Curriculum Visions

Tudor Age of Discovery

Key to interactive features
Press Teacher's Resources box right to go straight to Contents page.
Click on any item in the Contents to go to that page.
You will also find yellow arrows throughout that allow you to:

- 1A go to worksheet
- go back to previous page
- go forward to next page
- C go back to contents
- I go back to information for that topic

Teacher's Resources

Multimedia resources can be found at the 'Learning Centre':

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Lisa Magloff

Curriculum Visions

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Interactive PDF

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Contents

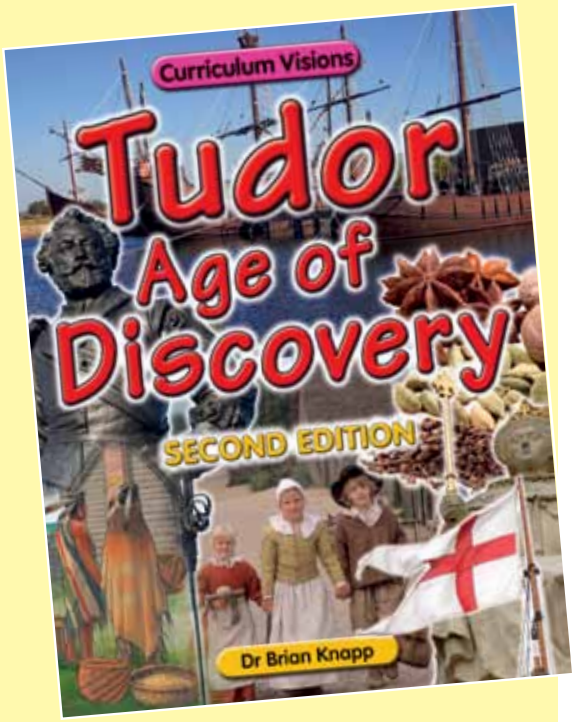
Section 1: Resources

Welcome to the Teacher's Resources for 'Tudor Age of Discovery'.

The Tudor Age of Discovery resources we provide are in a number of media:

1

The 48 page Curriculum Visions 'Tudor Age of Discovery'.



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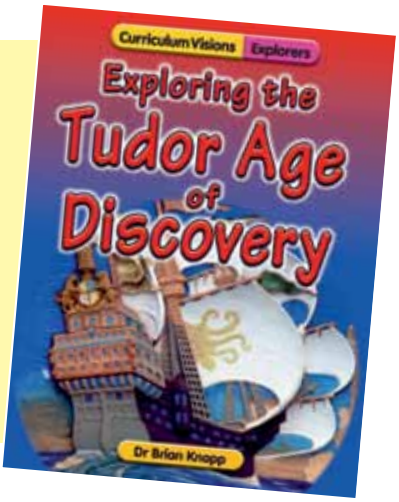
The 32 page Explorers title, 'Exploring the Tudor Age of Discovery'.



3

You can buy the supersaver pack that contains 1 copy of each book, and the Teacher's resources (what you are reading).

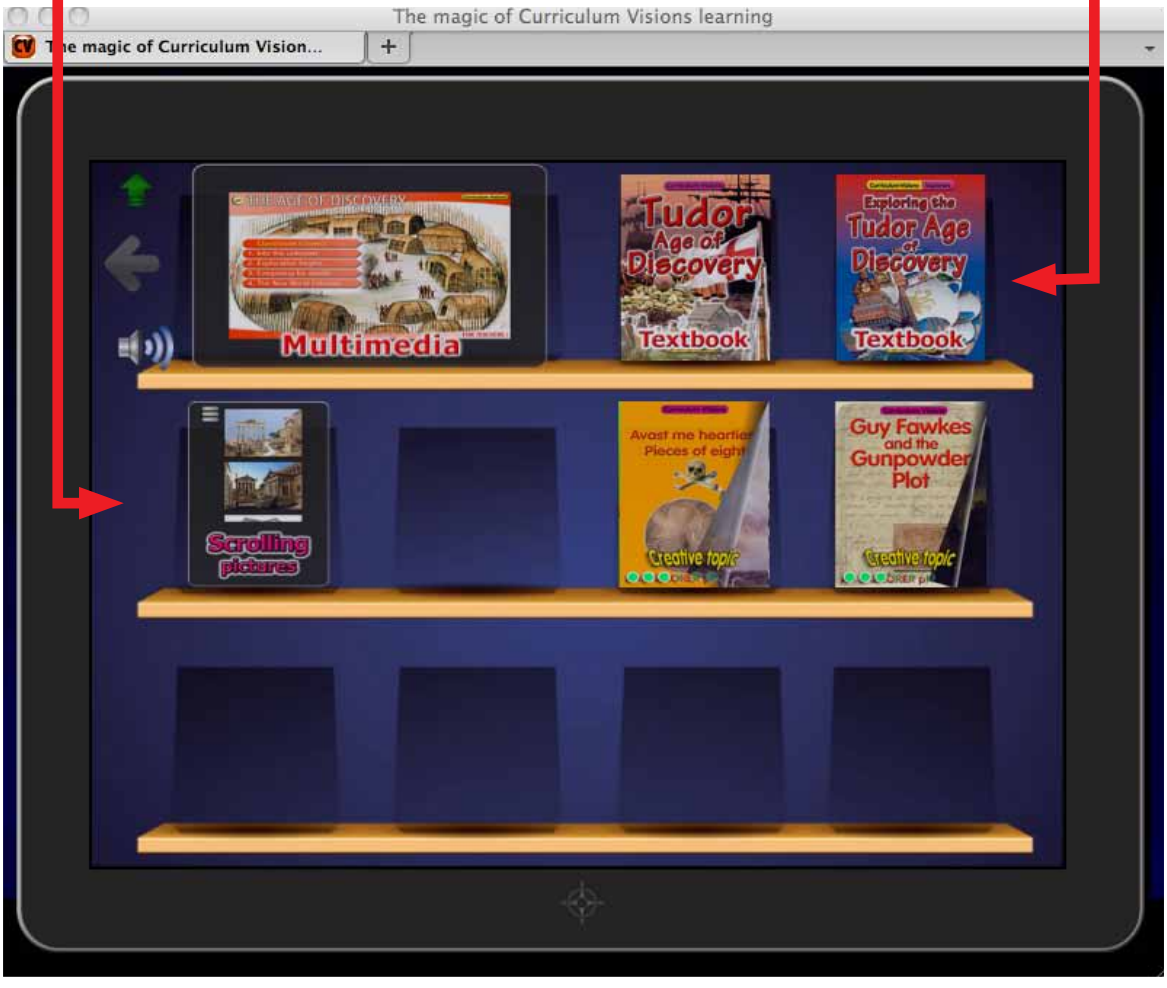
4

Our Learning Centre at
www.curriculumvisions.com
has almost everything you need to teach your primary curriculum in one convenient Virtual Learning Environment.

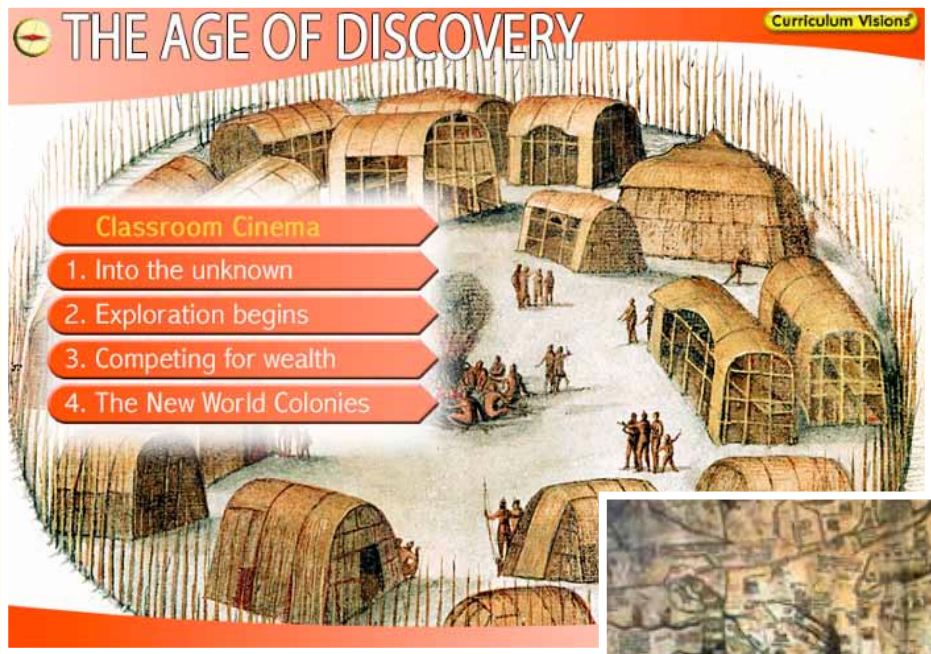
You can use support videos, e-books, picture and video galleries, plus additional Creative Topic books, graphic books called Storyboards, and workbooks. Together they cover all major curriculum areas.

All topics are easily accessible, and there is a built-in context search across all media.

You can also use our printed student books online as part of your subscription to the Learning Centre. There page-turning versions of every printed Curriculum Visions book for use on your whiteboard.



▼ The Age of Discovery home screen



▲ 'Classroom cinema' video

▲ Web site page

▶ Web site caption

Please note: screens are subject to change from those shown here.

▼ The Tudor times home screen

▲ 'Classroom cinema' video

▲ Web site page

▶ Web site caption

Please note: screens are subject to change from those shown here.

Matching the curriculum

These resources of books and web site aim to ensure that students:

- Find out about important events during the Tudor Age of Discovery.
- Make links across different periods of history.
- Learn about different aspects of local, British and world history.
- Have the chance to discuss why things happened or changed, and the results.
- Can carry out historical enquiries using a variety of sources of information, and look at how and why the past is interpreted in different ways.
- Can use their understanding of chronology and historical terms when talking or writing about the past.
- Learn about the experiences of people in the past, and why they acted as they did.
- Develop respect for, and tolerance of other people and cultures.
- See how people in the past have changed the society in which they lived.
- Develop respect for evidence, and the ability to be critical of the evidence.
- Develop an understanding of right and wrong and the ability to handle moral dilemmas.
- Understand, and adjust for some popular myths and stereotypes.

Furthermore, because history provides so many opportunities for improving communication skills, the resources aim to provide a body of material that can be used to reinforce English studies and which could, for example, be used in a literacy hour.

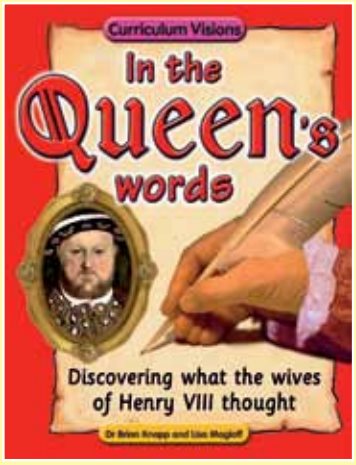
Last, and by no means least, these history resources can be linked to many other subjects, particularly mapping (geography) and through the use of science where appropriate.

Curriculum Visions products are renowned as a successful way to help teachers to get students of all abilities, ages and ethnic backgrounds to develop confidence in themselves, and to make the most of their abilities through the wide range of materials, the different levels of reading skills represented on each page, and through the wide range of tasks in the photocopiable worksheets.

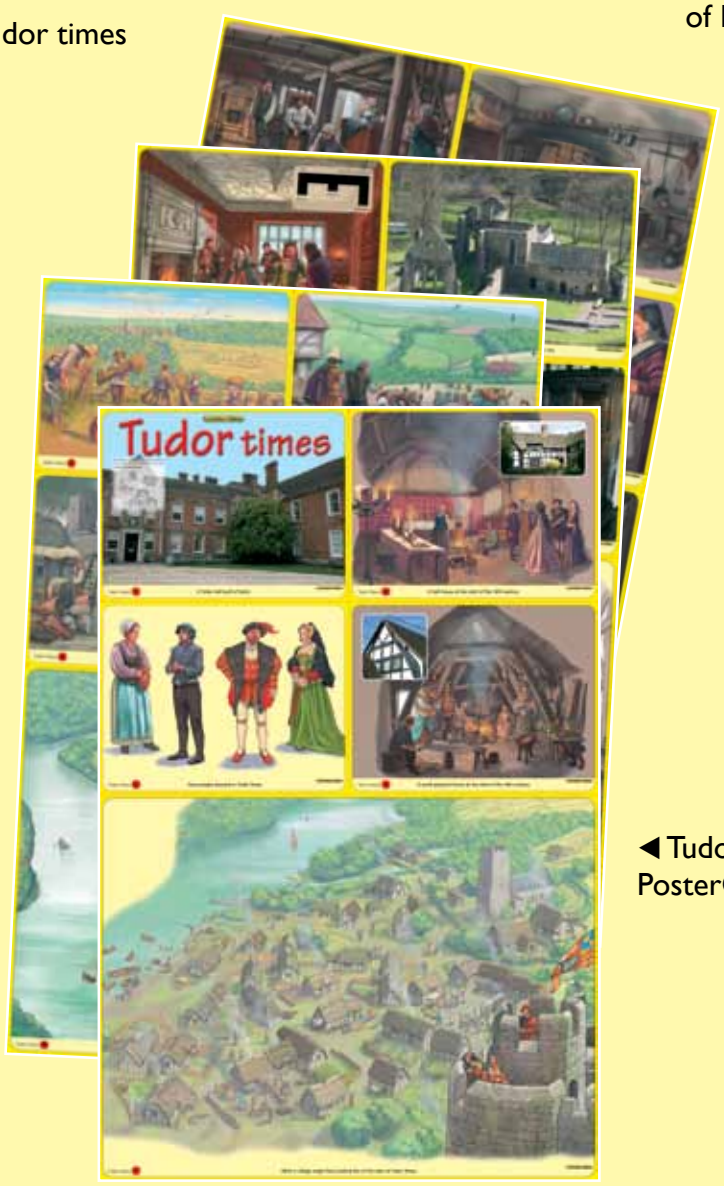
It should be noted that this material has been designed to be accessible by those teaching students in years 3/4 or 5/6 (SP4/5 or 6/7). This can be done with the help of the teacher by selective use of the worksheet material and by using the information in the student book to go into the appropriate level of depth and using a combination of 48-page and 32-page Explorer books.

Linked resources

▲ Tudor times



▲ Discovering the lives of Henry VIII's wives



◀ Tudor times PosterCard Portfolio

Section 2: Tudor navigation

How Tudors navigated

Today, almost all ships navigate by using a GPS (Global Positioning System). This is a small device which picks up signals from a series of satellites that orbit the Earth (the GPS satellites were put in orbit for this purpose by the US). The GPS picks up the signals from three or more satellites and then calculates its position through triangulation. A standard GPS is accurate to within a few feet – military GPS systems are accurate to within a fraction of an inch.

Obviously, nothing like this existed in the Tudor Age. In fact, the Tudors did not know how to determine longitude, only latitude. They found latitude by measuring the latitude (height measured as an angle) of the Sun from the visible horizon at the same time each day. They knew their latitude when they began the trip, they kept track of their speed each day and so they knew how far they had travelled. And the angle of the Sun told them how far they were from the equator.

To fix a ship's position exactly a seafarer needs to work out longitude. The Tudor seafarers couldn't do this because they could not accurately measure time. Longitude determines how far east or west a ship is from the Prime Meridian in Greenwich. Seafarers were only able to calculate longitude accurately after John Harrison invented the marine chronometer in 1759.

The Tudors used a number of instruments to determine their position and kept very accurate charts.

Experienced Tudor seafarers estimated the position of their ship at sea by knowing:

1. The latitude from where the ship had sailed.
2. The approximate speed of the ship.
3. The direction the ship was travelling in (using a compass).
4. The time of day.

This method was extremely unreliable, as these factors were all affected by the winds and currents.

The movement of stars in the night sky provided another method of navigation. For example north is indicated by the Pole Star, which travels in a tight circle above the North Pole and the three stars of Orion's belt point east as Orion rises and sets in the sky.

On a clear night, navigators calculated how far north of the equator they were by measuring the altitude of the Pole Star from the visible horizon. A measurement of altitude could then be converted into their latitude position.

For example:

- If the Pole Star is on the horizon, the ship is at the Equator (0° latitude).
- If the Pole Star is at an angle of 29°, then the ship is at 29° latitude (29°N).
- If the Pole Star was not visible, mariners had to measure the height of the Sun at noon instead. To calculate latitude using these measurements they compared their results with tables of the Sun's position in Europe.

The Tudor instruments were difficult to use, particularly in bad weather.

Tudor explorers were aware of the limitations of their navigational knowledge. They navigated using all the methods they knew, to reduce the risk of getting lost, shipwrecked or stranded.

Quadrant

The quadrant is a very simple instrument of medieval origin used to determine the altitude of a heavenly body. It takes its name from its shape, which is a quarter of a circle.

Navigators looked along the straight edge (the radius of the circle), with the arc downwards, to sight the Pole Star or the Sun. They lined up objects between the twin sights and fixed the measurement using the plumb line hanging from the circle's centre. This gave a reading of altitude that was converted into latitude using charts.

Astrolabe

The astrolabe (see picture below) is a circular device similar to the quadrant. The astrolabe was suspended from a ring. The weight of the instrument helped it to hang vertically and remain steady in rough seas.

A reading required two people. To measure the Pole Star the first navigator looked directly through the sight and aligned the pin holes with the star. The second navigator was then able to read the altitude indicated by the angle of the vane.

To observe the Sun the first navigator held the astrolabe at waist height and pointed the movable sight at the Sun. The second navigator either crouched down and looked through the sight, risking Sun blindness, or aligned pin holes of light shining through the twin sights on a card and read altitude from the angle of the sight vane.

On the following pages you will find instructions for making an astrolabe.

Cross-staff

The cross-staff was made up of a straight staff, marked with graduated scales, with a close-fitting sliding cross-piece. The navigator rested the staff on his cheekbone and lined up one end of the moving cross-piece with the horizon and the other end with the bottom of the Pole Star, or the Sun at midday. The position of the cross piece on the staff gave the reading of altitude.

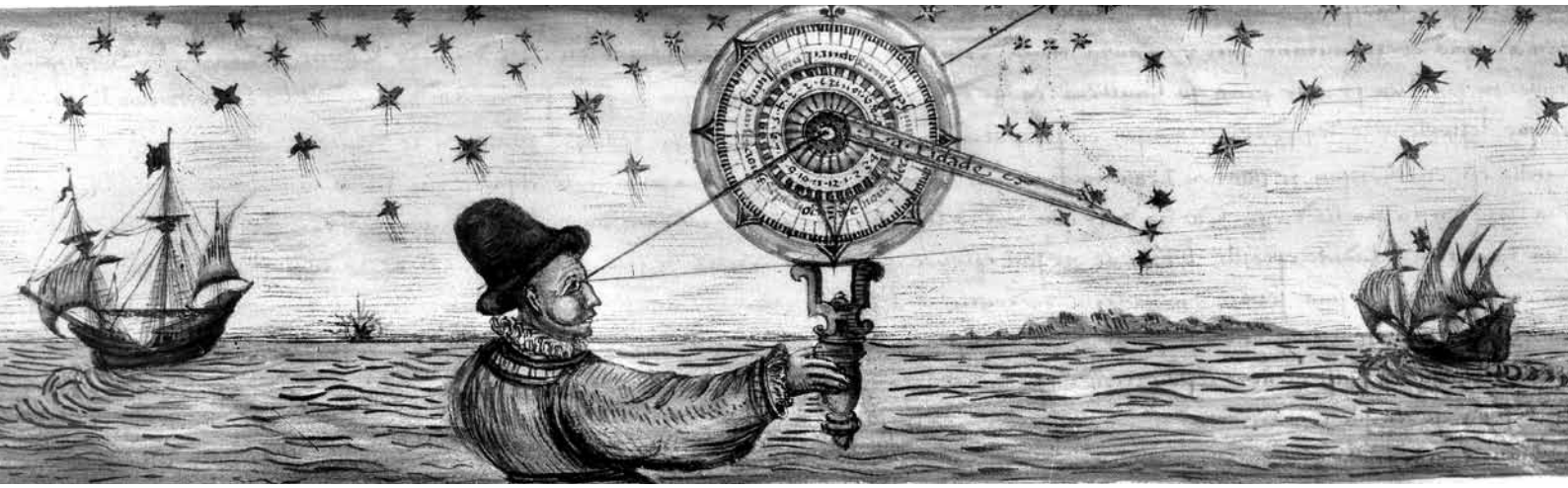
Too much staring at the Sun while using the cross-staff caused blindness and the ubiquitous sailor's eyepatch.

Back-staff

The back-staff allowed the navigator to make a reading with his back to the Sun.

The navigator looked along the staff and lined up the horizon with the horizon vane. He then aligned the shadow cast by the shadow vane with the horizon by sliding the shadow vane along the staff. To calculate the altitude the navigator added together the measurements of the two arcs of the horizon vane and the shadow vane. The instrument only worked in sunny weather.

More information on Tudor navigation is given on the following pages.



Build your own astrolabe (i)

An astrolabe is a device used for measuring altitude, including the height of objects in the sky.

Materials

a piece of card, manila file folder, or other stiff paper
piece of dark thread or string 30 centimetres long
small weight, such as a metal washer
plastic drinking straw
copy of the astrolabe drawing
glue or paste
scissors
tape
hole punch

Instructions

Glue a copy of the astrolabe drawing to a piece of card and cut the astrolabe out with scissors.

Using scissors or a paper hole-punch, carefully make a small notch at each of the lines marked along the curved edge of the astrolabe. These notches will come in handy when you're measuring the angle between two celestial objects and you have to hold the astrolabe horizontally.

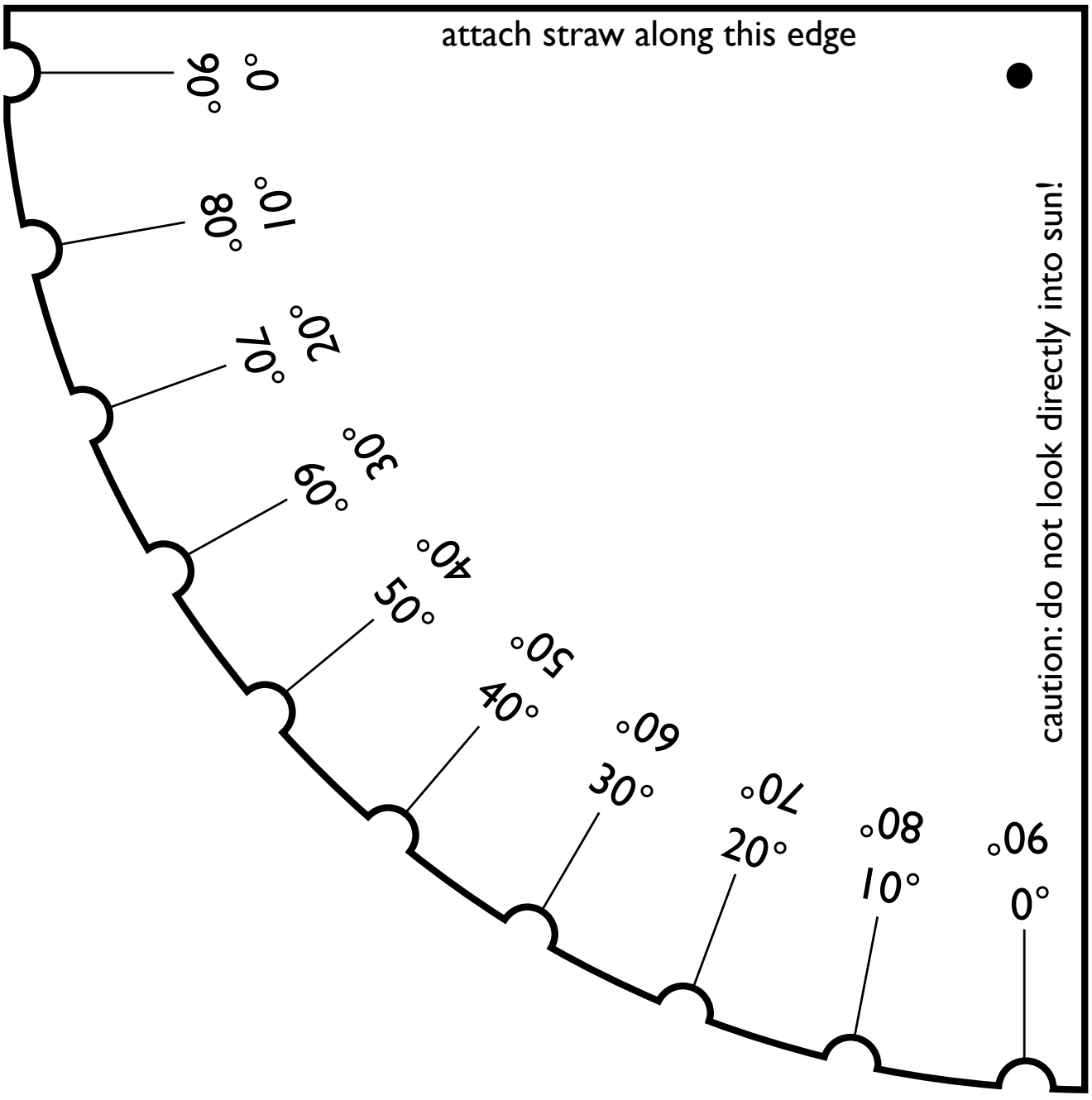
Cut a drinking straw to the same length as the sides of the astrolabe.

Tape the drinking straw to the edge of the astrolabe marked 'Attach straw along this edge'. Be careful to not tape the straw on the astrolabe, but just on the edge.

Carefully poke a small hole through the astrolabe where the 'X' is marked, pass the string through it, and either knot the string at the back of the cardboard or tape it there.

Tie the small weight to the opposite (front) end of the string.

Build your own astrolabe (ii)



Using your astrolabe

An astrolabe can be used to measure the altitude of an object, including changes in the Sun's path (or of the stars) over the course of the year. Altitude is the angle of an object above the horizon.

Materials

astrolabe from previous activity, pencil or pen, access to outdoors, sunny day

Measuring the altitude of trees and buildings

To become familiar with how an astrolabe works, practise measuring the altitude (angular height) of trees or buildings. To make a proper measurement, look at the top of the object through the straw.

Have someone read the altitude in degrees from the side of the astrolabe. The point where the string crosses the scale is the proper measurement.

Practise using your astrolabe by measuring and recording another tree or building of a different height.

Measuring the altitude of the Sun

Safety note: Remind students that they must never look directly at the Sun, even for an instant.

Have the students work in pairs. One person should hold the astrolabe so that the straw points in the direction of the Sun. They should not look through the straw. In fact, to make sure this does not happen, they can turn their back to the Sun.

Aim the straw so that they can see the shadow of the straw on their hand or the ground. Move the straw slightly until a small circle of light forms on their hand. The straw is now pointing directly at the Sun.

The second person should now read the Sun's altitude (in degrees) where the string crosses the scale. Take note of the time of day the reading was made.

Discussion

The cause of the change in altitude (the location of the Sun) is the tilt of the Earth's axis, which causes the Earth to face the Sun at an angle of 23 degrees. Where the Earth is located in its orbit around the Sun will determine both the altitude of the Sun at any given point in time and the length of the day. Since the Earth's location around the Sun is changing continuously, so is the Sun's position in the sky.

Measuring the Sun's noon altitude at the beginning of each season helps to show the relationship between seasonal warmth and whether direct or indirect rays of sunlight are falling on your location and the Sun's altitude. The difference between the Sun's altitude at the beginning of winter and beginning of spring is 23.5° (the same for spring and summer, and for summer and autumn, and autumn and winter). This is the degree of tilt of the Earth's axis in its orbit.

Section 3: Background and photocopiable worksheets

Introduction

Each unit of the student book is supported by background information and photocopiable worksheets in this *Teacher's Resources*. They have been designed to be a fast and efficient way of working through the study of the Tudor Age of Discovery.

Variety and selection

Each photocopiable worksheet is supported by information on its facing page which includes a resources list (where appropriate), suggestions on how the worksheet may be used and outcomes that may be achieved. There are probably more worksheets than you would use with any particular class so it is important to have a look through them all, and select which ones you wish to use to support your approach to the study of the Tudor Age of Discovery.

Linking background and worksheet to the student book

Each section of background information and each worksheet has been given a unique number which is in a circle at the top of the page. This is related to the number of the spread in the book. For example, pages 4 to 5 is the spread 'Into the Unknown'. If there is more than one worksheet per student book spread, then they are labelled A, B, and so on. At the head of each worksheet are the relevant pages of *Tudor Age of Discovery* for easy reference for students. They may find it useful to look back in the student book to help them with the activity on the worksheet. If the worksheet is testing understanding or evaluation of the information based on the spread, it will be essential for the students to use the student book with the worksheet. Some of the worksheets provide instructions for practical activities which support the topic covered in the unit.

A closer look at the worksheets

Cross curricular work

The worksheets provide a wide range of activities for the students. The aim of the worksheets is to help the students appreciate what it was like to live in the Age of Discovery, what is was like to be an explorer, and what life was like for those they met.

Some of the worksheets look at how we gather evidence with examples from reading letters and considering maps. The conditions of the times are provided by descriptions of life at sea and life in the colonies.

Because this is a book about the Age of Discovery, there are a number of map and atlas activities. Some of these require students to plot points on a map, while others focus on finding different cities or towns, or comparing modern maps with Tudor maps.

Although the main thrust of every activity is to help the students gain a perspective on life in the Tudor Age of Discovery, you may be able to use some of the activities in cross curricular work. Activities on occupations in the New World colonies, feeding the crew, and on the size of a Tudor caravel allow students an opportunity to work with maths.

Activities about Jamestown allows students to use archaeological methods; while activities on Roanoke colony allow students the chance to write newspaper articles and make deductions.

Although the book focuses on English exploration, we have also included some information about Portuguese, Spanish and even Italian explorers. This will allow students to discover what was happening in other parts of Europe at the same time and to make

comparisons, and to put English exploration into a broader framework.

You may also want to use this in conjunction with a field trip to visit the Golden Hinde.

The Golden Hinde

The Golden Hinde, in Southwark, London, is a modern reproduction of Francis Drake's ship. If you can arrange a visit to the Golden Hinde, it is an invaluable experience and a chance for students to get some hands on experience of what life was like on board one of the ships that made voyages of discovery during the Tudor Age.

If you are not able to visit the Golden Hinde in person, students can still experience a little of life at sea, in the classroom. On this and the following pages are some ideas for re-enacting life on a voyage of discovery.

Creating the ship

The Golden Hinde was 21 metres long, and had four decks. You could turn areas of the classroom into the different areas of the ship, or if you have a large outdoor area at your disposal, and nice weather, you could draw the decks of the ship in chalk outside. Of course, on the real ship the decks would have been on top of each other, while outside they will have to be side by side. You will have to judge if this will be confusing for students. You may wish to simplify things by simply drawing one deck.

The front of the ship was called the bow beak. Near the stern (the back) was a small hole which opened to the water – this was the public toilet.

There were four desks. First, the poop deck, then the main deck, then the half deck, then the foredeck.

There were three hatches in the main deck, covered up by planks of wood and a sheet. These were used to load goods onto and off of the ship.

The captain's cabin was at the back of the main deck. It was the only room with a bed. Above the captain's cabin was the great cabin where the captain entertained the officers and visitors. The great cabin had lots of windows, white painted walls and wooden carvings.

The captain's cabin.

Directly underneath the great cabin was the galley kitchen where food was cooked on a cauldron. This acted as a heater for the great cabin, as heat always travels upwards.

The officers slept on straw mattresses in the armoury and hung curtains for privacy. The men would have slept on the floor or in hammocks. Because there was not enough room, they slept in shifts. Men worked a four hour shift, so the half of the crew that was not on watch had a chance to sleep.

Crew

On the Golden Hinde, there were 20 officers and 60 men, but unless you have an unusually large class, you will have to chose four or five students to be officers and the rest to be sailors. Of the sailors, everyone would fight in a battle, but some people had special jobs – cook, carpenter, bosun, bosun's mate, gunner (in charge of gunpowder, loading and aiming the guns), gunner's mate, surgeon (who would also have been the barber), surgeon's mate and pilot (the navigator).

Food

The quality and type of food depended on how far out of port the ship was. For the first few weeks, sailors had fresh meat and other fresh foods, but as time wore on, the fresh foods went bad and everyone ate preserved (salted) meat and tap biscuits, hardtack or ship's biscuits.

These were often infested with weevils, which the sailors picked out before eating the biscuits. Many ships also carried livestock, which would be slaughtered and eaten along the way for fresh meat. Sailors also received a ration of rum each day.

You may like to cook, or have the students cook, some ship's biscuits. Here is a recipe:

Ingredients

- 4 cups flour (preferably whole wheat)
- 4 teaspoons salt
- Water (about 2 cups)

Preheat oven to about 180° C. Mix the flour and salt together in a bowl. Add just enough water (less than two cups) so that the mixture will stick together, producing a dough that won't stick to hands, rolling pin or pan.

Mix the dough by hand. Roll the dough out, shaping it roughly into a rectangle. Cut into the dough into squares about 7cm x 7cm and about 1.5cm thick.

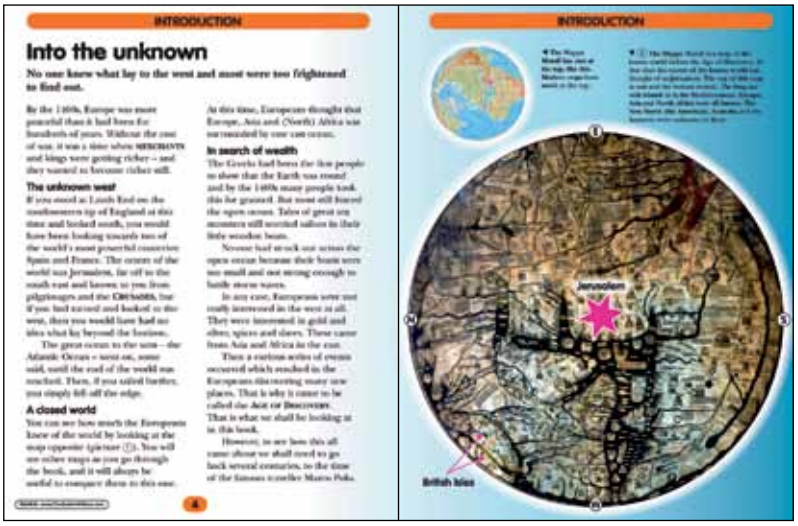
Place the squares on an ungreased cookie sheet in the oven and bake for 30 minutes. Turn each piece over and bake for another 30 minutes. The crackers should be slightly brown on both sides.

The fresh crackers are easily broken but as they dry, they harden and assume the consistency of fired brick.

Chapter 1: Introduction

Spread 1 (pages 4–5)

Into the unknown



1A

1B

1C

In the West, we tend to think that, before the Age of Discovery, everyone in Europe thought the Earth was flat, or did not know that Asia existed. This is actually not true. It had long been known and accepted that the Earth was round, and traders and leaders certainly knew that Asia existed and where it lay.

Europeans had long known that the lands of Asia were very wealthy, and trade goods such as silks and spices had been reaching Europe from China, India and the Indies (Spice Islands) since Roman times.

However, rather than trade directly by sailing to Asia, Europeans dealt with middlemen. This suited the Europeans before the 15th century, when they did not want to waste the resources searching for unknown trade routes, but as the 15th century wore on, Europe became more wealthy and people began to think they might be better off if they controlled the spice and silk trade directly. At the same time, the land routes to the East were cut off by the Turks, making it more important for European powers to find their own way to reach the East.

At the beginning of the Tudor Age, most people, even educated people, had little knowledge of the world outside England and a few parts of France and places like Holland or Germany. People, even wealthy people, did not travel to other countries. In fact, 90% of all people in Tudor England would live their entire lives without travelling more than a few miles from where they were born.

There was no such thing as foreign travel, travel books, or foreign holidays (or holidays at all for that matter – a holiday was a religious feast day). Sailors and soldiers might travel, but most of those were illiterate and could not write about what they saw.

There were many maps of the world at this time, but they showed only parts of Europe, the Middle East (which was known of through the Crusades) and North Africa. Some maps showed Asia and other

lands, but these were very inaccurate. In fact, while maps of the world certainly existed, they contained mostly guesses about what the world looked like.

The famous books of Marco Polo discussed only the land route to Asia and not the sea route – no one had ever described the ocean route because no one had ever sailed from Europe to Asia. You may wish to show children on a map or atlas, how the people who went on the Crusades travelled – they went overland across Europe and when they sailed, they stayed close to the coasts. So, even going to the Middle East, they never crossed large stretches of open ocean.

In the same way, although trade goods, such as silks and spices, came to Europe overland from Asia via Venice, no one had any idea where Asia was in relation to the known world. In fact, although the Greeks had determined the size and shape of the planet very accurately, that knowledge had long been lost to Europe (although not to the Arabs or Asians), so that even sailors no longer knew how big the Earth was.

Without this information, it was impossible for sailors to determine latitude and longitude at sea, and thus impossible for them to know where they were in relation to where they started from while on the open ocean.

Given this, it is not surprising that most sailors did not want to take a chance on the unknown.

The other problem in exploring the world was the ships. Until just before the Tudor Age, ships were not well suited to sailing on the open ocean. They could not hold enough supplies and were too shallow to survive at sea in a storm.

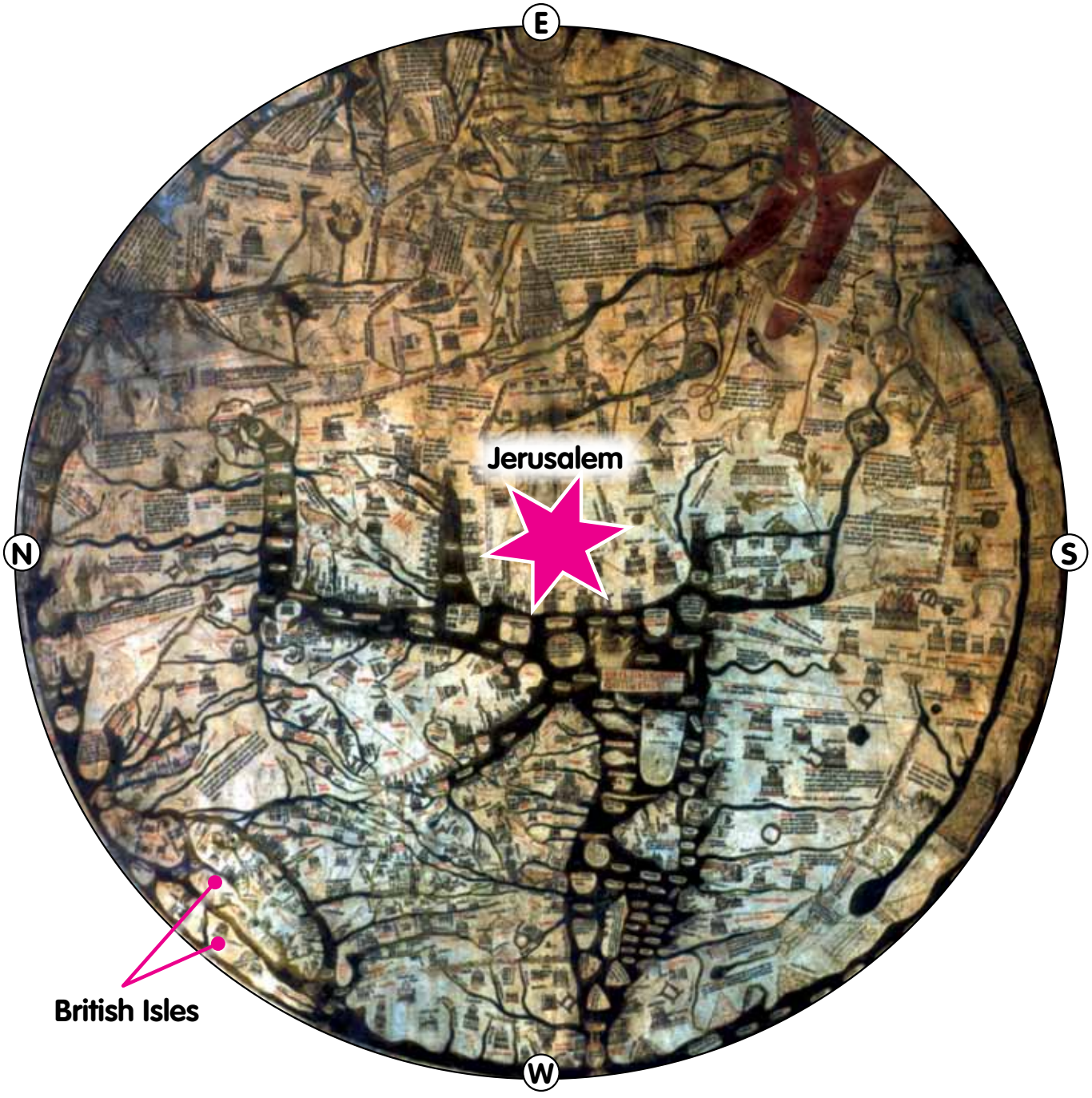
1A

Name:..... Form:.....

Based on **pages 4 and 5** of *Tudor Age of Discovery*

Comparing maps

The Tudor world looked very different from our world. Compare the map here with a modern globe. List some of the differences that you can see between them.



Comparing maps

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet, modern globe or map of the world.

Using the worksheet

Throughout the student book there are many maps of the world. In many ways, the Age of Discovery was about redrawing the map of the world. As more and more voyages were made, more and more accurate maps were created, making it possible for people to make more voyages more safely.

In Tudor times, and earlier, it was not very easy to get hold of a map. Captains who went on voyages kept their maps secret to prevent others from being able to find their way to lands with valuable trade goods. What maps were available to the public were usually very old and inaccurate.

In fact, most ordinary people did not really care about maps anyway – they didn't need them, especially maps of the world. Most people spent their lives in one small area and rarely travelled farther than the nearest market town. Most sailors too, were illiterate and not interested in maps. They relied on the captain and pilot to find the way.

This worksheet gives students a chance to familiarise themselves with the world of the Tudors and also with the world today. You may want to remind students that Jerusalem is given as the centre of the world on this map, because it was the home of Jesus Christ. England was a Christian country, so Jesus' home would have been considered the centre of the world.

Younger students

You may like to do this as a whole class exercise, asking the students to raise their hands and tell you about a difference they have spotted.

Outcomes

The students can:

- Compare two different maps.
- Know some of the countries of the world and where they belong on a map.
- Extract information from a map.

Older students

The students may like to have a contest. You could divide the class into groups and the groups would have a certain period of time to write down as many differences as they could find. This may be a nice introduction to their study of the topic.

Some differences

- Jerusalem is at the centre of the map.
- The top of the map is east (instead of north).
- Australia, the Americas and Antarctica are all missing from the map.
- No Atlantic or Pacific Ocean.
- Only parts of North Africa are on the map – not Africa below the Sahara.
- All the continents are different shapes.
- The Mediterranean is the wrong shape.

Outcomes

The students can:

- Compare two different maps.
- Know some of the countries of the world and where they belong on a map.
- Extract information from a map.

Name:..... Form:.....

Based on **pages 4 and 5** of *Tudor Age of Discovery*

Maps 2

Below is some information and a map of the world. Colour in red the areas that were known during Tudor times and in blue the parts of the world that were unknown.

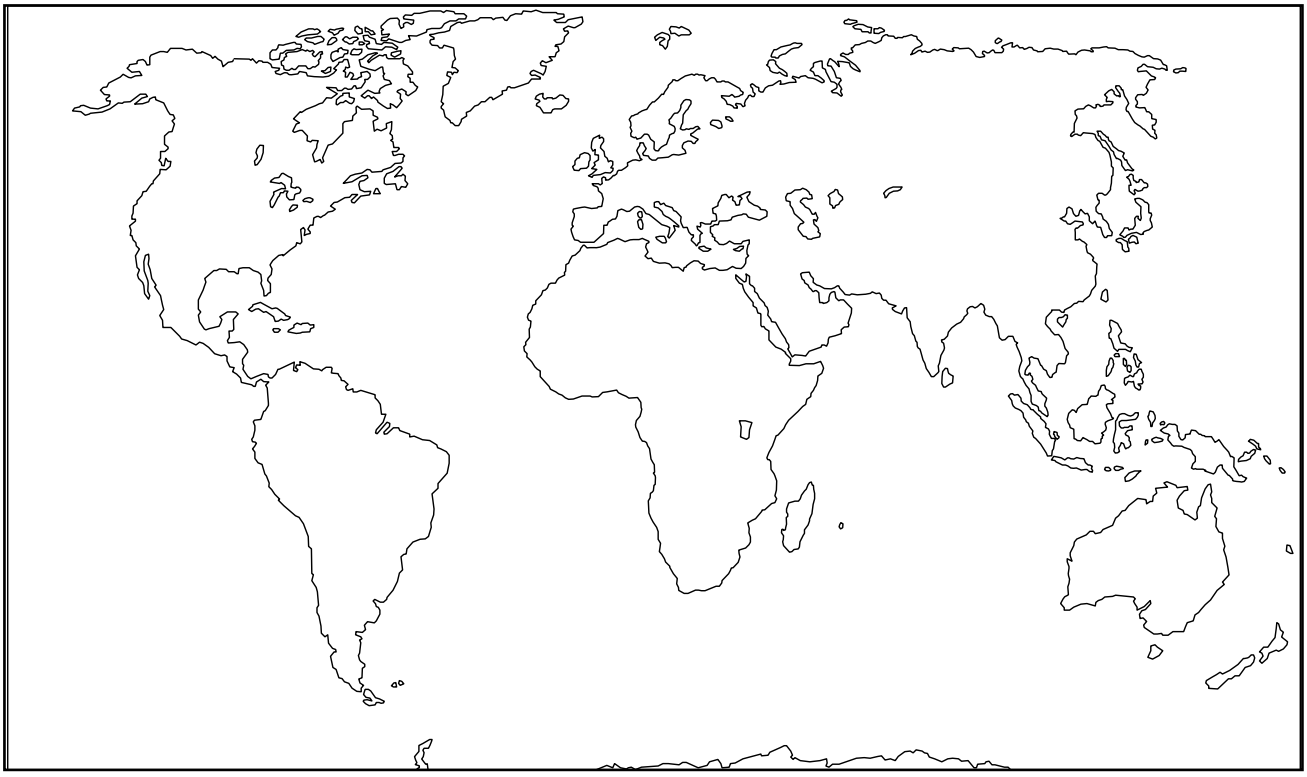
South America

At the beginning of the Tudor Age, only the Eastern coast of South America was well known and many maps showed the southern tip touching Antarctica.

Australia

In Tudor times, Australia had not been discovered by Europeans.

Africa



Britain

Tudor seafarers sailed all around the British Isles to fish and trade, and had since Roman times, so the shape of Britain was well known.

Antarctica

European ships had not yet explored or even been near the Antarctic, so sailors and mapmakers had to guess what it was like – some thought there was a large island at the bottom of the world.

North America

At the start of Tudor times sailors knew North America existed but did not know much about its shape or size. They mostly knew the East Coast and the Indies.

Teacher's sheet

Based on **pages 4 and 5** of *Tudor Age of Discovery*

Maps 2

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet, modern globe or map of the world.

Using the worksheet

This activity gives students another chance to imagine how the Tudors saw the shape of the continents. The information given here is what was known at the start of the Tudor Age. Of course, as the Tudor period wore on, more and more became known about the shape and size of the continents.

You may also like to discuss with the students that different people might have known more or less about the shape of the continents. For example, the Arabs had very good maps showing Africa and large parts of Asia, although these were mostly inland areas and so not much help to sailors.

You could also discuss the differences between a map and a chart. A map shows the land and seas that make up the Earth's surface. Look closely at a map, and you'll find natural features, such as forests, mountains and lakes. Maps also show things that have been created by humans, such as boundaries and borders, towns and bridges.

A chart is made for sailors to use while they're at sea. It tells them what they need to know to sail safely. Most charts include coastal outlines with descriptions and names of harbours and other places to anchor. A chart often gives a sailor help with directions or points out dangers, such as sandbanks or rocky shores. You could even bring in a chart to show students what one looks like.

Younger students

Students can work on their own to colour in the map. Afterwards you might like them to compare maps.

Outcomes

The students can:

- Apply descriptions from a text to a map.
- Know some of what the Tudors thought the world looked like.
- Learn the shape of the continents.

Older students

Students can work on their own to colour in the map. Afterwards you might like them to compare maps.

Outcomes

The students can:

- Apply descriptions from a text to a map.
- Know some of what the Tudors thought the world looked like.
- Learn the shape of the continents.

Note

Students answers may vary as the descriptions given here are not very detailed.

Name:..... Form:.....

Based on **pages 4 and 5** of *Tudor Age of Discovery*

Timeline: History of ocean exploration

Here are some events in the history of ocean exploration up to the start of the Tudor Age.

4000 BC	Egyptians develop sailing vessels. These were probably used only in the eastern Mediterranean near the mouth of the Nile River.
600 BC	Phoenicians develop sea routes around the entire Mediterranean and into the Red Sea and the Indian Ocean. They made it all the way around Africa near 590 BC. They also reached England by sailing along the western European coast. They were trying to find sources of tin to use in producing bronze. Although they understood celestial navigation, they probably stayed within sight of land whenever possible.
500–200 BC	Greeks develop trade routes throughout the Mediterranean. They used the length of the day (corrected for the time of the year) to estimate latitude.
450 BC	Herodotus (Greek) publishes an accurate map of the Mediterranean region.
325 BC	Pytheas, a Greek astronomer and geographer, sailed north out of the Mediterranean, reaching England and possibly even Iceland and Norway. He also developed the use of sightings on the North Star to determine latitude.
150 AD	Ptolemy produces a map of the Roman world, including lines of latitude and longitude, the continents of Asia, Europe, and Africa and the surrounding oceans.
600 AD	By this time, Europeans had lost the knowledge of Ptolemy and the ancient world and no longer knew the ocean routes or maps of the world.
900–1430 AD	Vikings explore and colonise Iceland, Greenland, Newfoundland (Canada) using the North Star to determine latitude.
1405–1433 AD	Chinese make seven voyages, in 317 huge ships, around the China Sea, Sea of Japan and Indian Ocean. These missions were mostly to impress their neighbours and the Chinese soon lost interest in exploring.
1410 AD	European crusaders capture ancient Roman texts and Ptolemy's map of the oceans is published in Europe once more.

Questions

1. Where did the Phoenicians explore?

✎ .....
.....

2. What did Ptolemy make?

✎ .....
.....

3. How did the Europeans get knowledge of Ptolemy's map back?

✎ .....
.....

4. Why did the Chinese explore?

✎ .....
.....

Timeline: History of ocean exploration

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

During Rome's long fall, most of its huge store of knowledge was lost to the West. Some of the knowledge was preserved in the Eastern empire (which continued for hundreds of years) and some of it preserved by the Arabs when they conquered the Eastern Roman empire. So, when we say the knowledge was lost, we mean it was lost to western Europe, to the part of the Roman empire that had been overrun and collapsed.

This is a chance for students to see the evolution of ocean exploration up to Tudor times, and also to see what other peoples knew of the ocean and sea routes.

The Phoenicians were big sailors and very adventurous. It is likely that they had some method for determining latitude, but they certainly used the stars to find their way and also certainly had very detailed charts. They sailed in smaller ships than the Tudors, but would have stayed close to land so they could go ashore and collect new supplies as they needed.

Similarly, the Greeks sailed a great deal, but you might want to show students a map of the Greek Isles. They can see how that with so many islands, the Greeks were never far from land. If students have studied the ancient Greeks and Trojan war, you may also want to point out Athens and the probable site of ancient Troy (in Turkey). Students could see that the two are not that far apart.

Younger students

The students could answer the questions on their own or in groups.

Outcomes

The students can:

- Learn something of the history of ocean exploration.
- Understand that other cultures had explored the oceans before the Tudors.
- Extract information from a text.

Older students

The students can answer the questions on their own.

Outcomes

The students can:

- Learn something of the history of ocean exploration.
- Understand that other cultures had explored the oceans before the Tudors.
- Extract information from a text

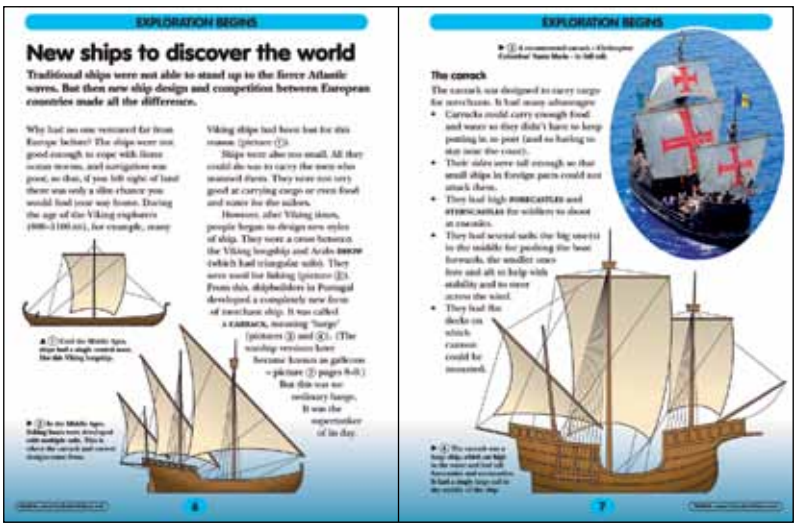
Answers

1. The entire Mediterranean and into the Red Sea and the Indian Ocean; all the way around Africa; England; western Europe.
2. A map of the Roman world.
3. Through the Crusades.
4. To impress their neighbours.

Chapter 2: Exploration begins

Spreads 2, 3 and 4 (pages 6–11)

New ships to discover the world



2

In addition to a lack of maps, the other big problem in exploring the world prior to Tudor times was the ships. Until just before the Tudor Age, ships were not well suited to sailing on open ocean. They could not hold enough supplies and were too shallow to survive at sea in a storm. In fact, when you consider the Vikings crossed the Atlantic Ocean in their narrow, shallow boats, you develop a new appreciation for their bravery.

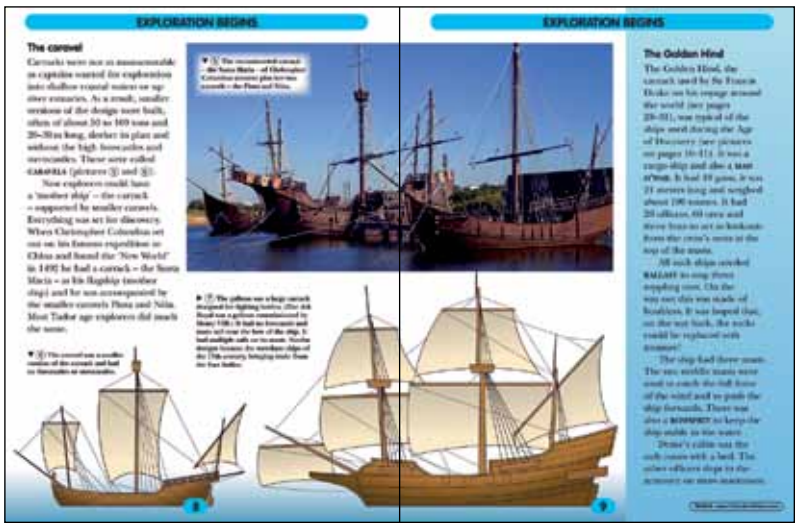
Most sailing before Tudor times took place along coastlines – boats tended to stay within sight of land, or travel along well mapped routes, such as across the Mediterranean or the Channel (both of which had been well mapped since Roman times).

However, as the Tudor Age began, new shipbuilding techniques had been imported from the Arab world, via Venice (Venice had long had close ties with the East and the Middle East and served as a trading hub).

The carrack was one of the first of the new breed of ships. No one really knows why the Portuguese began building them, but it is most likely that a shipbuilder returned from a trip to Venice or the Middle East and thought there would be a huge market for this type of ship.

The real advantage of the carrack was the high forecastle and sterncastle which protected the ship and allowed a place to shoot from. So, these ships were very useful in war. The high stern and forecastle also created extra depth in the ship and so more supplies could be carried.

The shape of the ship also allowed it to carry new types of sails, the design of which was also imported from the Middle East. These sails allowed the ships to sail faster, but more importantly also let them tack closer to the wind, allowing them more manoeuvrability (in other words, instead of having to keep the wind right behind them, the ships could sail at a closer angle to the wind).



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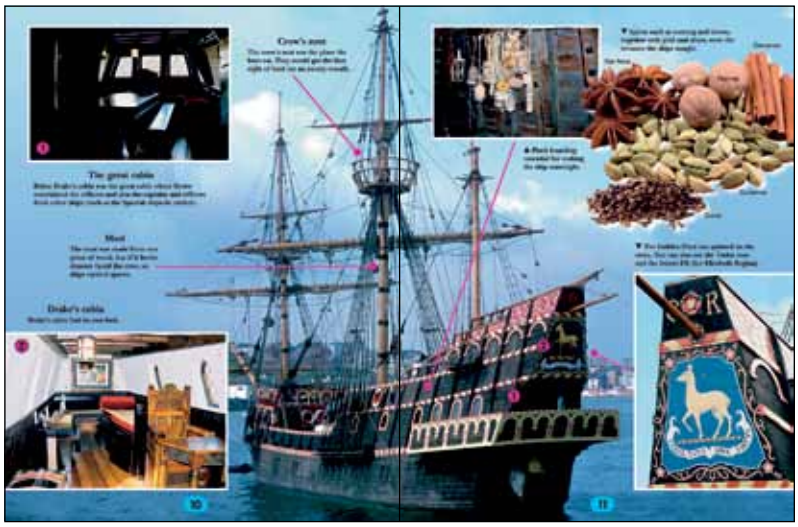

4 A

4 B

4 C

4 D

Large ships, such as galleons and carracks had a very large draught (amount of the ship below the water line) and so were not good for entering rivers or shallow areas – which could be important in exploring. But the smaller ships were not very good at defending themselves because they couldn't carry very heavy cannon. This is why explorers and privateers usually travelled in a convoy with some small ships and at least one large ship. When faced with an enemy, the large ship would place itself between the enemy and the smaller ships.

Students will be amazed to see the relatively small size of the ships that sailed such long distances over such long periods of time. They were very cramped conditions and men would be cooped up on board for months.

Name:..... Form:.....

Based on **pages 6 to 11** of *Tudor Age of Discovery*

The size of a caravel

You will need a piece of chalk and a tape measure, and a large space outside. Measure off a space 19.5m long by 7.5m wide. This is the size of a caravel, but remember there were several decks. Now place 60 large Xs in the space. This is the crew of the ship.

Questions

1. Do you think there was a lot of room on the caravel?

✎ .....
.....

.....

2. Describe how you think you would feel to be on this ship, without getting off, for four months?

✎ .....
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Teacher's sheet

Based on **pages 6 to 11** of *Tudor Age of Discovery*

The size of a caravel

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This is a chance for students to get a bit of a feel for the small size of the ships. Of course, the actual ships would have had three or four decks and so would have been roomier than your chalk drawing, but students could use their imaginations to add the decks and imagine how cramped it would be.

In reality, it was very cramped at sea. Sailors usually slept in shifts – those who were not working would sleep – because there was no room for everyone to sleep at the same time. Most ships also had movable interior walls so that some areas could be used for more than one function.

You might like to ask 20 or so students to stand in the 'ship'. Then you could ask some of them to do a simple task, such as coil up a rope or fold a sheet (representing a sail). It's not so easy, even with 20 people in that area.

Younger students

The students could answer the questions on their own or in groups.

Outcomes

The students can:

- Have some understanding of how much room there was on a Tudor caravel.
- See how easy or difficult it was to do things on a Tudor caravel.
- Measure accurately and follow instructions for measuring.

Older students

The students could answer the questions on their own or in groups.

Outcomes

The students can:

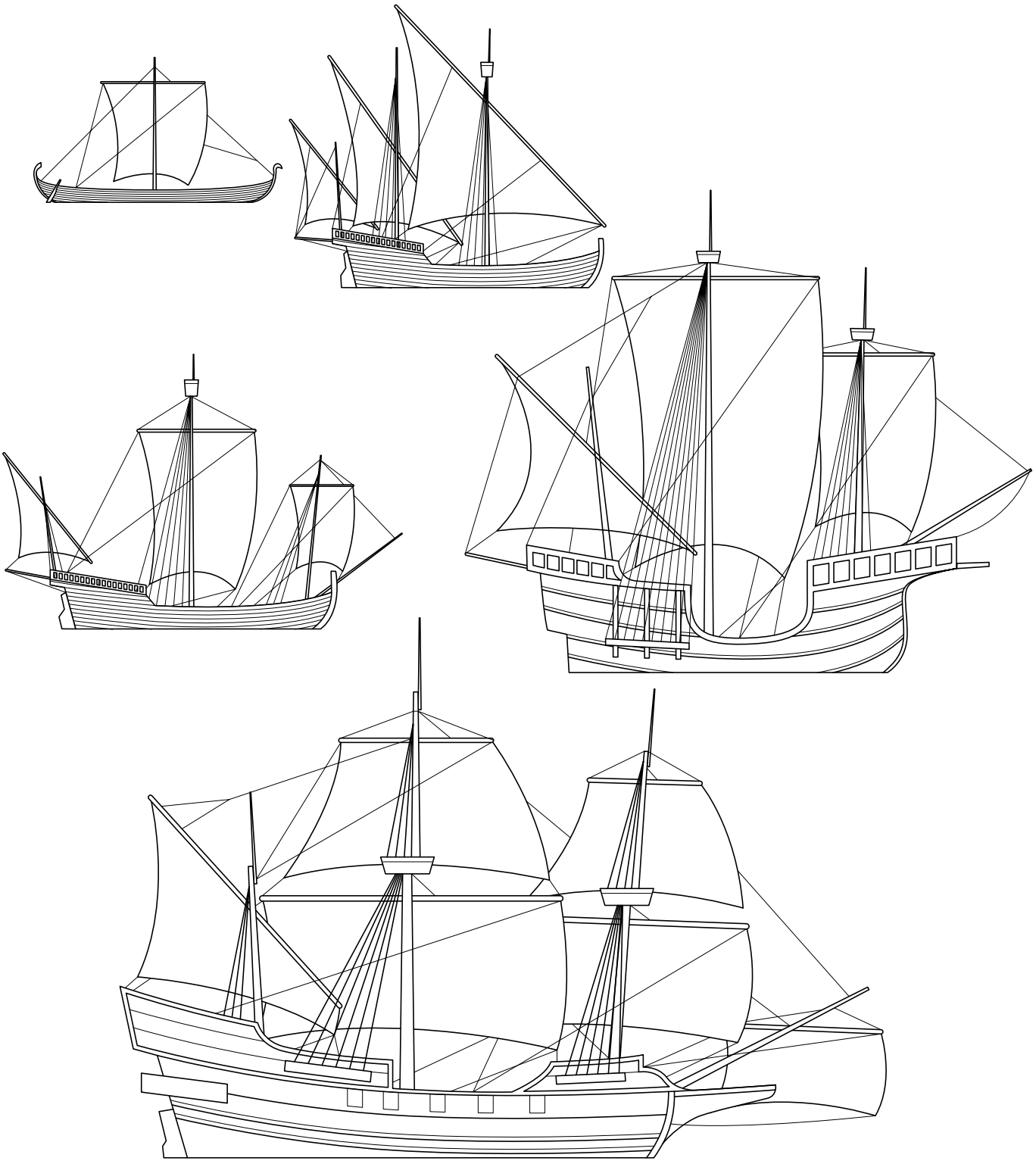
- Have some understanding of how much room there was on a Tudor caravel.
- See how easy or difficult it was to do things on a Tudor caravel.
- Measure accurately and follow instructions for measuring.

Name:..... Form:.....

Based on **pages 6 to 11** of *Tudor Age of Discovery*

Types of ship

Here are pictures of some types of ship. Label each one with its name or description.



Teacher's sheet

Based on **pages 6 to 11** of *Tudor Age of Discovery*

Types of ship

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This is an opportunity for students to familiarise themselves with the different types of ship discussed here. You may also like to use this as a review at the end of your study of this unit.

This can also provide an opportunity to discuss how the Tudor ships 'evolved' from earlier boats. You could discuss what each of these ships has in common and how they are different. For example, they all have sails, but the number, size and shape of the sails is different. The shape of the ships is also different, with the simplest one, the Viking longship, having no raised parts (forecastle or sterncastle). You may like to ask students whether they think the Vikings fought any battle from their ships (they didn't really – there was no place to fire weapons from).

Generally, the more sails a ship has, the more it can take advantage of different types of wind (wind from different directions and at different speeds) and so the more versatile the ship is at sailing in different conditions. The ability to sail in all conditions is crucial to being able to sail the open ocean for long periods of time.

Younger students

You may like the students to label parts of the ships or to write descriptions of the ships. You can also do this as a class exercise by projecting the images onto the board and asking the class to discuss how the ships are similar and different.

Outcomes

The students can:

- Understand different types of Tudor ship.
- Understand how Tudor ships were different from ships that were used before.
- Describe a Tudor ship, in part.

Older students

Students might like to draw their own design for a Tudor ship, based on the ones they have studied here.

Outcomes

- Understand different types of Tudor ship.
- Understand how Tudor ships were different from ships that were used before.
- Describe a Tudor ship, in part.

Name:..... Form:.....

Based on **pages 6 to 11** of *Tudor Age of Discovery*

Loading the cannon

Here is some information about the guns on a carrack.

The guns could fire a cannon ball accurately to around 100 metres.

The sailors slept where the guns were kept (half the men slept while the other half worked). They had no blankets and the floor was hard. It was cramped as the ceiling was very low. When they loaded the cannon, the sailors had to stoop over. It would have been very dark and cold because the gun ports did not shut up tightly.

To load the guns

First, the windows were opened and the cannon were rolled so that they poked out of the windows. Then a device called a 'worm' was used as a pot scourer to clean the gun. Next, a swab with sheep skin at the end was used to clean inside the gun. Then Gunpower would be brought upstairs in buckets, from the barrels stored below. Next wadding would be put into the cannon – first sail cloth and then sheep's dung rolled into a ball. A long rod called a ramrod was used to press down the wadding. Gunpower would then be put into the hole at the top. The boat would be turned to aim the guns (the guns were too heavy to turn). A stick with a piece of string on one end was used to light the gun. The string would be dipped in urine to slow down the flame. Once lit, the string would be twirled to stop the flame going out. The captain would call "Have a care!" and the sailors would cover their ears. The string would be touched to the fuse and the cannon would go off.

There would be four sailors to each gun and they could do all of the steps above in less than 3 minutes.

Questions

1. What were conditions like in the gun room?

✎ .....
.....

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2. On the back of this sheet, make a list of the steps involved in shooting a cannon. How many steps are there?

✎ .....
.....

Loading the cannon

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

The information given here was taken from the Golden Hinde, but the situation would have been similar in any large ship of the time.

There were a number of steps involved in getting the cannon ready to fire and a trained crew could do them all in 3-4 minutes. This sounds like a lot of time, but not when you consider all the steps involved. Captains constantly drilled their men to get them as fast as possible because the ship that could shoot the fastest often won in a fight. In battle, the idea was to shoot the masts off the other ship so that it lost manoeuvrability and then they would board it.

You may want to ask the students if they thought the conditions during battle would have been dangerous. In fact, accidents were frequent during practice as well as battle. The cannon rolled back and forth so they had some 'give' when they fired. It was easy for people to get caught in the way. Add to this the smoke from the cannon fire, the darkness, the low ceiling, the deafening noise, the fire, the heavy cannon balls rolling around and it all adds up to a very dangerous environment – even without an enemy. Of course a well drilled crew should be a lot safer, which was another reason for the practice.

The cannon balls were usually kept down below, out of the way, and brought to the cannon when preparing for a battle.

Younger students

The students could answer the questions on their own or as a whole class discussion.

Outcomes

The students can:

- Have some understanding of the dangerous and cramped conditions on board a ship.
- Learn the sequence of events in firing a cannon.
- Understand a little of what was involved in fighting a battle at sea.

Older students

The students could answer the questions on their own. They might want to act out the steps involved in firing a cannon as part of their answer.

Outcomes

The students can:

- Have some understanding of how much food was needed on a long voyage.
- Calculate amounts using multiplication.
- Know some of the foods eaten on a sea voyage in Tudor times.

Answers

1. **Cramped, cold, dark, hard floor/ uncomfortable.**
2. **The steps are:**

   Open the windows.

   Roll the cannon out.

   Clean the gun.

   Swab the gun/clean the inside.

   Bring gunpowder upstairs.

   Place wadding into the cannon.

   Press the wadding with a ramrod.

   Load the gunpowder.

   Turn the ship.

   Dip the string in urine.

   Light the string and twirl it.

   The captain would call "Have a care!"

   The sailors would cover their ears.

   The string would be touched to the fuse.

   The cannon would go off.

Name:..... Form:.....

Based on **pages 6 to 11** of *Tudor Age of Discovery*

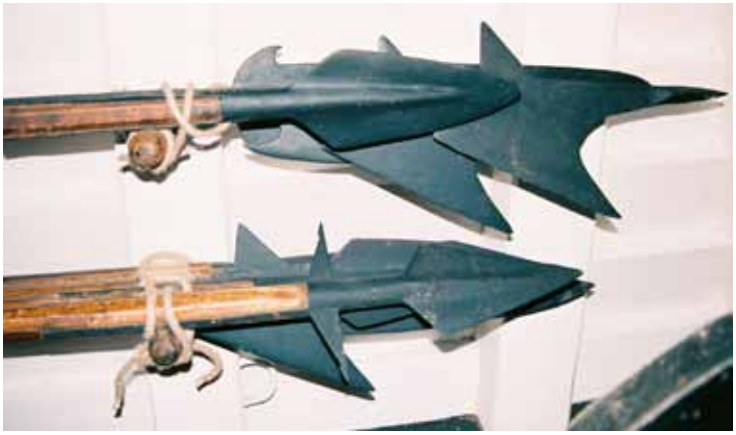
The armoury and capstans

Here is some information about the weapons carried on board a carrack.

There were three main types of weapons on board: crossbows, longbows and pole arms. The arrows of the longbows were up to 6 feet tall. The pole arms were long spears with spiky ends. If an enemy ship came alongside the men would stand in lines at the side each with a pole arm ready. Or they would hang a sheet of netting between the two masts. If the enemy tried to get on board they would have to cut their way through the net first. While they were doing that, the men would stand underneath and stab them with the pole arms.

The floor of the main deck and the armoury were always painted red on fighting ships so the sailors couldn't see the blood so easily. The top of the capstan was in the armoury. This joins the bottom part on the deck below. Attached to it a long rope went all the way round the ship. There were four anchor ports attached to this rope. The capstan would be turned by the men singing sea shanties to keep them going. As the capstan turned so the rope moves and the anchors are either raised or lowered. The anchors and rope would get covered in seaweed and muck. Small boys on the ship were used to clean the rope. This was called 'nipping the lines', which is where the phrase 'little nippers' (meaning children) that we use today comes from.

Pole arms.



The capstan.

The armoury and capstans

Age range .

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheets.

Using the worksheet

Here is some more information about the weapons used on board ship and about a few other important parts of the ship. Battles at sea were very brutal and there was usually not much room for mercy while the battle was going on. Because the fighting was in such close quarters, it was easy for men to get trampled or crushed. If the cannons broke lose, they usually crushed someone. The red colour helped the men concentrate and not lose their nerve when confronted with the sight of so much blood.

Every ship had a few small boys on board. This seems odd but was continued in the navy until the past 100 years or so. Officers were commissioned at about the age of 8. They would go to sea and learn as they went along, often being put in junior command positions by the age of 12.

In Tudor times the boys were not officers, but had been sent to sea by their parents, or were perhaps orphans. Because of their small size, the boys were given a variety of dangerous jobs, such as climbing the top mast to act as lookout and nipping the lines.

Younger students

The students could work on their own to answer the questions.

Outcomes

The students can:

- Learn about weapons on a Tudor ship.
- Learn how the anchor on a Tudor ship was raised and lowered.
- Extract information from a text.
- Understand the origin of a modern phrase.
- Learn about some of the jobs on a Tudor ship.

Answers

1. Crosbow, longbow, pole arms.
2. 6 feet.
3. Keeping the enemy off the ship, delaying the enemy.
4. To hide the blood.
5. The anchor would be raised or lowered.
6. Small boys.

Older students

The students could work on their own to answer the questions.

Outcomes

The students can:

- Learn about weapons on a Tudor ship.
- Learn how the anchor on a Tudor ship was raised and lowered.
- Extract information from a text.
- Understand the origin of a modern phrase.
- Learn about some of the jobs on a Tudor ship.

Answers

1. The arrows of the longbows were up to 6 feet tall. The pole arms were long spears with spiky ends. Crossbow was the third weapon.
2. Keeping the enemy off the ship, delaying the enemy.
3. If an enemy ship came alongside the men would stand in lines at the side with the pole arms to stab boarders.
4. Raised and lowered the anchor.
5. Small boys were given the job of "nipping the lines" – cleaning the ropes.

Name:..... Form:.....

Based on **pages 6 to 11** of *Tudor Age of Discovery*

Questions (i): Armoury and capstan

1. What were the three main weapons on board?

✎ .....

.....

.....

2. How long were the longbow arrows?

✎ .....

3. What was a net used for during battle?

✎ .....

.....

.....

4. Why was the floor of the armoury painted red?

✎ .....

.....

.....

5. What would happen when the capstan was turned?

✎ .....

.....

.....

6. Whose job was it to clean the ropes and anchors?

✎ .....

Name:..... Form:.....

Based on **pages 6 to 11** of *Tudor Age of Discovery*

Questions (ii) Armoury and capstan

1. Describe the three main weapons on board.

✎ .....

.....

.....

2. What was a net used for during battle?

✎ .....

.....

.....

.....

3. How were the pole arms used during battle?

✎ .....

.....

.....

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4. What did the capstan do?

✎ .....

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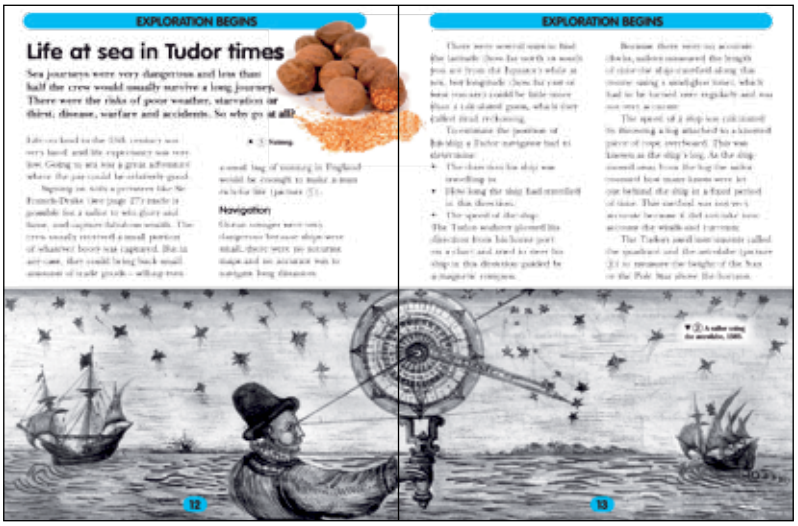
5. Where does the phrase little nippers come from?

✎ .....

.....

Spreads 5 and 6 (pages 12–15)

Life at sea in Tudor times



5

Life at sea was very treacherous and few sailors survived to enjoy a retirement on land. But the lure of the sea and of treasure was very strong and there was no shortage of sailors. Besides, life on land was no picnic in Tudor times either. Life expectancy was short and at sea there was at least a chance for adventure and treasure.

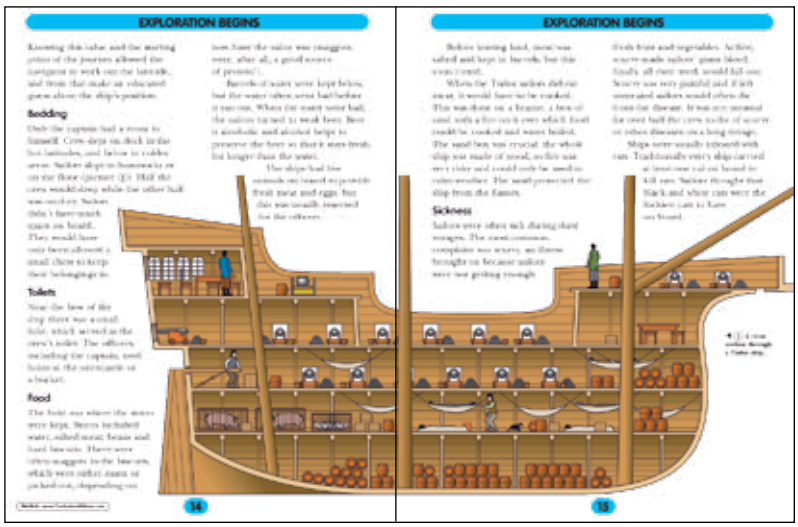
Navigational science of the period was a rather hit or miss affair, particularly out of sight of land, and was basically to remain so until the mid-18th century. The tools of the pilot or navigator in Tudor times were relatively crude. The spyglass, later to be called the telescope, did not evolve until the early part of the 17th century, and a means of scientifically anticipating the weather was not available until the arrival of the barometer in 1643. No adequate survey of the British coastline existed until the end of the 16th century.

Nevertheless, the 16th century saw tremendous advances in the science of navigation. Seamen had evolved rule of thumb methods of using the Sun, stars and Moon for direction finding since time out of mind, but now the scholar and the pilot were to work in unison in Portugal. The pilot was taught to use instruments and it is interesting to note that Sir Francis Drake used Portuguese pilots.

One of the basic items of navigation was the lead and line, essential for letting the pilot know the water depth, and at the same time, the nature of the seabed. This latter information was useful in helping them to identify the section of coast, the distance off shore and for locating suitable holding ground to anchor in. This was achieved by sticking a piece of tallow in the bottom of the lead, allowing sand, shingle and shells to adhere to it.

The lead weighed 7lbs or 14lbs, with 28lbs for a deep sea lead, weights that are still the same. The line was marked with pieces of cloth, rope and leather at certain fathom marks so that the leadsman could identify the nearest mark by sight during the day and by feel at night.

The ‘Log’ was used to measure the speed of a ship through the water. A piece of wood with a ‘stray’ line attached was thrown off the stern of the ship until it



6 A

6 B

6 C

floated clear. This stray line was in turn attached to a rope reeled on a hand held drum. As the ship moved away from the floating log the reel turned and the rope was allowed to run off for a specified period of time measured by a sand glass. The line was marked by knots in the rope at proportionate distances and at the end of the specified period the number of knots to run off the reel was recorded. This gave rise to the term 'knots' to express nautical miles per hour. The 'league' was the common usage for expressing distances in Tudor times.

Finding the ship's position when in sight of land wasn't too difficult, except when exploring uncharted waters. Pilots became familiar with land marks, water colour, scent of the sea, tidal stream lore, even the smell of a certain area. This led to the sensible policy of employing pilots for a specific area, as with Trinity House pilots today. It is noteworthy that the Trinity House for the Advancement of Navigation and Training in Pilotage was formed by Henry VIII in 1514. Thomas Spert, Master of the Mary Rose in 1513, was appointed master of Trinity House at its inception.

The pilot was directly concerned with the science of astronomy, he needed to know the 'age' and bearing of the Moon for the purpose of tidal prediction. Tide tables were already in being, although the true cause of tides was not yet understood.

5

Name:..... Form:.....

Based on **pages 12 to 15** of *Tudor Age of Discovery*

Life at sea

Here is a newspaper story about some problems on a Tudor ship.

Seamen are complaining about the conditions aboard Britain's sea-going ships.

The men claim they are forced to starve during long voyages because either the food is rotten – or it has run out.

Most of the food stored on board ship is preserved by drying, salting or pickling, making it taste bad. There is little fresh food and dry goods, like ship's biscuits, become riddled with little white worms called weevils.

Even the water turns green and rancid over a period of time, forcing the men to drink beer instead.

Any animals that are kept on board, like cows and hens, are saved for the officers.

Many sailors think lack of fruit and vegetables has led to them suffering a disease called scurvy which has made their skin erupt in sores – and their teeth drop out.

Conditions between the decks where the sailors sleep are very cramped and filthy and infested with rats and mice – which they sometimes kill and eat.

Other sailors complain that they are often wet, cold and tired. They often work four hours on and four hours off, giving only four hours of sleep at a time. The only toilet is a hole in the front of the boat.

The men are demanding ships be fitted with a new sort of bed called a hammock, brought out this year (1596). The bed, made of canvas and rope, will keep them from sleeping on the floors.

Life at sea

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

You may wish to use this as part of literacy hour. You may like the students to use the text here as an example and have the students write their own newspaper account of a problem with life at sea.

There were many difficulties with life at sea. Lack of fresh food and cramped, cold or hot conditions were some of them. Students may like to make a list of some of the difficult or unpleasant parts of life at sea and use this as the basis for a newspaper article or a diary of a sailor.

You may also like to ask the students some of the following questions about the text.

Questions (and answers)

1. What are the sailors complaining about? (Conditions at sea)
2. Why do the men have to drink beer? (The water turns rancid)
3. Who gets to eat fresh meat and eggs? (Officers)
4. Where is the bathroom? (A hole at the front of the boat).
5. Why are they demanding hammocks? (So they do not have to sleep on the floor)

Younger students

You may like the students to read through the article as a class and then write their own newspaper story.

Outcomes

The students can:

- Understand some of the conditions of life on a Tudor ship.
- Know how to write a newspaper style article.
- Extract information from a text.
- Think of some difficulties or problems with life at sea and write about them.

Older students

Students may work on their own or in groups to read through the article and write their own story.

Outcomes

The students can:

- Understand some of the conditions of life on a Tudor ship.
- Know how to write a newspaper style article.
- Extract information from a text.
- Think of some difficulties or problems with life at sea and write about them.

Name:..... Form:.....

Based on **pages 12 to 15** of *Tudor Age of Discovery*

Feeding the crew

Here are some rations for one sailor for one week:

7lb (3kg) ship's biscuit
7 gallons (27 litres) beer
8lb (3.5kg) salt beef
3/4lb (340g) salt fish
1/2lb (250g) butter
3/4lb (340g) cheese

Now fill in the chart below to see how much food would have been eaten by one man, and by 150 men on a 50 week voyage.

	1 sailor for 1 week	1 sailor for 50 weeks	150 sailors for 50 weeks
biscuit			
beer			
salt beef			
salt fish			
butter			
cheese			

Feeding the crew

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

Students may have a difficult time visualising how much food was needed on a long voyage. This activity will help them to see the vast quantity of food needed. You might want to begin by bringing in the amounts of food given here (you can use fresh meat and fish for the salt beef and fish, or simply bags of flour or another substance that weighs the same amount if you don't feel like buying 8 pounds of beef all at once, and use litre bottles of water instead of beer).

Once the food and drink is all laid out it looks like a huge amount. But remember that the sailors actually did hard labour most of the time. The amount of beer seems like a huge amount. But on a long voyage the water would have gone bad fairly quickly – it would have become contaminated with salt water and was probably not very good to begin with. Beer, because it had hops in it, lasted longer and so sailors drank it instead of water. Also, the beer would have been relatively weak and probably did not get the men drunk.

You might also want to ask the children how they think the butter and cheese were kept fresh. These items were stowed in the hold, below the water line, where it was a bit cooler. The cheese may also have been wrapped in vinegar soaked cheesecloth, which would prevent the growth of bacteria and mould. However, they did go off pretty quickly. When that happened, the sailors ate them anyway, but used hot sauces to disguise the taste. The biscuits would also become infested with weevils, which the sailors would pick out before eating them.

The ship's biscuits was very hard, and sailors who had lost teeth to scurvy would only be able to eat them by soaking them in beer first.

Younger students

The students could fill in the chart on their own or in groups.

Outcomes

The students can:

- Have some understanding of how much food was needed on a long voyage.
- Calculate amounts using multiplication.
- Know some of the foods eaten on a sea voyage in Tudor times.

Older students

The students could answer the questions on their own or in groups.

Outcomes

The students can:

- Have some understanding of how much food was needed on a long voyage.
- Calculate amounts using multiplication.
- Know some of the foods eaten on a sea voyage in Tudor times.

Answers

	1 sailor for 1 week	1 sailor for 50 weeks	150 sailors for 50 weeks
biscuit	3kg	150kg	22,500kg
beer	27 litres	1,350 lit	202,500 lit
salt beef	3.5kg	175kg	26,250kg
salt fish	340g	17,000kg	2,550,000kg
butter	250g	12,500kg	1,875,000kg
cheese	340g	17,000kg	2,550,000kg

Name:..... Form:.....

Based on **pages 12 to 15** of *Tudor Age of Discovery*

Jobs on a Tudor ship

Here are some jobs on a Tudor ship.

Captain: Responsible for the running of the ship. In complete charge of everything – his word is law. He makes all the decisions. Captains were usually members of the aristocracy.

Master: A professional seaman. In charge of the day to day running of the ship. Masters of the larger King's Ships were probably drawn from wealthy families.

Barber surgeon: A surgeon and his mate were usually carried on board, to deal both with disease and injuries. They usually had little training, but were good with knives. The barber surgeon also provided shaves.

Carpenter: The position of the carpenter, on a warship made entirely of wood, was very important. The carpenter and his mates were responsible for all repairs to the ship.

Pilots: Also called a lodesmen. A professional seaman who may have been appointed for specific voyages in sea areas for which he had local knowledge. The pilot is responsible for taking measurements and soundings, plotting the ships course and keeping the daily log of the ship's movements. Some pilots also had their own maps, which they kept secret.

Boatswain, master's mate and quartermaster: These men were professional sailors who assisted in the running of the ship. The quartermaster was in charge of all the supplies. The boatswain and master's mate were in charge of assigning work to the men and making sure it was carried out.

Purser, master gunner, steward and cook: Along with the carpenter, there were craftsmen and junior officers who were paid at least twice as much as an ordinary seaman.

Mariner: An ordinary sailor. Mariners were usually landsmen driven by poverty to take to the sea.

Soldier: These were not professional soldiers, but came from the county militia. They would have had some expertise with the longbow, and received some basic military training.

Gunners: Professionals who specialised in the maintenance, aiming and firing of the cannon. They were responsible for keeping the cannon in good working order and for training the seamen on how to fire the cannon in battle.

Jobs on a Tudor ship

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

You may wish to use this as part of literacy hour. You may like the students to use the text here as an example and have them write their own descriptions of what it would be like to do one of the jobs given here.

Most of the people on board the ship would have been ordinary mariners, or seamen. The other jobs listed here are all specialised positions of one type or another. Except for the mariners and soldiers, the people here would usually all have had assistants as well.

You may like to begin by asking the students whether or not the jobs sound difficult, pleasant or unpleasant. Many students might say that the job of captain sounds like the best job. Of course, the captain also had the most responsibility – and if he failed in his mission then he took all the blame.

You may also like to discuss if any jobs seem to be missing from this list. You could point out that on the ship, sailors did their own laundry and cleaning – and they also did the cleaning for the officers.

You may also like to ask the students the following questions about the text:

Questions (and answers)

1. What person (or people) was responsible for assigning work and making sure it was carried out? (boatswain and master's mate)
2. Who was in charge of the supplies? (quartermaster)
3. What job was usually taken by landsmen who went to the sea to escape poverty? (mariner)
4. Who was in charge of repairing the ship? (carpenter)
5. What did the pilot do? (take measurements and soundings, plot the ship's course and keep the daily log of the ship's movements)

Younger students

You may like the students to read through the article as a class and then write about what job they would like to have and why (girls should pretend that all the jobs are open to women as well as men).

Outcomes

The students can:

- Learn about some of the jobs on a Tudor ship.
- Extract information from a text.
- Think of some difficulties or problems with life at sea and write about them.

Older students

Students may work on their own or in groups read through the article and write a story about the jobs on a ship.

Outcomes

The students can:

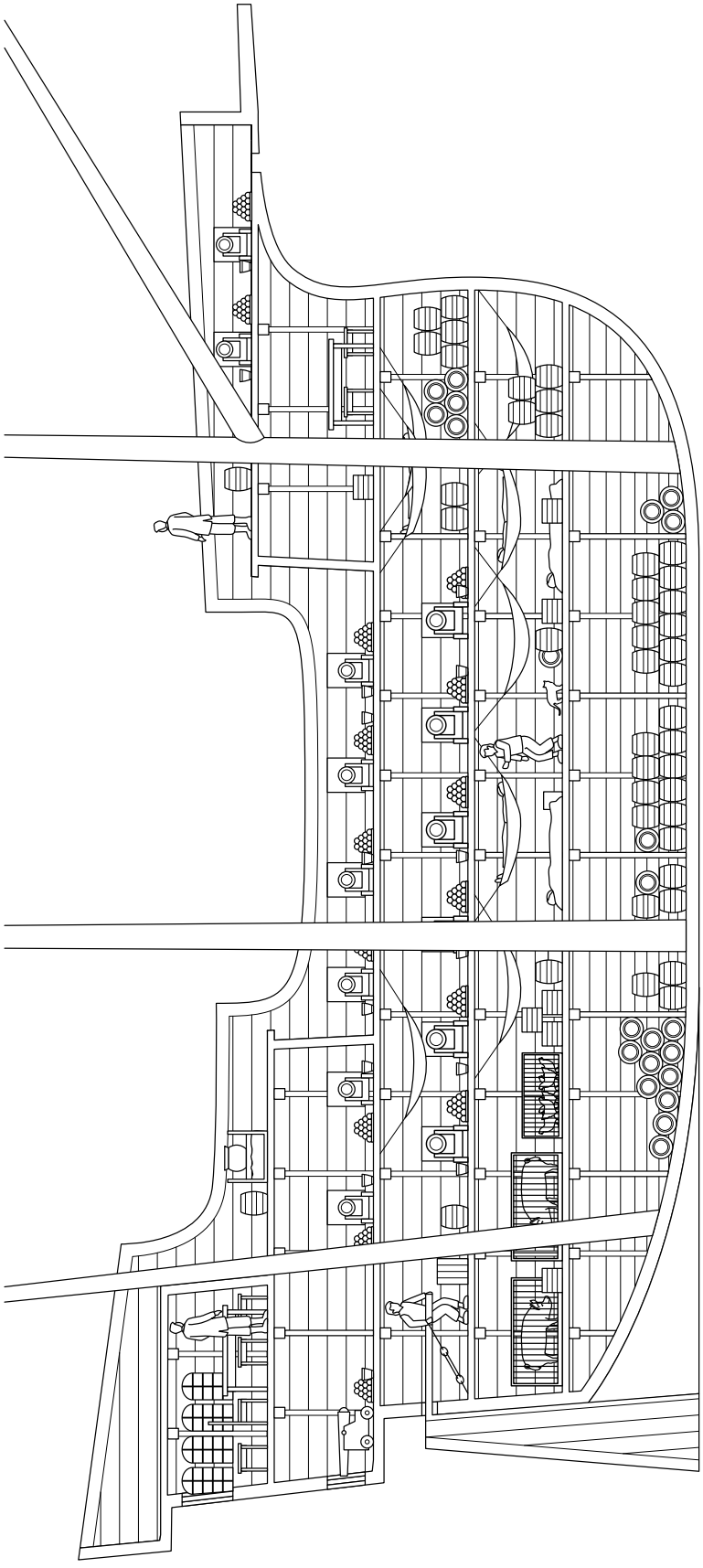
- Learn about some of the jobs on a Tudor ship.
- Extract information from a text.
- Think of some difficulties or problems with life at sea and write about them.

Name:..... Form:.....

Based on **pages 12 to 15** of *Tudor Age of Discovery*

A Tudor ship

Here is an outline of a Tudor ship. Draw in and label all the parts of the ship that you know.



A Tudor ship

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This is an opportunity for students to review some of the parts of the Tudor ship and what they know about the ship. You may like to use this as a review or as part of a report on the Tudor Age of Discovery.

Students can either work from memory or use the information in the 'Exploration begins' chapter of the student book to help them.

Before you begin, you may like to go over some of the people on the ship and on what part of the ship they would have worked, slept, ate, etc. Students could also use their knowledge, from reading and the activities in this *Teacher's Resources*, to add some extra things that are not in the illustration on pages 14–15, for example, the kitchen. They will have to use educated guesses to add these in, based on what they have read.

Younger students

Students may need to refer to the pages in the student book to fill in the diagram.

Outcomes

The students can:

- Learn about the different parts of a Tudor ship.
- Compare diagrams.
- Extract information from a diagram.
- Label a diagram.

Older students

Students may like to work from memory to label the parts of the ship. They may also like to add in some of the people and label who they are. For example, gunner standing next to the guns, captain on deck, etc.

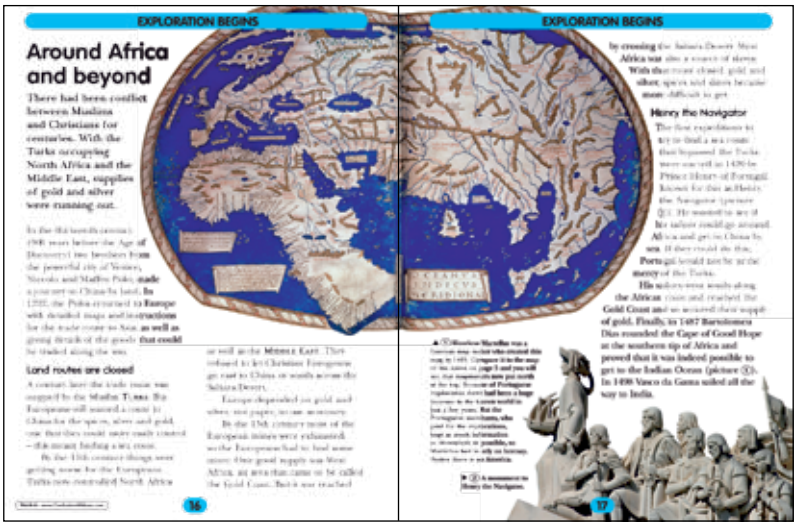
Outcomes

The students can:

- Learn about the different parts of a Tudor ship.
- Compare diagrams.
- Extract information from a diagram.
- Label a diagram.

Spread 7 (pages 16–17)

Around Africa and beyond



Europeans had long known that the lands of Asia were very wealthy, and trade goods such as silks and spices had been reaching Europe from China, India and the Indies (Spice Islands) since Roman times. However, links between the Europeans and the Asians were broken by hordes of barbarians who overran China, India and Europe in the fourth and fifth centuries AD.

Halting trade was re-established, but when Islam came to North Africa, the Eastern Mediterranean, Spain and France, hostilities between the Christian and Muslim Kingdoms again led to the cutoff of trade routes to the East for hundreds of years.

In the thirteenth century, nomadic Mongols captured most of Eurasia, Korea and Hungary, and united them under one rule. For the first time in centuries, Europeans could travel unmolested to China.

Two brothers from the powerful city of Venice, Niccolo and Maffeo Polo, undertook their first journey to China by land in the early 1260s. They met the Mongol Emperor, Kublai Khan, and eventually returned to Venice.

In 1271, the Polos undertook a second journey, bringing Niccolo's young son Marco (then 15 years old) with them. In 1292, the Polos returned to Europe with detailed maps and instructions for the land trade route to Asia, as well as details of the goods that could be traded along the way.

Although the Polo's trip sounds very exciting, Marco's record of the journey is very dry and concentrates on what people were most interested in – directions for the overland route. His book included details about where to stay, what goods could be traded where and how to best conduct trade. These were all key facts that traders needed to know.

Although the land route across Central Asia closed after the collapse of the Mongol empire a century later, Europeans were so inspired by Marco Polo's accounts that they were determined to re-establish routes of their own to the riches of the East. Europeans wanted access to Asia's wealth that they could more easily control – this meant a sea route.

Although the Mongols were Muslims, they were friendly to trade. But by the 15th century the Turks had risen to power in Africa and elsewhere. Because of the long history of the Crusades, the Turks were not very amenable to Christian traders crossing their lands. Of course, this was more practical than religious – the Turks wanted to control all the trade routes themselves, and keep all the profits.

Prince Henry the Navigator was the third son of King John I, the founder of the Aviz dynasty, and of Philippa of Lancaster, the

daughter of John of Gaunt. In 1415, Henry encouraged his father to conquer Ceuta, the Muslim port on the North African coast across the Straits of Gibraltar from the Iberian peninsula, with profound consequences on Henry's worldview: Henry became aware of the profit possibilities in the Saharan trade routes that terminated there and became fascinated with Africa in general, and with expanding Portuguese trade.

About 1418, Prince Henry started the first school for oceanic navigation along with an astronomical observatory at Sagres, Portugal. In this school, people were trained in navigation, map-making and science.

At this time, no Europeans had sailed past the treacherous Cape Bojador and returned alive. Cape Bojador is on the coast of Africa just below latitude 27° North (off the western Sahara Desert) and had frequent, violent storms and strong currents. The Europeans called the ocean beyond that point the 'Sea of Darkness'.' Most sailors refused to go there. Prince Henry sent 14 expeditions there over 12 years, trying to go farther than Cape Bojador. Finally, he convinced Gil Eannes to try, and Eannes succeeded in 1434.

On Eannes' first trip down the coast of Africa in 1433, he only sailed as far as the Canary Islands. In 1434, Eannes rounded Cape Bojador, and then landed on the coastal desert. He found no people there, only a few hardy plants, including 'Saint Mary's roses', which he brought back to Portugal as proof of his accomplishment.

Eannes made another journey in 1435, again rounding Cape Bojador and sailing south. About 50 leagues past the cape, they entered a large bay and saw a caravan of men and camels. Eannes named the river Rio de Ouro (meaning river of gold).

In 1441, Prince Henry became involved in the slave trade when explorer Antao Gonçalves returned from Rio de Ouro with captives. Nuno Tristao reached Cabo Blanco that same year.

Many years later, in 1455, Prince Henry sent the Venetian navigator Alvise da Cadamosto on two expeditions. On the first, in 1455, Cadamosto reached the mouth of the Gambia River (in west Africa). On the second, in 1456, Cadamosto sailed up the Gambia river to the Geba River. He tried trading with the Africans but was unsuccessful.

In 1458, Prince Henry sent Diogo Gomes (1440–1482) on an expedition that sailed as far as Cape Palmas. Prince Henry died in 1460, the year that this expedition returned.

In 1488, Batholomew Dias led the first European expedition to sail around Africa's Cape of Good Hope, leaving Tagus, Portugal, in 1487. This breakthrough of circumnavigating the Cape of Good Hope opened up lucrative trading routes from Europe to Asia.

Dias may have originally called the southern tip of Africa the 'Cape of Storms'; it was later renamed the Cape of Good Hope. On a later expedition (in 1500, with Pedro Álvares Cabral), Dias sailed near South America on the way to Africa, and spotted land at Espírito Santo in Brazil, calling it the 'Land of the True Cross'. Although they thought it to be an island, Dias was still among the first Europeans to see Brazil. Dias died during this expedition; he was lost at sea near the Cape of Good Hope in 1500.

It was the Portuguese explorer Vasco da Gama (1460–1524) who finally sailed from Europe to India.

Da Gama was born to a noble family in Sines, Portugal. Da Gama's father Estavao was also an explorer. He was to have made the sea voyage from Portugal to India that eventually made his son famous, but the elder da Gama died before completing the journey.

Vasco da Gama sailed from Lisbon, Portugal, on 8 July, 1497, heading to the East. At the time, many people thought that da Gama's trip would be impossible because it was assumed that the Indian Ocean was not connected to any other seas.

Da Gama rounded Africa's Cape of Good Hope on 22 November, and continued on. After many stops in Africa, and problems with Muslim traders who did not want interference in their profitable trade routes, da Gama reached Calicut, India on 20 May, 1498.

At first, da Gama and his trading were well-received, but this did not last for long. Da Gama left India on 29 August, 1498, after he was told to pay a large tax and leave all of his trading goods. When he left, da Gama

took his goods with him, together with some Indian hostages.

Da Gama returned to Lisbon, Portugal, in September, 1499. Upon his return, da Gama was treated as a hero and was rewarded by the king.

King Manuel I of Portugal then sent da Gama, now an Admiral, on another expedition to India (1502–1503). On this second trip, da Gama took 20 armed ships as a show of power.

After King Manuel's death, King John III sent da Gama to India as a Portuguese viceroy. Da Gama died of an illness in India on 24 December, 1524.

Although these were triumphant voyages of exploration, you may like to remind students that they were also the beginning of the slave trade, and of what would become the eventual destruction of the empires and peoples of the Americas.

7

Name:..... Form:.....

Based on **pages 16 and 17** of *Tudor Age of Discovery*

Portuguese voyages of discovery

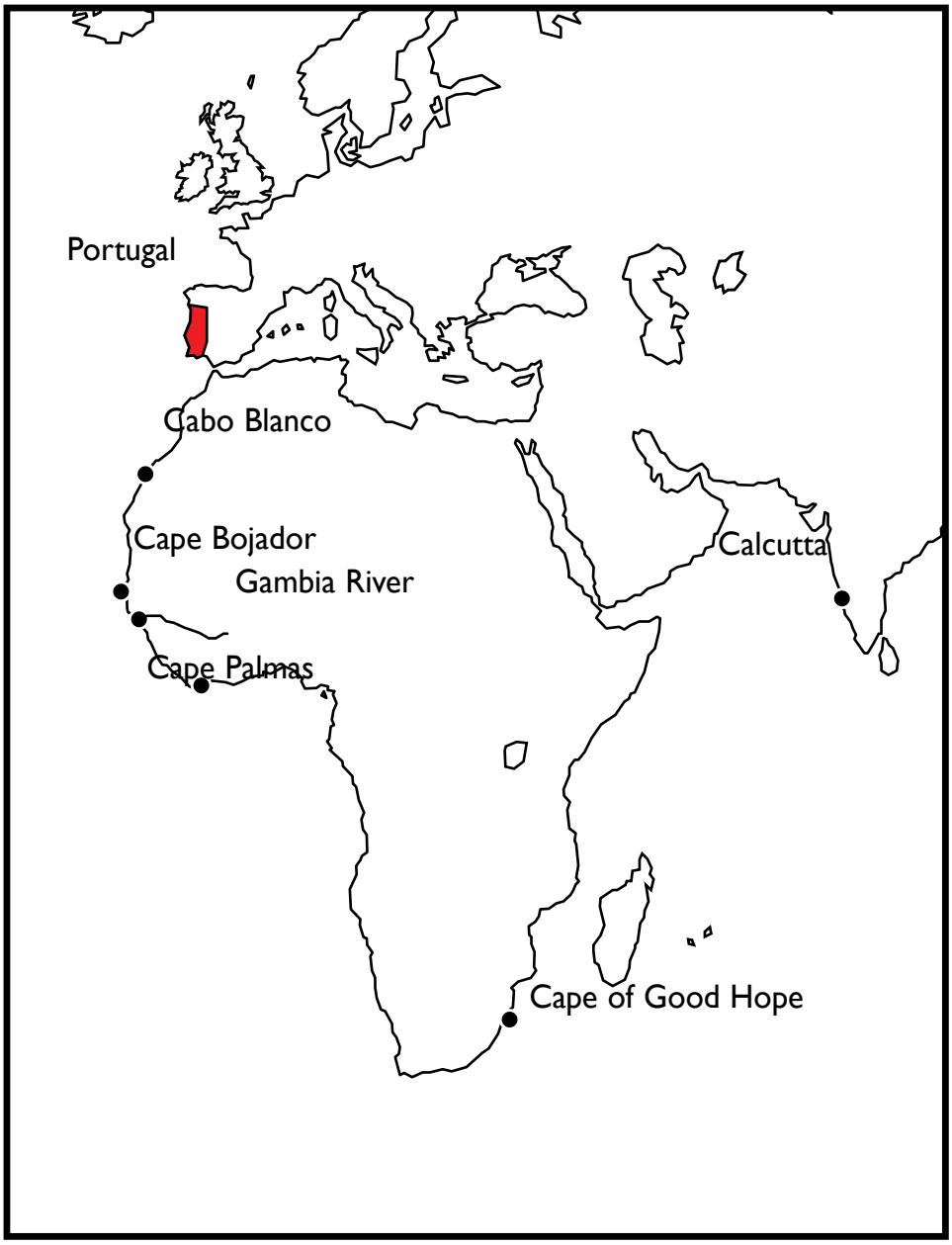
The voyages of discovery made by the Portuguese set the stage for later Tudor voyages. Use the information below to trace the route of the Portuguese explorers on a map.

Nuno Tristao: From Portugal to Cabo Blanco.

Diogo Gomes: From Portugal to Cape Palmas.

Alvise da Cadamosto: From Portugal to the mouth of the Gambia River (in west Africa).

Vasco da Gama: From Portugal, around the Cape of Good Hope and on to Calcutta, India.



Portuguese voyages of discovery

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet. Coloured pencils. World atlas or globe.

Using the worksheet

Although this book focuses on the Tudor voyages of discovery, it is important for students to know that those voyages did not happen in a vacuum. There was a reason why the Tudors went on their voyages, and why they were possible.

The Portuguese voyages not only set the stage by showing what was possible, the set the stage by providing competition. Once the Portuguese had found a route to Asia and Africa, everyone wanted to capture some of the wealth. In fact, they had to capture some of the wealth to stay powerful. So, the Portuguese voyages encouraged the Tudor voyages and made them more urgent.

Details of the Portuguese voyages are given on the preceding pages of this *Teacher's Resources*, and you may want to review these with the students first. Or, you may chose to simply explain that the explorers mentioned on the worksheet are all Portuguese who were encouraged and paid by Henry the Navigator to try and find a sea route to Asia.

Students can see that each explorer went a little further, until finally da Gama was able to go round the Cape and sail on to India.

Younger students

The students can work on their own to draw the routes on the map. They may want to refer to a modern atlas or globe as well. They may like to use different coloured pencils or pens to mark each route.

Outcomes

The students can:

- Learn the routes used by Portuguese explorers.
- Learn where some of the parts of Africa are.
- Understand that the Portuguese explorers were the first Westerners to pioneer a sea route to Asia.

Older students

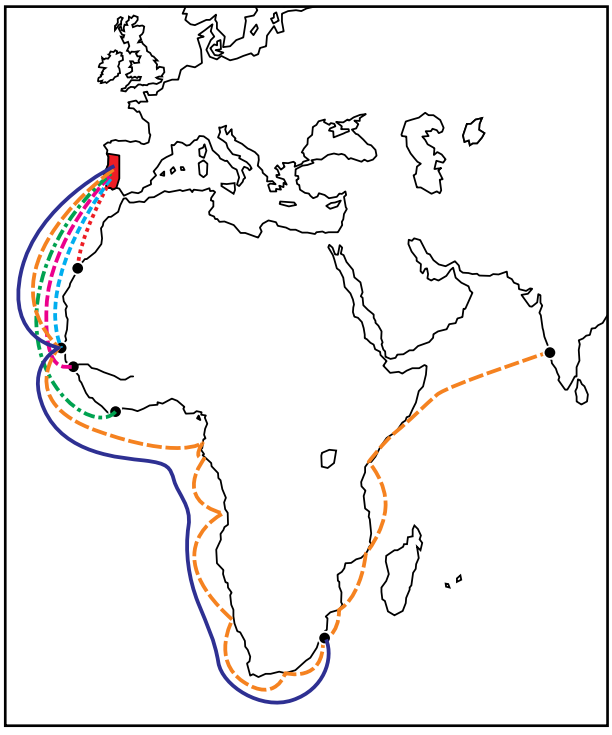
The students can work on their own to draw the routes on the map. They may want to refer to a modern atlas or globe as well. They may like to use different coloured pencils or pens to mark each route.

Students may also want to research the explorers mentioned here and draw more detailed maps of their voyages.

Outcomes

The students can:

- Learn the routes used by Portuguese explorers.
- Learn where some of the parts of Africa are.
- Understand that the Portuguese explorers were the first Westerners to pioneer a sea route to Asia.



Chapter 3: Competing for wealth

Spread 8 (pages 18–19)

The great western adventure

8A

8B

8C

The voyages of Columbus continue to be quite controversial today. Although Columbus did not actually land on the mainland of the Americas during his first voyage (in 1492), this first voyage represents, to many people, the beginning of the destruction of the Native American people and empires. However, it is important to remember that Columbus himself was very friendly with the people he met – the destruction and genocide came a bit later.

It is generally believed that Columbus was born in Genoa. He had difficulty obtaining funding for his voyages because his plans were based on a different interpretation of the navigational science of the time and on the size of the Earth.

Most scholars of Columbus' day believed Ptolemy's claim that Eurasia and Africa occupied 180 degrees of the terrestrial sphere, leaving 180 degrees of water.

Columbus, however, believed the calculations of Marinus of Tyre, putting the landmass at 225 degrees, leaving only 135 degrees of water. Columbus also believed one degree represented a shorter distance on the Earth's surface than was commonly held. Columbus calculated the circumference of the Earth as 25,255 kilometres at most, and the distance from the Canary Islands to Japan as 2,300 miles (3,700 km).

Columbus' problem was that experts did not accept this estimate. In fact, Columbus was completely wrong.

The true circumference of the Earth is about 40,000 km (25,000 sm), a figure established by Eratosthenes in the second century BC, and the distance from the Canary Islands to Japan 19,600 km (12,200 sm). No ship in the 15th century could carry enough food and fresh water for such a journey. Most European sailors and navigators concluded, correctly, that sailors undertaking a westward voyage from Europe to Asia non-stop would die of thirst or starvation long before reaching their destination.

Luckily for Columbus, although his calculations and theories were wrong, the space to the west between Europe and Japan was not made up of uninterrupted water, but contained two very large landmasses – North and South America (and a multitude of islands). So, you could say that Columbus

blundered into the Americas. In fact, he believed he had found Asia.

Luckily, too, although Ferdinand and Isabella of Spain did not believe Columbus' theories any more than anyone else, and had very little money after the long military battle to eject the Moors from Spain, they were willing to take a chance that Columbus might be right.

Columbus made three voyages to the 'New World'. On the first (1492–1493) he sailed to the Bahamas. Exactly which island in the Bahamas he landed on is still up for debate. The indigenous people he encountered were peaceful and friendly.

Columbus also explored the northeast coast of Cuba and the northern coast of Hispaniola. On his return, Columbus insisted he had found Asia and that the lands he saw were filled with riches. This was pure fiction – Columbus made stuff up willy nilly in order to get his investors to stump up for a return trip, which they did.

On his second voyage (1493–1494), Columbus sailed to more islands in the Indies, including Jamaica, Cuba, Hispaniola and others. He again found no gold or riches, and again lied his head off on his return.

On his third voyage (1498–1499), Columbus sailed to the Canary Islands and Cape Verde. He explored the mainland of South America, including the Orinoco River and sighted and named Tobago (Bella Forma) and Grenada (Concepcion).

Columbus returned to Hispaniola on 19 August to find that many of the Spanish settlers he had brought there on earlier voyages were discontented, having been misled about the supposedly bountiful riches of the new world.

On his return to Spain, no one believed any longer that the New World was filled with riches, and Columbus was sent to jail and had to fight several lawsuits in the courts. But when gold was discovered on Hispaniola all was forgiven.

On Columbus' fourth voyage (1502–1503), he sailed to Central America.

It may seem strange that the Pope arbitrarily divided the world between the Spanish and the Portuguese. It is almost funny to imagine what the Chinese, sitting on a huge and advanced empire, might have thought on hearing that the Pope had given their country to the Portuguese.

In fact, the decision had no effect on such developed peoples. But it did have a major effect on Spain and on the rest of Europe. Frozen out of the East by the Pope, the Spanish now had to concentrate on the West, on the Americas. The British, meanwhile, would have to fight both the Spanish and the Portuguese for any new lands.

Name:..... Form:.....

Based on **pages 18 and 19** of *Tudor Age of Discovery*

Columbus' voyage

Columbus' journal of his first voyage to America was lost. However, we do have part of a journal written by Bartolome de las Casas in the 1530s. Las Casas was an historian and he had seen Columbus' original journal. Las Casas wrote this version of Columbus' first voyage as he remembered it from Columbus' journal.

Thursday 11 October, 1492

The course was west south west, and there was more sea than there had been during the whole of the voyage. They saw sand-pipers, and a green reed near the ship. Those of the caravel Pinta saw a cane and a pole, and they took up another small pole which appeared to have been worked with iron; also another bit of cane, a land-plant, and a small board. The crew of the caravel Niña also saw signs of land, and a small branch covered with berries. Everyone breathed afresh and rejoiced at these signs.

After sunset they went along at the rate of 12 miles an hour. Up to two hours after midnight they had gone 90 miles. As the caravel Pinta was a better sailer, and went ahead, she found the land. The land was first seen by a sailor named Rodrigo de Triana. But Columbus, at ten o'clock, saw a light, though it was so uncertain that he did not know it was land. He called Pero Gutierrez, a gentleman of the King's bedchamber, and said that there seemed to be a light, and that he should look at it. He did so, and saw it.

Columbus then asked and admonished the men to keep a good look-out on the forecastle, and to watch well for land; and to him who should first cry out that he saw land, he would give a silk doublet, besides the other rewards promised by the King and Queen, which were 10,000 maravedis to him who should first saw it. At two hours after midnight the land was sighted.

Columbus ordered the three ships to halt and wait for daylight before venturing further.

Friday 12 October

The vessels were anchored, waiting for daylight; and on Friday they arrived at a small island of the Lucayos, called, in the language of the Indians, Guanahani. Presently they saw naked people. Columbus went on shore in the armed boat, and Martin Alonso Pinzon, and Vicente Yanez, his brother, who was captain of the Niña.

Having landed, they saw trees very green, and much water, and fruits of diverse kinds. Columbus called to the two captains, and to the others who leaped on shore and said that they should bear faithful testimony that he, in presence of all, had taken possession of the island for the King and for the Queen his Lords.

Shortly after landing, many of the island's inhabitants assembled on the beach and Columbus gave them gifts of red hats and beads. The natives reciprocated with gifts of parrots, cotton and other goods. In describing the natives, Columbus wrote: "They go as naked as when their mothers bore them, and so do the women, although I did not see more than one girl. They are very well made, with very handsome bodies."

Columbus' voyage

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

You may like to use this activity to discuss with students the differences between primary and secondary sources. This journal was an account written by Columbus' biographer, Las Cases. Las Cases had seen Columbus' original journal, but this version is only based on the original, so it is a secondary source. Some of the words have been changed to make it easier to read.

You may want to begin by reviewing Columbus' trip in greater detail. Some more information is given on the preceding pages of this book.

Although this is a study of Tudor exploration, it is important for students to see that Tudor exploration was a result of and in addition to, other explorations that were happening at the same time. So, an understanding of Columbus' trip is important to understand Tudor exploration in the context of the times, the political realities and other explorations that were going on at the same time.

Columbus' flagship, the Santa Maria, grounded on a reef and sank on Christmas Eve. Because of limited space on the remaining ships, Columbus was forced to leave about 40 of his crew on the island of Hispaniola in a fort built from the remains of the wrecked ship.

The maravedí was a coin used in Spain for several centuries. It was originally a gold coin issued by the Moors. Adopted by the Christian states, it declined in value, becoming first a silver coin, then a copper coin. According to estimates, King Charles I of Spain financed Ferdinand Magellan's epic voyage around the Earth for 8,751,125 maravedis in March of 1518.

It was last issued in the 1850s, when the Spanish currency was changed to a decimal system based on the real de vellón, previously worth 34 maravedíes.

Younger students

You may like to go over the journal entry with students and discuss the meanings of any words they do not understand. You may like the students to discuss or write down what happened in their own words. Students can work on their own to answer the questions.

Answers

1. Nina and Pinta.
2. A sailor named Rodrigo de Triana.
3. A gentleman of the King's bedchamber.
4. Guanahani.
5. They were waiting for the light.
6. Parrots, cotton and other goods.

More able students can try the questions for the older students.

Outcomes

The students can:

- Extract information from a text.
- Learn how the Americas were first sighted by Columbus' men.
- Understand a little of what happened on a Tudor ship of exploration when a new land was sighted.

Older students

Students can work on their own to answer the questions.

Answers

1. Sand pipers, a green reed, a cane and a pole, and another small pole which appeared to have been worked with iron; also another bit of cane, a land-plant, and a small board.
2. A silk doublet and 10,000 maravedis.
3. Trees, water and fruits.
4. Red hats and beads.
5. Nothing.
6. The two captains and others who leaped on shore.

Outcomes

The students can:

- Extract information from a text.
- Learn how the Americas were first sighted by Columbus' men.
- Understand a little of what happened on a ship of exploration when a new land was sighted.

Name:..... Form:.....

Based on **pages 18 and 19** of *Tudor Age of Discovery*

Questions (i): Columbus' voyage

1. The names of two caravels are given in the first paragraph, what are they?

✎ .....

.....

2. Who saw land first?

✎ .....

3. Who was Pero Gutierrez?

✎ .....

.....

4. What was the name of the island where Columbus landed first?

✎ .....

.....

5. Why were the ships anchored on Friday night?

✎ .....

.....

6. What gifts did the natives give to Columbus?

✎ .....

.....

Teacher's sheet

Based on **pages 18 and 19** of *Tudor Age of Discovery*

Questions (ii): Columbus' voyage

1. What signs of land did the Pinta find?

✎ .....

.....

2. What was the reward for the first person to sight land?

✎ .....

3. What did Columbus and his men see when they landed?

✎ .....

.....

.....

4. What gifts did Columbus give to the natives?

✎ .....

.....

.....

5. What were the natives wearing when Columbus met them?

✎ .....

.....

.....

6. Who witnessed Columbus taking possession of the land?

✎ .....

.....

Spreads 9 and 10 (pages 20–23)

England's search for wealth


COMPETING FOR WEALTH

England's search for wealth

Spain and Portugal had begun to divide up the New World and the Far East between them before England joined in the race. Now it was time for the English to get some of the wealth for themselves.

John Cabot

Ignoring the Pope

Portugal loses out

20

COMPETING FOR WEALTH

"well-beloved John Cabot... to seek out, discover and find whatsoever isles, countries, regions or provinces... which before this time have been unknown to all Christians."

21

Spain and Portugal had a head start on England and grabbed many valuable lands for themselves. Now it was England's turn. At this point, England had to take what was left – North America. Like many explorers of his day, Cabot was an 'explorer for hire' – he was willing to work for whoever would finance his trips.

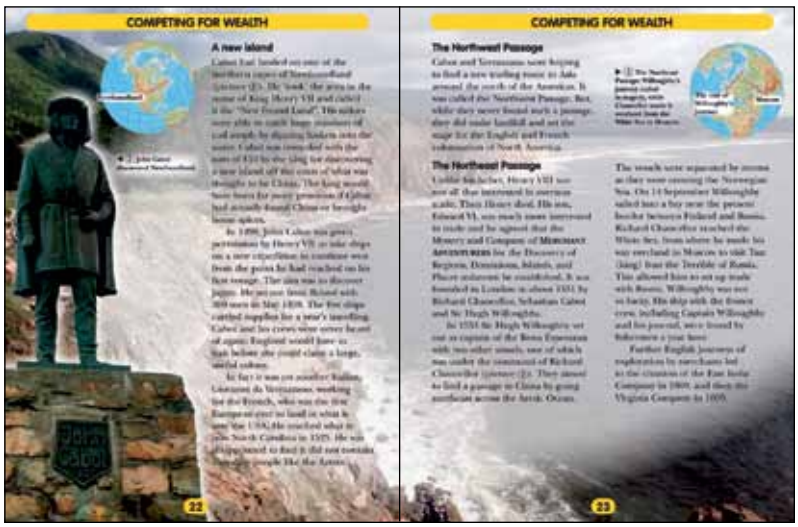
Cabot predicted that it would be possible to reach Asia by sailing westwards from Europe. Henry VII provided Cabot with a small ship, called 'The Matthew', and an eighteen-man crew (an exact replica of the ship can be seen in Bristol today). Cabot hypothesised that because the lines of longitude are shorter in distance from one another the further north one travelled from the equator, his voyage would be over a shorter distance from a higher latitude. So, setting off from Bristol would make the voyage shorter than if he had set off from the coast of Spain.

He set sail from Bristol in 1496, but only got as far as Iceland before turning back. He attempted the voyage again the next year though, and this time landed at what he thought was the eastern coast of Asia, but was in fact the coast of Canada. In 1498, Henry VII provided him with five ships to try again to find the Western route to Asia. One ship had to stop at Ireland for repairs. The rest of the ships, and John Cabot, were never seen again.

Sebastian Cabot followed in his father's footsteps – he was both a navigator and mapmaker. Henry VII was still eager to find out more about the 'Western Lands' and so funded Sebastian for a voyage to go and explore them, in 1508. The ship set sail and Cabot was able to make detailed maps of the coast of Canada. However, the ships crew threatened mutiny, so they were forced to return to England.

At this time, many people were convinced that the shortest route to Asia led over 'the top of the Earth'. This was the fabled Northwest Passage, the search for which will be discussed in the next unit. But the search for the Northeast Passage was successful, and marks a turning point in England's colonial fortunes.

In 1547 Sebastian Cabot returned from Spain to England and argued that England should trade with Cathay (China) and India for itself, and not rely on the Portuguese. However, the known routes, around Africa and through the Straits of Magellan, were controlled by Portugal and Spain, respectively. Three possibilities seemed to remain: in the Northwest (around or through North



10

America), in the Northeast (around Asia) or over the North Pole itself.

Cabot preferred the second route, and since Henry VIII (who was now King) refused to fund any more expeditions, in 1551 Cabot and a group of traders founded the Company of Merchant Adventurers (in full 'Mystery and Company of Merchant Adventurers for the Discovery of Regions, Dominions, Islands and Places unknown') to look for this route.

The first expedition of the Company of Merchant Adventurers was led by Sir Hugh Willoughby. He had no prior nautical or navigational experience, but may have been chosen for his leadership qualities. Richard Chancellor was the pilot-general of the small fleet (three ships, the Bona Esparanza under Willoughby, the Edward Bonaventure under Chancellor and the Bona Confidentia). The ships left London on 10 May 1553, but off the Lofotan Islands the ships were caught in a storm, and Chancellor's ship was separated from the other two.

Willoughby crossed Barents Sea and reached Novaya Zemlya. He spent some time along the coast, then returned to Scandinavia. At the mouth of the Arzina River, on the coast near Murmansk, he got trapped in the ice. He was not prepared for the cold. The next year, Russian fishermen found the ships with the corpses of Willoughby and his men.

Chancellor was luckier. He reached the White Sea, where the local fishermen were amazed by the great size of his ship. He then sailed to the harbour of Kholmogory (near present-day Arkangel). The region had just recently been added to the Russian empire, and when czar Ivan IV (Ivan the Terrible) heard of Chancellor's arrival, he invited him to come over to Moscow.

Chancellor made the overland voyage to Moscow and found that Ivan was very happy to start trade with England. Russia did not yet have a connection with the Baltic Sea at the time, and the Hanseatic League had a monopoly on the trade between Russia and central and western Europe. Chancellor was also happy at finding a good market for English wool, in exchange for Russian furs and other goods. On Chancellor's return, the Company of Merchant Adventurers renamed itself to Muscovy Company, and the very next year (1555) Chancellor left for Russia again. When he returned to England one year later, he was joined by the first Russian ambassador to England, Ossip Gregorevitch Nepeja. Off the Scottish coast, his ship was caught in a storm and shipwrecked. Chancellor drowned, but Nepeja managed to reach the coast, where he was taken hostage by the Scots for a few months before being able to travel on to London.

Trade with Russia was important, but more important was that the Muscovy Company had succeeded. Inspired by its success, other company's were formed to fund expeditions, eventually leading to the formation of The Company of Merchants of London Trading into the East Indies (the East India Company) in 1600.

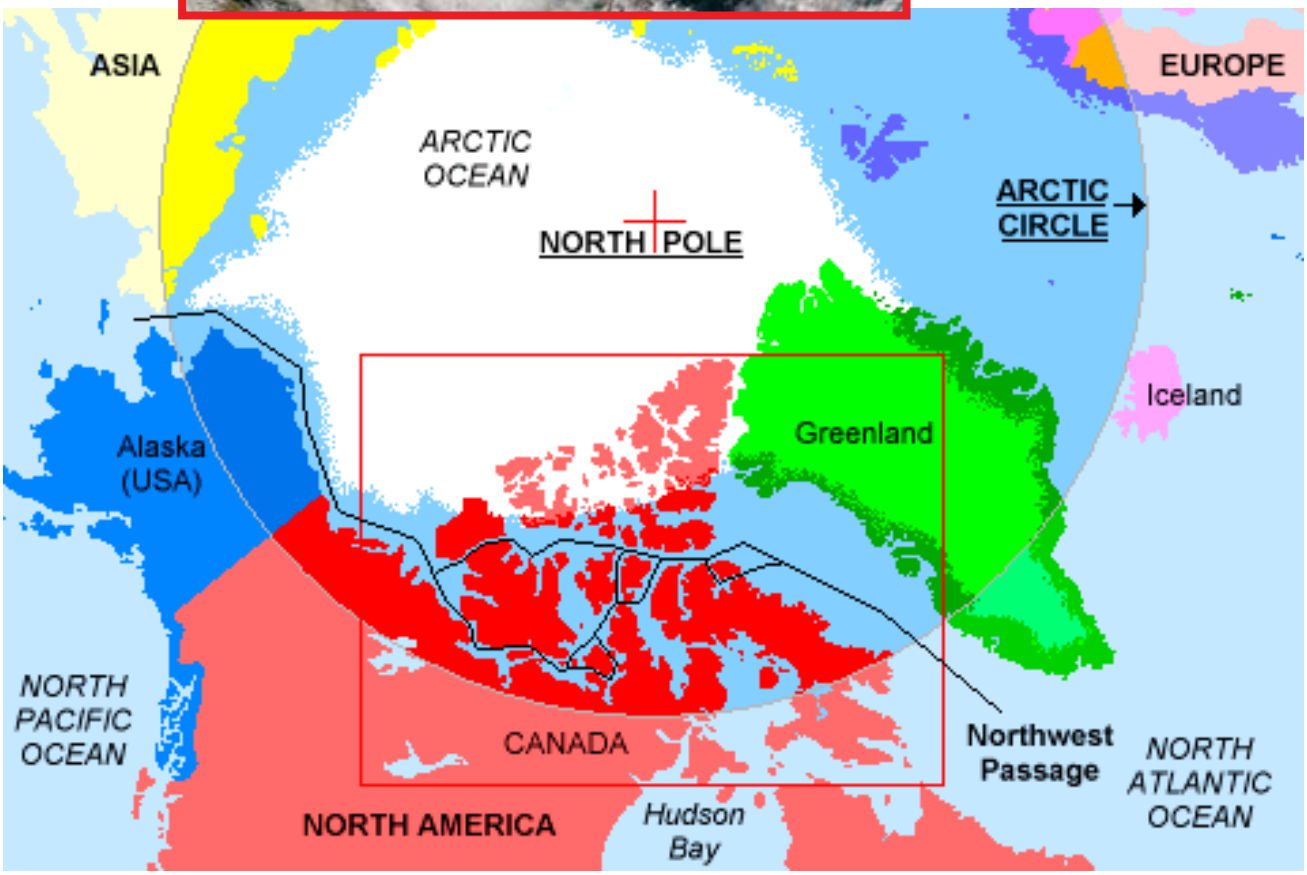
Name:..... Form:.....

Based on **pages 20 to 23** of *Tudor Age of Discovery*

Northwest Passage

The Northwest Passage is a famous sea route linking the Atlantic and Pacific Oceans. It was expected to provide an alternative and shorter passage from Europe to Asia. The route was discovered in the 1850s, but the sea along the route is frozen over for most of the year, so the route was not very practical. But the planet has been warming up and today the Northwest Passage is finally open for most of the year.

A NASA image showing a section of the Northwest Passage taken in September 2007. Much of the sea ice covering the route has now disappeared.



Northwest Passage

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

In 1497, English King Henry VII sent Italian explorer John Cabot to look for a Northwest route from Europe to the Orient that would keep ships from having to sail all the way around Africa. That expedition launched roughly four centuries of steady disappointment and tragedy as generations of explorers – Sir Francis Drake and Captain James Cook among them – met with failure as they searched for the fabled Northwest Passage. Even in modern times, navigating from the Atlantic to the Pacific through Canada's Arctic Islands has been difficult. The summer of 2007, however, saw sufficient sea ice retreat to finally open up the fabled sea route.

This image shows sea ice around the Northwest Passage as observed by the Advanced Microwave Scanning Radiometer for EOS (AMSR-E) aboard NASA's Aqua satellite on 22 August, 2007. In this image, the black circle at the North Pole indicates no data. McClure Strait, Parry Channel, Victoria Strait, and McClintock Channel (north of Victoria Strait), all appear nearly ice-free.

Although nearly open, the Northwest Passage was not necessarily easy to navigate in August 2007. Located 800 kilometres (500 miles) north of the Arctic Circle and less than 1,930 kilometres (1,200 miles) from the North Pole, this sea route remains a significant challenge, best met with a strong icebreaker ship backed by a good insurance policy. But long-term opening of the passage would have a big impact on trade and natural resource use.

The second map shows the route usually taken today by icebreaker ships. Roald Amundson, in 1905, was the first person to navigate the route, although it had been discovered in 1854 by Robert McClure (whose ship was stuck in the ice and who found the route after striking off by sled).

There are many ways that you can use this information and the illustrations and images on the activity sheet. If you are studying the environment and global warming in science, you may want to discuss the impact that the retreat of the ice is having. True, it makes trade and shipping easier and possibly cheaper, but there are negative effects on the wildlife, which depend on the ice.

You may also want to discuss the way that modern satellite technology has made exploration easier. Scientists don't have to go all the way to the Arctic, they can see the ice conditions on the satellite images.

You may also like the students to compare these maps with a globe and discuss why people thought the Northwest Passage would be so important. They could see that it cuts a huge distance off of the trip from England to Southeast and Northeast Asia. In fact, today, airplanes often take this route when flying from Europe to Southeast Asia, as it is the shortest way.

Younger students

The students might like to trace the route from the second map onto the satellite image in order to see how the sea ice has changed.

Outcomes

The students can:

- Compare maps.
- Appreciate that environmental conditions have changed since Frobisher's day.
- Understand why people thought it was important to find the Northwest Passage.

Older students

The students could research the routes used by explorers searching for the Northwest Passage. In addition to Frobisher, other people who looked for the passage included James Cook, Sir John Franklin, Sir Willian Edward Perry, Roald Amundson and Robert McClure.

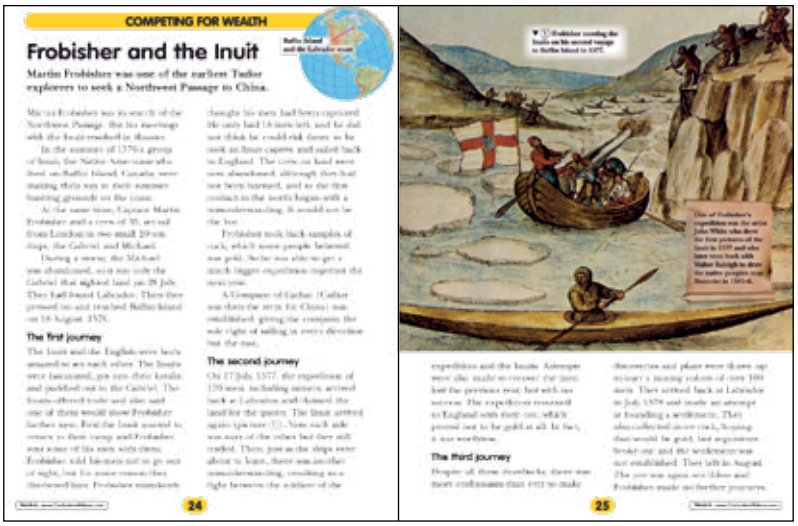
Outcomes

The students can:

- Compare maps.
- Appreciate that environmental conditions have changed since Frobisher's day.
- Understand why people thought it was important to find the Northwest Passage.

Spread 11 (pages 24–25)

Frobisher and the Inuit


COMPETING FOR WEALTH

Frobisher and the Inuit

Martin Frobisher was one of the earliest Tudor explorers to seek a Northwest Passage to China.

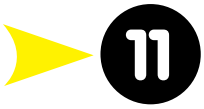
The first journey

The second journey

The third journey

24

25



The journeys of Martin Frobisher are a good example of how misunderstanding between people can have disastrous consequences. Although in this case, nothing too disastrous happened, it sets the stage for the eventually destruction of the Native American peoples.

Frobisher was really interested in finding the Northwest Passage as a trade-route to India and China.

In 1576 he managed to get funding for an expedition of small ships. It consisted of two tiny barks, the Gabriel and Michael, of about 20–25 tons each, and a pinnace of ten tons, with a total crew of 35.

He weighed anchor at Blackwall, on 7 June, 1576, by way of the Shetland Islands. In a storm, the pinnace was lost, and the Michael was abandoned, but on 28 July, the Gabriel sighted the coast of Labrador.

Some days later, he reached the mouth of Frobisher Bay, and because ice and wind prevented further travel north, Frobisher determined to sail westward up this passage.

He reached Baffin Island on the 18 August 1576, where the misunderstanding with the Inuit occurred. The men who were left behind were never seen again, but Inuit legend tells that the men lived among them for a few years until they died attempting to leave Baffin Island in a self-made boat.

Frobisher turned home, and reached London on 9 October. Among the things which had been hastily brought away by the men was a 'piece of a black stone', which two assayers consulted declared to be gold ore; two other assayers whose opinions were asked thought it was just marcasite. Public opinion favoured the former, and in a spirit of enthusiasm a new 'Company of Cathay' was established to finance the extraction of more of the material. The Company of Cathay was granted a charter from the crown, giving the company the sole right of sailing in every direction but the East. Frobisher was appointed high admiral of all lands and waters that might be discovered by him.

On 25 May 1577 the expedition, with three ships and 150 men left Blackwall, and reached Hall's Island at the mouth of Frobisher Bay on 17 July.

Several weeks were now spent in collecting ore, but very little was done in the way of discovery.

Although no agreement was reached on what the ore was (it was iron pyrite, 'fools gold', but the spirit of the time was so enthusiastic that Frobisher had no trouble raising more money for another voyage). Even the Queen was enthusiastic.

On the 31 May 1578, the third expedition, consisting in all of fifteen vessels, left England and landed at Frobisher Bay.

Although tasked with founding a settlement, there was too much argument about who should do what and so the fleet left for England.

Once back, the ore was taken to a specially constructed smelting plant in Kent. Despite many attempts, the ore was apparently not worth smelting.

Although this was the end of Frobisher's attempts at the Northwest Passage, he continued to sail and won recognition fighting the Spanish. He eventually died of wounds received while fighting the Spanish and is considered a hero.

You may like to point out to the students that although Frobisher failed, he was not considered a failure. Many explorers in those days failed, but Frobisher came back alive, which was very important.

In the case of the Northwest Passage, there is a very good reason why no one found it – it didn't really exist. It took several hundred more years before ships became powerful enough to navigate their way through the ice. Even then, in most years, the route was impassable – the area too packed with ice to allow a ship to get through. Or at least that was the case until recently. Global warming has now melted so much of the pack ice that a Northwest Passage has in fact opened up – although it still requires ice breaker ships to make the journey. The earlier activity on page 62 discusses this in more detail.

Name:..... Form:.....

Based on **pages 24 and 25** of *Tudor Age of Discovery*

The Inuit

When Frobisher reached North America, it was the first time they had seen people like the Inuit. The text in quotes is an account of that time, written by Frobisher's second in command, George Best.

Frobisher went ashore on an island, and for the first time saw signs that the country was inhabited.

"And being ashore, vpon the toppe of a hill, he perceiued a number of small things fleeting in the Sea a farre off, whyche hee supposed to be Porposes, or Ceales, or some kinde of strange fishe: but comming nearer, he discouered them to be men, in small boates made of leather."

Frobisher met the Inuit of Baffin Island. Over the next days the two groups cautiously traded with one another, sometimes ashore and sometimes aboard the Gabriel. The Inuit appeared familiar with ships such as this; they tried European food, drank wine, and competed with the mariners in acrobatics on the ropes of the ship's rigging.

"They exchanged coates of Ceale, and Beares skinnes, and suche like, with oure men, and received belles, loking glasses, and other toyes."

The English had never encountered such people and marvelled at their appearance.

"They bee like to Tartars, with long blacke haire, broad faces, and flatte noses, and tawnie in colour, wearing Seale skinnes, and so doe the women, not differing in the fashion, but the women are marked in the face with blewe streekes downe the cheekes, and round about the eyes."

Activities

1. You can see that many of the words used in Frobisher's day were spelled differently from how we spell them today. Put the sentences in quotes into modern spellings.

2. Rewrite the sentences in quotes into your own words.

3. Describe Frobisher's men from the point of view of an Inuit. Do you think the Englishmen looked strange to the Inuit.

Teacher's sheet

Based on **pages 24 and 25** of *Tudor Age of Discovery*

The Inuit

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

Frobisher's encounter with the Inuit was not the first time European had come into contact with Native Americans, but none of Frobisher's men would have seen or heard of any native people's before this and would likely have been amazed by what they saw. In many ways, it is not surprising that a misunderstanding occurred – it would not be the last one.

This activity is an opportunity for students to read descriptions actually written by one of Frobisher's men, in his original words. It is also a chance for them to try and put themselves into the 'shoes' of the native people and imagine what they might have made of the Englishmen.

The words used here look very difficult, but students will see that most of them are actually very easy to figure out. For example, if they say 'Ceale' out loud, it is obvious that it is a 'seal'. But the younger students may need a good deal of help with the first activity. You will almost certainly need to explain that Tartar was the name of a Turkic people who lived in parts of Eastern Europe and Central Asia. The majority of them lived in Russia. They are descendants of the Mongols.

Younger students

You might like to do the first activity as a whole class exercise – writing the modern spellings and the old spellings on the board for students to use.

Outcomes

The students can:

- Learn some of the language and spelling used in Frobisher's day.
- Read a first hand account of Frobisher's first meetings with the Inuit.
- Think about how the Inuit may have felt on seeing the English for the first time.

Older students

The students could work on their own, or you may like to do the first activity as a whole class exercise. Students may want to write a short story of the meeting between Frobisher and the Inuit from the point of view of the Inuit.

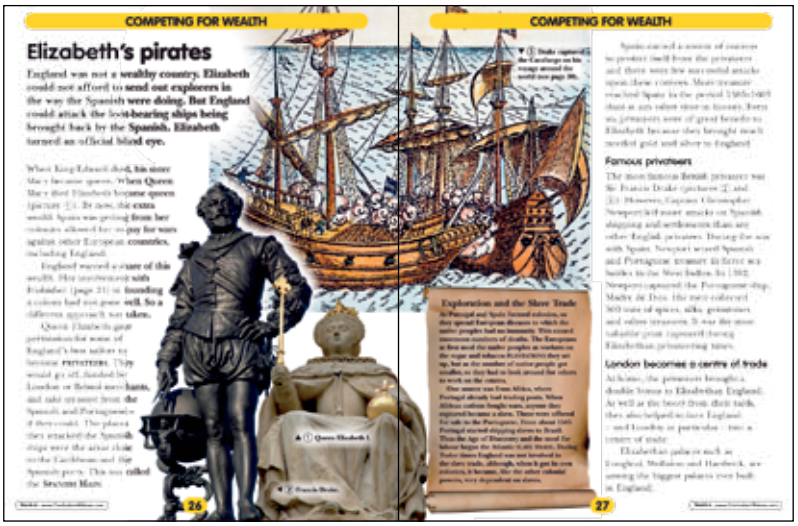
Outcomes

The students can:

- Learn some of the language and spelling used in Frobisher's day.
- Read a first hand account of Frobisher's first meetings with the Inuit.
- Think about how the Inuit may have felt on seeing the English for the first time.

Spread 12 (pages 26–27)

Elizabeth's pirates



12A

12B

Students may have some difficulty in understanding that Elizabeth's pirate were not the same type of pirates as the pirates of the Caribbean. Elizabeth had given these adventurers and captains her permission to engage in a limited form of piracy. They were permitted to steal from and fight the Spanish and Portuguese in certain areas, but they were not permitted to attack on land or to attack ships not flying Spanish or Portuguese flags. The privateers could be thought of as mercenaries.

In exchange for Elizabeth's permission to engage in piracy, the men were allowed to keep much of what they captured.

This was necessary because the Spanish and Portuguese had become so wealthy from their monopolies on trade that they could not be beaten in a conventional way. But while the pirates became wealthy, they discovered new lands and brought great wealth and trade to England.

Elizabeth inherited an almost bankrupt throne so every exploration had to be self-financing.

The Netherlands were one of the first states to take up licensed pirateering. When the Netherlands started to fund Protestant privateers – licensed pirates – Elizabeth encouraged Prince William, the leader of the revolt, to attack Spanish ships. English ports provided safe harbours for the privateers, and English captains and crew soon began to join them.

Among the first English privateers was Francis Drake. In 1567, he and his cousin John Hawkins had tried to break the Spanish monopoly of the African slave trade to the Americas. When they arrived off the coast of New Spain (Mexico) the following year, the Spanish opened fire and they were driven away. So Drake turned his hand instead to licensed piracy.

For Elizabeth, who pretended to the Spanish that she could do nothing to stop it, this piracy provided a ready source of revenue. By licensing the privateers to rob Spanish ships, she was able to cream off huge sums for her exchequer.

King Philip of Spain eventually ran out of patience with Elizabeth's excuses about piracy and by the mid-1580s, he had begun to prepare for war. In 1587, Elizabeth's execution of the Catholic Mary Queen of Scots, her cousin, provoked outrage among Catholics. And Drake's surprise attack on the Spanish fleet at Cadiz in the same year not only yielded half a million stolen ducats for the English treasury;

but made certain that the Spanish Armada would set sail for war with England in 1588.

The Spanish Armada was defeated by a combination of bad weather, and superior British sailing (and superior British ships). The licensed piracy of Drake, Raleigh and others and Spain's defeat in the war that it had triggered heralded a dramatic change in the European balance of power.

Spain, which had previously been able to exploit the treasures of the New World almost as it pleased, was losing its dominant position.

At home, the privateers brought a double bonus to Elizabethan England. As well as the booty from their raids and explorations, they also helped to turn England – and London in particular – into a centre of trade and commerce.

The wealth showed itself in the lifestyle of the rich and influential. The Elizabethan palaces such as Longleat, Wollaton and Hardwick, are among the most sumptuous palaces ever built in England. The 'Elizabethan Renaissance' also saw a great flowering in the arts, most famously through the likes of Marlowe, Jonson and Shakespeare. These artists were supported by the newly wealthy merchants. And the merchants were supported by the proceeds of piracy and trade from lands discovered by the adventurer pirates.

The other side of the coin, however, is that the pirates brought slavery to England. Many of them engaged in the slave trade on the side, as an additional money earner.

The most famous pirates were: Francis Drake, John Hawkins, Martin Frobisher, Humphrey Gilbert, Richard Grenville, Richard Hawkins and Walter Raleigh.

These were all extraordinarily colourful men, whose greed and bravery were used by Elizabeth I to increase the prestige of her kingdom and fill her treasury.

Of course, the idea of licensed privateers soon caught on among other nations as well and eventually led to the growth of unlicensed piracy. The scheme would even backfire on the British, eventually, when the Americans used privateers to hobble the British in the War of 1812.

Name:..... Form:.....

Based on **pages 26 and 27** of *Tudor Age of Discovery*

Sir John Hawkins – pirate

John Hawkins was not the most famous Elizabethan pirate, but the story of his life can tell us a lot about what Elizabeth's pirates were like.

Sir John Hawkins (1532–1595)

John Hawkins was born in Plymouth, into a wealthy family. He went to sea at a young age and made his living as a trader in slaves. During the 1550s and 1560s, Hawkins became rich by buying slaves in west Africa and selling them to the Spanish colonies in the West Indies. If he came across a Spanish ship he would raid it.

Hawkins soon became rich and Elizabeth I was very happy with him. But the Spanish were very unhappy with Hawkins and in 1568, Spanish ships attacked Hawkins' six-strong fleet in San Juan de Ulua harbour in Mexico. Only Hawkins' ship and a ship captained by his cousin Francis Drake, escaped. But Hawkins was able to take his treasure away with him.

As bad feelings grew between Spain and England, Hawkins acted as a double agent and foiled a Spanish plot to depose Elizabeth. During the 1570s, he became a shipbuilder, an MP and a treasurer of the navy. He also continued to pay for Drake's expeditions.

In the 1580s, Hawkins was in charge of rebuilding the English fleet. He built many low-sided 'race' ships. These ships were small, so they were not good for exploring, but they were fast, heavily armed and were able to operate with smaller crews, so they were perfect for fighting. These new ships helped England to defeat the Spanish Armada. Hawkins also made it harder for Navy officers to cheat the Navy and steal money.

During the attack of the Armada, in 1588, Hawkins was rear-admiral of the fleet. He fought the Armada in his ship, the Victory.

After the defeat of the Armada, Hawkins returned to piracy. In 1589, he sailed with Frobisher to try and steal from the Spanish treasure fleet. In 1595, aged 63, he sailed to South America with Drake and died of sickness while waiting for another chance to raid the Spanish treasure fleet.

Activity

Make a timeline of events in Hawkin's life.

1532
1550–1568
1568
1570s
1580s
1588
1589
1595

Teacher's sheet

Based on **pages 26 and 27** of *Tudor Age of Discovery*

Sir John Hawkins – pirate

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

It may be difficult for students to grasp that Elizabeth's pirates were gentlemen, explorers and pirates all at the same time. In Hawkins' case, he was a businessman, MP, Admiral in the Navy, shipyard owner and many other positive things. Yet at the same time, he trafficked in slaves and worked as a pirate. You may like to begin by explaining that these men lived complicated lives made up of both good deeds and bad deeds, but that many of the things we would consider 'bad' today, were not thought bad at the time.

Younger students

You may like the students to read through the text together. You could use a map to plot the main events discussed and have the students make a timeline on the board. You may like students to discuss which parts of Hawkins' life were 'bad' and which were 'good'.

Outcomes

The students can:

- Learn about John Hawkins' life.
- Understand that many Tudor pirates also had normal lives.
- Learn what it was like to be an Elizabethan pirate.
- Make a timeline.

Older students

Students can work on their own to make the timeline. They may also like to discuss, or to write about, which parts of Hawkins' life they thought were 'good' and which 'bad'. They could also indicate this on the timeline.

Outcomes

The students can:

- Learn about John Hawkins' life.
- Understand that many Tudor pirates also had normal lives.
- Learn what it was like to be an Elizabethan pirate.
- Make a timeline.

Name:..... Form:.....

Based on **pages 26 and 27** of *Tudor Age of Discovery*

Sir Richard Grenville – pirate

Richard Grenville was another of Elizabeth's pirates.

Grenville was born in 1541 in Cornwall. His family had been in the navy for generations. Grenville liked to fight – he once killed an opponent in a street fight, he fought against the Turks in Hungary and he helped to put down the Fitzmaurice rebellion in Ireland.

He became an MP for Cornwall in 1571.

In 1572 he joined an expedition to the South Seas to look for a large land in the South Pacific, called Terra Australis, which many thought existed but which had never been found. In 1574, he suggested sailing through the Strait of Magellan – a route jealously guarded by the Spanish. At the time, Elizabeth was trying to restore relations with Spain and forbade the trip.

Grenville was knighted by Elizabeth in 1577. In 1585 he sailed to Virginia with 300 settlers on board. He left the settlers on Roanoke Island (off the coast of what is now North Carolina), and raided a Spanish ship on the way home, taking a huge amount of treasure. In 1586 he sailed back to Roanoke with supplies, but the colonists had already been picked up by Drake. So Grenville sailed on to the Azores and raided several towns, stealing and taking Spanish prisoners.

In 1588, Grenville was in charge of West Country defences during the Armada attack. After the Armada, he and Raleigh guarded sea approaches to Ireland.

In 1591 he sailed back to the Azores with Lord Thomas Howard and a squadron of the queen's ships, to try and capture home-bound Spanish treasure ships. Philip II of Spain sent a huge squadron of war ships to challenge them, and the English, outnumbered and with many men lying sick on shore, were forced to retreat. Grenville's ship, the Revenge, was late leaving harbour and was surrounded. He held out for 15 hours, damaging 15 Spanish ships, before ordering his crew to blow up the Revenge. They surrendered instead.

Grenville died of his wounds a few days later. Soon afterwards a cyclone sank the Revenge and many Spanish ships, so giving a boost to the legends that were already growing up around Grenville's name.

Activity

Make a timeline of events in Grenville's life.

1541
1571
1572
1577
1585
1588
1591

Sir Richard Grenville – pirate

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet, additional paper for the timeline.

Using the worksheet

You may want to use this in conjunction with the previous activity. Some students could do this one, while others work on the previous activity and then students can compare their answers and discuss the lives of 'their' pirate.

Like Hawkins, Grenville also led a conventional life, although he was more of a swashbuckler. It is also clear from Grenville's exploits that he was a very violent man. The text says he put down the Fitzmaurice rebellion in Ireland, but this was accomplished with extreme violence and loss of life. But he was also a fearless sailor and the times certainly called for someone like him.

Despite all that he did, it is for his championing of the settlement at Roanoke that Grenville is most remembered today. Although a failure, it was the beginning of the long adventure of colonisation of North America.

Younger students

You may like the students to read through the text together. You could use a map to plot the main events discussed and have the students make a timeline on the board. You may like students to discuss which parts of Grenville's life were 'bad' and which were 'good'.

Outcomes

The students can:

- Learn about Richard Grenville's life.
- Understand that many Tudor pirates also had normal lives.
- Learn what it was like to be an Elizabethan pirate.
- Make a timeline.

Older students

Students can work on their own to make the timeline. They may also like to discuss, or to write about, which parts of Grenville's life they thought were 'good' and which 'bad'. They could also indicate this on the timeline.

Outcomes

The students can:

- Learn about Richard Grenville's life.
- Understand that many Tudor pirates also had normal lives.
- Learn what it was like to be an Elizabethan pirate.
- Make a timeline.

Spreads 13 and 14 (pages 28–31)

Around the world


COMPETING FOR WEALTH

Around the world

In the search for ways of getting to the Far East, explorers, including Ferdinand Magellan and Sir Francis Drake, became the first to sail right around the world.

The Pope had declared that Spain could own anything found by travelling west. So, while one of Spain's explorers, Hernan Cortes, was invading the land of the Aztecs in Mexico, Spain was also sending Ferdinand Magellan west in search of the Spice Islands (modern Indonesia). To be successful, Magellan had to travel around the south of South America (picture 1). Although Magellan was later killed in the Philippines, his crew became the first men to sail entirely around the world in a single journey. It took three years.

Around the world with Sir Francis Drake

Sir Francis Drake spent much of his early life as a privateer, but he was an adventurous man, always given to take up a challenge. In 1577, Drake was sent by Queen Elizabeth to claim land along the Pacific coast of North America and so prevent the Spanish from getting it. He set out aboard his flagship, the Pelican, together with the Elizabeth, the Marygold, the Swan and the Benedict (later renamed the Christopher) (picture 2, pages 30–31). In all there were over 160 men.

South America

After crossing the Atlantic, Drake made contact with the Native Americans. At this point he found two ships unseaworthy and he scrapped them. He renamed his flagship the Golden Hind in honour of the friend on the coast of arms of Sir Christopher Hatton (see pages 9–11). The three ships sailed through the Magellan Straits, but were then caught in great storms and blown offcourse. The smallest ship (the Marygold) sank and one other (the Elizabeth) turned back to England, so it was only the Golden Hind that eventually sailed north along the Pacific coast of South America, attacking Spanish ports and capturing some Spanish ships and their treasure.

Nova Albion

On 17 June, 1579, Drake landed somewhere north of Spain's northernmost settlement, probably in California (picture 3). He claimed the land for the English Crown and called it Nova Albion, meaning "New Britain". It set England's claim to the entire coast.

Drake then sailed west across the Pacific, and a few months later reached what is modern Indonesia – the Spice Islands. While there, the Golden Hind became caught on a reef and was almost destroyed.

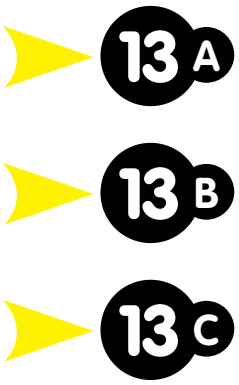
He then went round the Cape of Good Hope in southern Africa, and reached Sierra Leone on 22 July, 1580.

On 26 September the Golden Hind sailed into Plymouth with Drake and 59 remaining crew, along with a rich cargo of spices and captured Spanish treasures. The Queen's half-share of the cargo was worth more than the rest of the crown's income for that entire year. Drake was the first Englishman to sail around the world and he was knighted by Queen Elizabeth aboard the Golden Hind on 4 April, 1581.

The Queen then ordered all written accounts of Drake's voyage to be classed as secret, and its crew were sworn to silence on pain of death. She wanted to keep Drake's success a secret from Spain.

28

29



Francis Drake is possibly best known for his voyage around the world. He made it while seeking fame and fortune – and found both. Although he left on the voyage with a small flotilla only the flagship, the Golden Hind, returned home to England.

Drake's success at fighting the Spanish and raiding their ships made him a favourite of Queen Elizabeth and in 1577, Drake was sent by the queen to start an expedition against the Spanish along the Pacific coast of the Americas.

On 15 November 1577 Drake set out from Plymouth Sound with his small flotilla. Drake's flagship was the Pelican – armed with eighteen guns and weighing about one hundred tons. In addition there was the Elizabeth, under John Winter, and the Marygold as well as a supply ship – the Swan – and the Benedict. In all there were one hundred and sixty men including Drake's younger brother Thomas.

First they sailed to Morocco, and then on to the Cape Verde Islands and across the Atlantic to the River Plate.

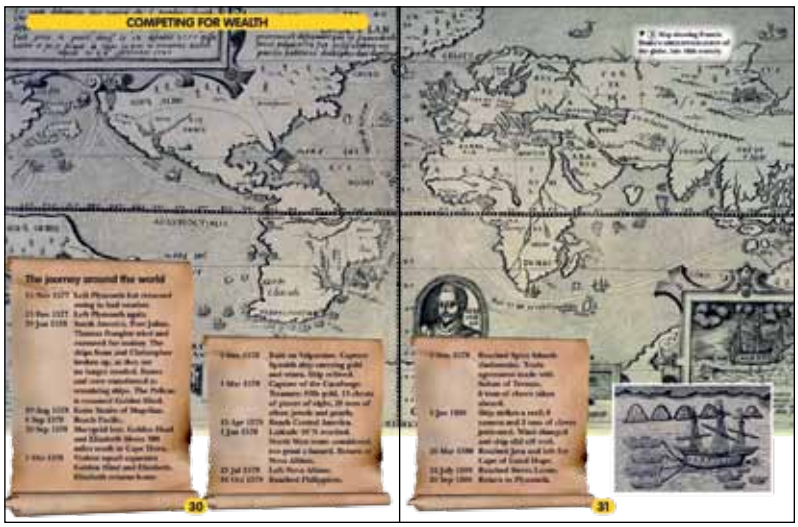
They lay for the six weeks at Port St Julian, reorganising for the next stage of the journey. They weighed anchor on 17 August 1578 and within three days arrived at the dreaded opening of the Magellan Straits. It was here that Drake renamed the Pelican and christened her the Golden Hind as a tribute to his friend Christopher Hatton Lord Chancellor of England (and possibly Elizabeth's lover) (the Golden Hind was a symbol on his coat of arms).

The passage through the Straits of Magellan was torturous. The charts were unreliable and every day was critical. They completed the hazardous journey in just sixteen days and sailed into the Pacific.

Drake's flotilla was like a cat among the Spanish treasure ship pigeons. Then a huge gale hit them which lasted for almost two weeks. The Marygold had floundered and while the other ships waited in a sheltered harbour another storm parted. The Elizabeth, assuming the other ships were lost, re-entered the straits and returned to England.

During the storm, Drake and the Hind had been blown so far south that Drake entered the Antarctic and realised Tierra del Fuego was not part of a southern continent, as was believed at that time.

The Golden Hind sailed north alone along the Pacific coast of South America, attacking Spanish ports and rifling towns as it went. Then Drake set sail for the Port of Lima seeking the King of Spain's greatest ships. They entered the harbour silently and relieved a number of ships lying at anchor of their spoils. There also they heard that the Lady of the Conception had recently departed – a famous ship and a worthy prize. They set out in pursuit



14 A

14 B

and with surprise on their side captured it with barely a shot fired.

Drake made good use of the more accurate Spanish charts which he had captured and proceeded north in search of the mythical north west passage.

On 17 June, 1579, Drake landed somewhere north of Spain's northern-most claim at Point Loma, California. He found a good port, landed, repaired and restocked, then stayed for five weeks, keeping friendly relations with the natives. He claimed the land in the name of the Holy Trinity for the English Crown and called it Nova Albion – 'New Britain'. This would form the basis on England's claim on North America.

The precise location of the port was carefully guarded to keep it secret from the Spaniards, and several of Drake's maps may even have been altered for this reason. All first hand records from the voyage, including logs, paintings and charts were lost when Whitehall Palace burned in 1698.

Historians debate the location of the port – San Fransisco and Whale Cove, Oregon are top contenders.

When they left North America, it was with the knowledge that they now had no choice but to cross the Pacific and circumnavigate the globe if they were to arrive home safely.

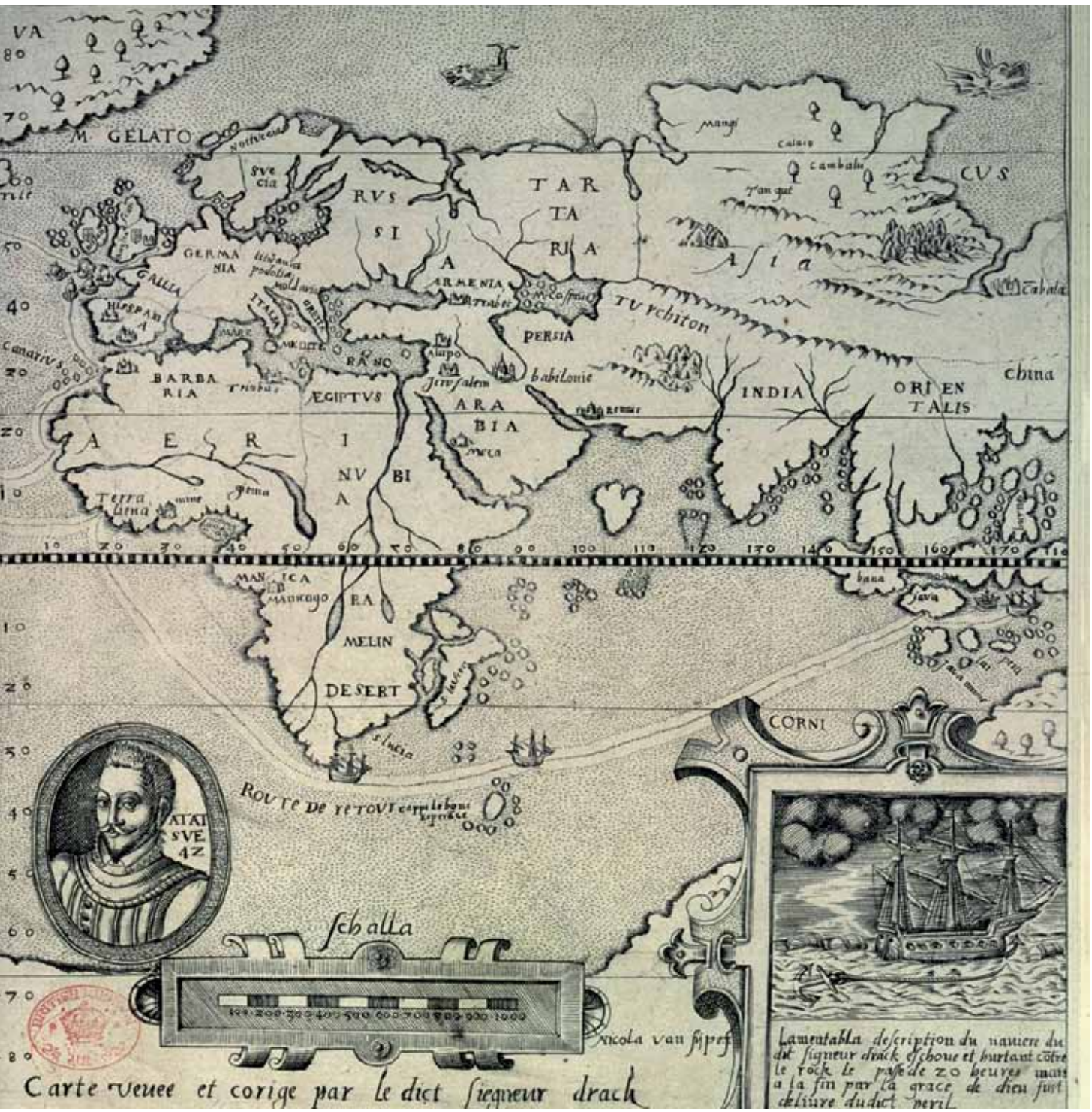
Drake then headed westward across the Pacific, and a few months later reached the Moluccas, a group of islands in the south west Pacific, in eastern modern-day Indonesia. While there, the Golden Hind became caught on a reef and was almost lost. After three days of waiting for expedient tides and dumping cargo, the ship was freed. Drake and his men befriended a sultan king of the Moluccas and arranged for the English to trade for cloves in competition with the Portuguese. This treaty would be very important to Great Britain later, when the East India Company developed its trade in the Far East.

Drake made multiple stops on his way towards the tip of Africa, eventually rounding the Cape of Good Hope, and reaching Sierra Leone by 22 July, 1580. On 26 September the Golden Hind sailed into Plymouth with Drake and 59 remaining crew aboard, along with a rich cargo of spices and captured Spanish treasures (and most important, maps of his journey). The treasures recovered were so vast, estimated at £600,000 in 1580 (around £25 million today) that Elizabeth I's share (half the total) was more than the total exchequers receipts for a year, twice the costs of fighting the Spanish Armada in 1588 and probably accounted for why the crown was free of debt in the year after Drake's return.

Ferdinand Magellan was a Portuguese maritime explorer who while in the service of the Spanish crown, tried to find a westward route to the Spice Islands of Indonesia. This was the first known successful attempt to circumnavigate the Earth. He did not complete his final westward voyage; he was killed during the Battle of Mactan in the Philippines. As he died farther west than the Spice Islands, which he had visited on earlier voyages from

the west, he became one of the first individuals to cross all the meridians of the globe. He was the first person to lead an expedition sailing westward from Europe to Asia and to cross the Pacific Ocean.

Magellan should also be recognised as the first European explorer to enter the Pacific from the Strait of Magellan, which he discovered. He is also remembered as the first European to reach the archipelago of what is now known as the Philippines, which was unknown to the western world before his landing. Arab traders had established commerce within the archipelago centuries earlier.



Of the 270 crew members who set out with Magellan to circumnavigate the globe, only 18 completed the circumnavigation and managed to return to Spain.

Google Earth has a wonderful virtual flyover of Drake's journey that you may like to use as a unit. Go to http://earth.google.com/

Name:..... Form:.....

Based on **pages 28 and 29** of *Tudor Age of Discovery*

Encounters with local people

These readings are taken from a diary kept by one of Drake's men, Francis Petty. Here, he writes about some of the things that happened to Drake and his men in the Pacific and Indian oceans.

The Caroline Islands

"…we reached some islands eight degrees north of the equator. From these islands came a great number of canoes, some with four, some six, and some fourteen men. These people have the lower part of their ears cut into a round circle, hanging down very low upon their cheeks, whereon they hang things of a reasonable weight. The nails of their hands are an inch long, their teeth are as black as pitch, they keep them that way by eating of an herb with a kind of powder, which they always carry about them in a cane."

Celebes

"Our General resolved to sail to Ternate. Where the next morning we came to anchor. Our General sent a messenger to the king, with a velvet cloak for a present and token of his coming in peace, and that he wanted nothing but trade and exchange of merchandise.

The king, intending to come to our ship, sent four great and large canoes, in every one were certain of his greatest land owners, wearing white cloth of Calicut. The canoe was covered, from one end to the other, with thin perfumed mats, on a frame made of reeds to keep them from the heat of the Sun; several of these men, being of good age and seriousness, made an ancient and fatherly show. There were also several young and handsome men also dressed in white; the rest were soldiers, standing in order round about on both sides. Thus approaching our ship, they rowed about us one after another, and passing by, paid homage with great solemnity. Soon after the king himself appeared, accompanied by six serious and very old people, who did their homage with marvellous humility. The king was a man of tall stature, and seemed to be much delighted with the sound of our music; to whom, our General gave presents.

The next day our General sent certain of his gentlemen to the Court, keeping the vice-king as hostage for their safe return. They were received by a brother of the king's, and were conducted with great honour to the castle. The place that they were brought to was a large and fair house, where there were at the least a thousand persons assembled.

The king being still absent, 60 people of the king's council sat in their places there. Apart from them there were four people, dressed all in red, down to the ground, and attired on their heads like the Turks; The king at last came in guarded by twelve lances, covered over with a rich canopy with embossed gold. Our men, accompanied with one of their captains called Moro, rising to meet him, he graciously welcomed and entertained them. The king was dressed in the manner of the country, but more sumptuously than the rest. From his waist down to the ground was all very rich cloth of gold; his legs were bare, but on his feet were a pair of shoes, made of Cordovan skin. On his head were finely wreathed hooped rings of gold, and about his neck he had a chain of perfect gold, the links of which were great, and one folded double. On his fingers he had six very fair jewels; and sitting in his chair of state, at his right hand stood a page with a fan in his hand. The fan was in length two foot, and in breadth one foot, set with eight sapphires richly embroidered, and fastened to a staff three foot in length, by which the page held and moved it. Our gentlemen having delivered their message were allowed to depart, being safely conducted back by one of the king's council.

This island is the chief of all the islands of Maluco, and the king is king of 70 islands besides. The king with his people are Moslem in religion, fasting at certain new Moons; during these fasts they neither eat nor drink in the day, but only at night."

Activities

1. Locate the Caroline Islands and the Celebes on a map.
2. Draw a picture of some of the people that Drake's men met on their travels from these description.
3. Pretend that you are one of Drake's men and write about what it would be like to meet these people.

Encounters with local people

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This reading, and the following reading, are taken from the diary of Francis Petty, one of Drake's gentlemen at arms. They are an actual account. In this extract, the language has been changed here to make it easier to read. The diary entries here are also not in the order they occurred. You can read the entire diary, in its original language, at www.bartleby.com/33/41.html.

These extracts describe two encounters that Drake and his men had with local peoples. Students can see that they had some real adventures when meeting new peoples and get a feel for how Drake and his men felt when encountering new peoples.

Students might wonder why Drake and his men didn't try to 'conquer' these people and others they met along the way. The reason is that Drake knew that these people were part of a powerful kingdom that was well established and had connections with other European or Eastern countries, as trading partners. What Drake was looking for was land that had not already been 'discovered' by Europeans.

Because all of Drake's sailors were men (as were all sailors in Tudor times), girls may have a harder time picturing themselves as Tudor sailors. But you may like to point out that just because there were no women sailors in Drake's day doesn't mean they can't pretend now.

Younger students

You may want to ask students how they would feel if they were meeting the people described here; and then how they might feel if they were a sailor on Drake's ship.

You may want to read the reading out loud and discuss the meanings of any words students do not understand.

Outcomes

The students can:

- Learn about some of Drake's encounters.
- Use their imagination to turn a description into a picture or a story.
- Learn about some of the places Drake and his men went on their voyage round the world.

Older students

You may want to discuss with the students the difference between a primary and a secondary source in history. This is a primary source, because it was written by someone who witnessed the events he is describing.

Outcomes

The students can:

- Learn about some of Drake's encounters.
- Use their imagination to turn a description into a picture or a story.
- Learn about some of the places Drake and his men went on their voyage round the world.
- Learn the difference between a primary and a secondary source.

Name:..... Form:.....

Based on **pages 28 and 29** of *Tudor Age of Discovery*

Encounters with Spaniards

These readings are taken from a diary kept by one of Drake's men, Francis Petty. In these readings, Petty writes about what happened when Drake's ships meet Spaniards.

Coast of Chile

"When we arrived there we found the ship at anchor; on board were eight Spaniards and three local men; who, thinking we were Spaniards, and their friends, welcomed us with a drum, and got a jar of wine to drink with us. But as soon as we entered, Thomas Moon, one of our men, began to lash out, and struck one of the Spaniards, saying to him, "Abaxo, perro!" that is in English, "Go down, dog!" One of the Spaniards, seeing such people as us in that area, crossed and blessed himself. But, we stowed them under hatches, all but one Spaniard, who suddenly and desperately leapt overboard into the sea, and swam ashore to the town of Santiago, to give them warning of our arrival.

Continuing on our course, we arrived next at a place called Coquimbo, where our General sent fourteen of his men on land to fetch water. But they were espied by the Spaniards, who came with 300 horsemen and 200 footmen, and killed one of our men with a firearm. The rest came aboard in safety, and the Spaniards departed.

We went on shore and buried our man, and the Spaniards came down again with a flag of truce."

The coast of Mexico

"This pilot brought us to the haven of Guatulco, which he said, had only 17 Spaniards in it. As soon as we entered this haven, we landed, and went presently to the town and to the town-house; where we found a judge, with three other officers, sitting in judgment, on three local men who had planned to burn the town. We took both the judges and prisoners and brought them on board ship, and made the chief judge write a letter to the town to command all the townsmen to keep out of the town so that we might safely take water on board from there."

Activities

1. Describe in your own words, what happened to the Spaniards that Drake and his men met on the coast of Chile.

2. Why do you think Drake and his men tried to capture or fight any Spanish people they came across?

Encounters with Spanish

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

These readings are a chance for students to see what relations were like between Spanish and English sailors.

While Spain and England were not officially at war, they often acted like it, as you can see from this reading. Drake felt free to take any Spaniards he comes across hostage and to steal from them. The same is true of the Spanish, who do not hesitate to fight Drake in Coquimbo, even though he has not really done anything wrong there.

You may like to point out that Drake was one of the queen's pirates and this is how these pirates behaved.

In the last paragraph, the writer mentions the pilot. This was a type of navigator, and was often someone with local knowledge. The pilot would have had charts and maps that he kept secret to himself.

Younger students

You may want to read the reading out loud and discuss the meanings of any words students do not understand.

Outcomes

The students can:

- Extract information from a text.
- Understand what relations were like between Spanish and English in Tudor times.
- Learn some of the events that occurred when Drake and his men met Spaniards on their trip.

Older students

The students might also like to write a story or diary entry, or draw a picture illustrating what happens when English and Spanish Tudor sailors meet.

Outcomes

The students can:

- Extract information from a text.
- Understand what relations were like between Spanish and English in Tudor times.
- Learn some of the events that occurred when Drake and his men met Spaniards on their trip.

Name:..... Form:.....

Based on **pages 28 and 29** of *Tudor Age of Discovery*

Magellan's journey

Use the information below to trace Magellan's trip on the map.

Set sail from southern Spain

Sailed across the Atlantic Ocean to the coast of Brazil.

Followed the coast to the bay where Rio de Janeiro now stands.

Sailed South in search of a passage to the Pacific Ocean.

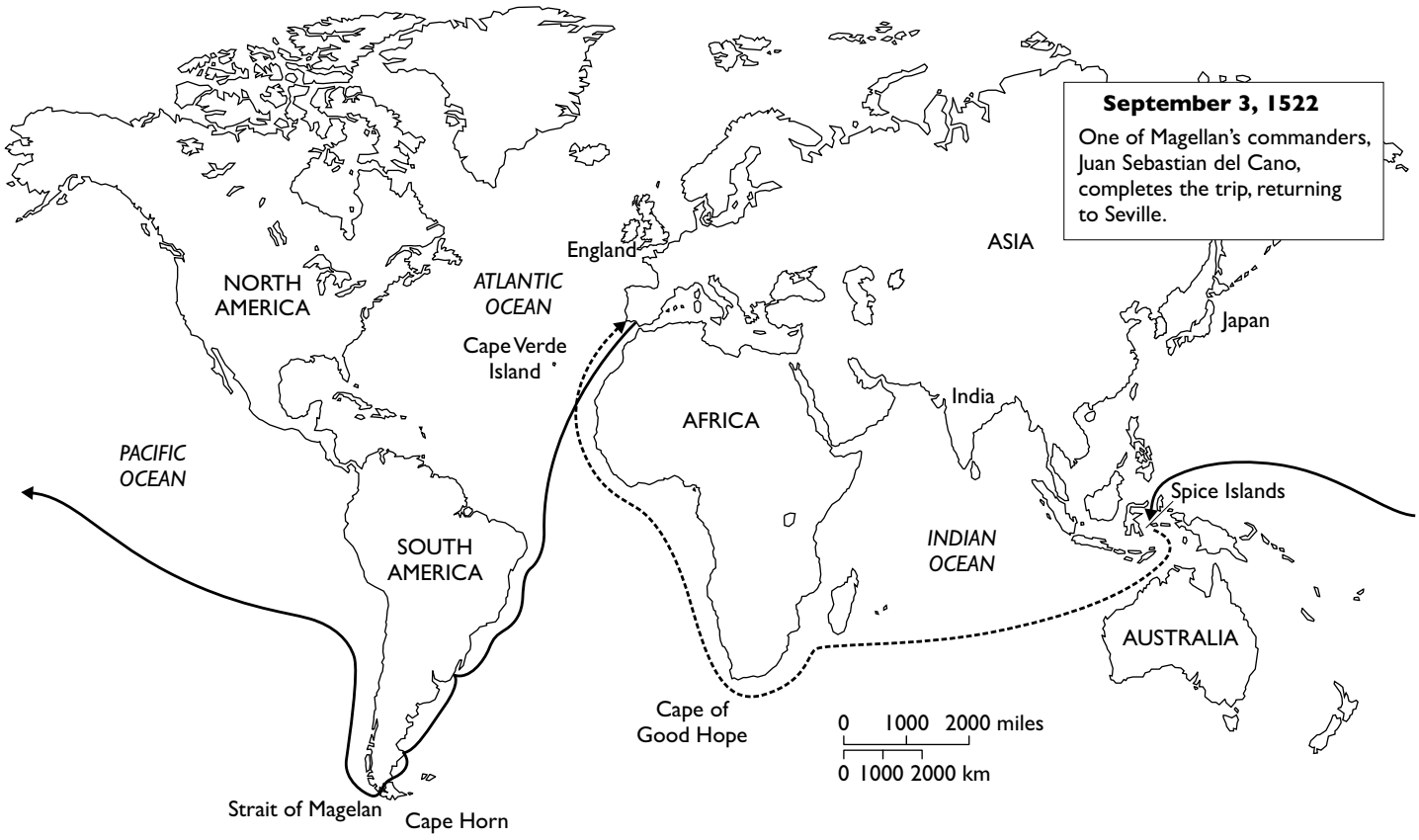
Anchored for the winter at San Julian in what is now southern Argentina.

Sailed through the strait now called the Strait of Magellan.

Sailed across the Pacific to Guam.

Continued on to the Philippines. Magellan was killed when he took part in a battle between rival Filipino groups on the island of Mactan.

Remaining men sailed back to Spain.



Magellan's journey

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet, map, atlas or globe.

Using the worksheet

Magellan was not English, but he was a pioneering explorer and students may find it interesting to compare his journey with that of Drake.

Ferdinand Magellan was a Portuguese maritime explorer who tried to find a westward route to the Spice Islands of Indonesia. This was the first known successful attempt to circumnavigate the Earth. He did not complete his final westward voyage; he was killed during the Battle of Mactan in the Philippines. As he died farther west than the Spice Islands, which he had visited on earlier voyages from the west, he became one of the first individuals to cross all the meridians of the globe. He was the first person to lead an expedition sailing westward from Europe to Asia and to cross the Pacific Ocean.

Magellan should also be recognised as the first European explorer to enter the Pacific from the Strait of Magellan, which he discovered. He is also remembered as the first European to reach the archipelago of the Philippines, which was unknown to the western world before his landing although Arab traders had established commerce within the archipelago centuries earlier.

Of the 270 crew members who set out with Magellan to circumnavigate the globe, only 18 completed the circumnavigation and managed to return to Spain.

Younger students

Students might like to trace the journey on a large map or globe. Students could do this exercise together with the following exercise, where they trace Drake's route and compare them.

Outcomes

The students can:

- Learn a little about Magellan's route.
- Understand that Magellan was the first person to attempt to circumnavigate the globe and he set the groundwork for Drake.
- Find some of the places on Magellan's route.

Older students

The students may want to investigate more about Magellan and the places he visited on his route.

Outcomes

The students can:

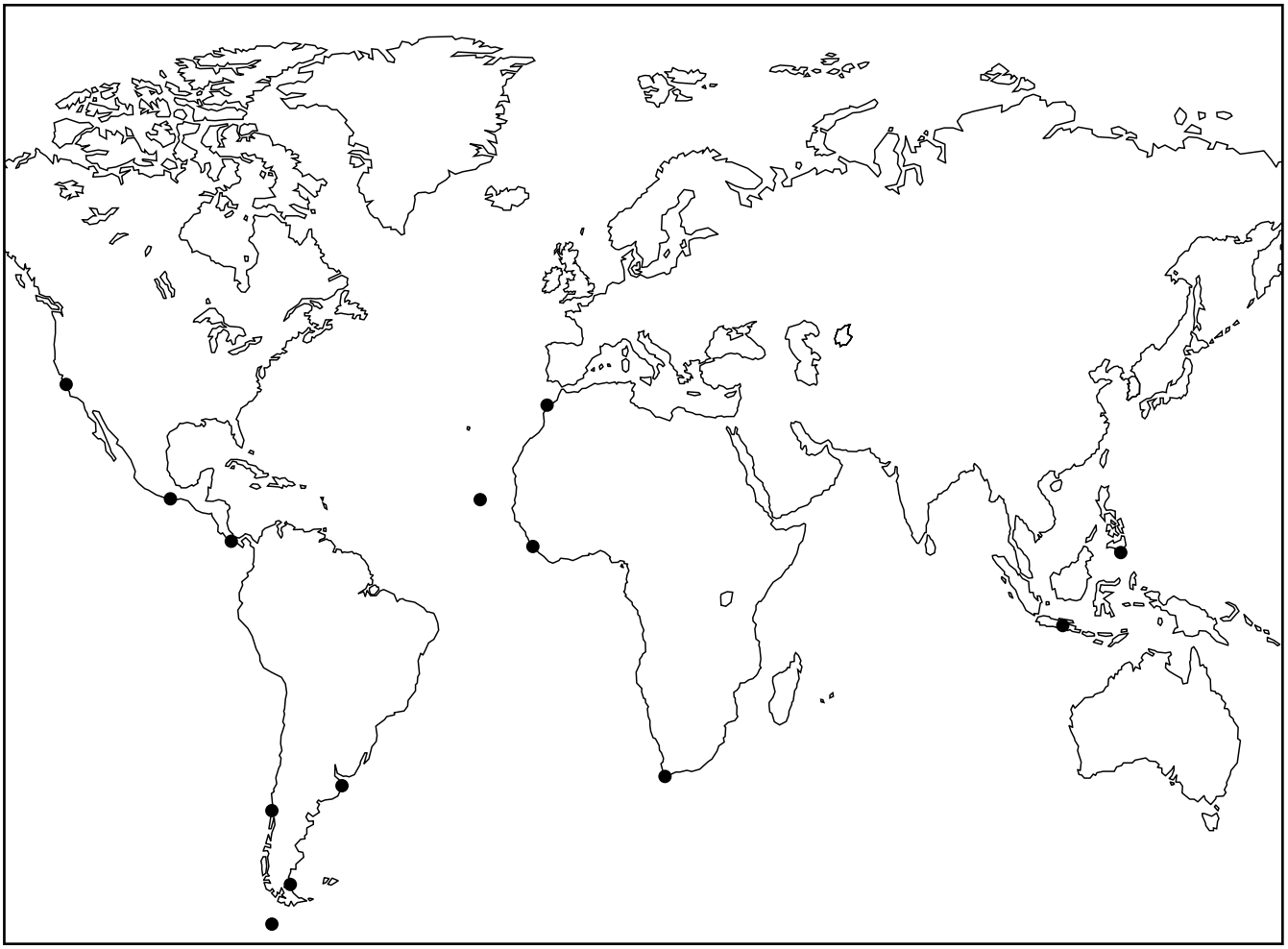
- Learn a little about Magellan's route.
- Understand that Magellan was the first person to attempt to circumnavigate the globe and he set the groundwork for Drake.
- Find some of the places on Magellan's route.

Name:..... Form:.....

Based on **pages 30 and 31** of *Tudor Age of Discovery*

Drake's journey (i)

Here are some of the places Drake sailed on his journey. Write the number of the place, shown below, onto this map.



1. Close to Safi in Morocco (32°N 9°W) (Cape Cantin)
2. Santiago – Cape Verde Islands 14.5°N
3. Coast of Brazil – 33°S close to the Rio Grande
4. Strait of Magellan – 52.5°S between mainland Chile and Tierra del Fuego
5. Antarctic Ocean
6. Valparaiso – Chile
7. Costa Rica (Canno Island)
8. A small port on the South coast of Mexico (Guatulco)
9. 38°N San Francisco (Nova Albion)
10. Mindanao – Philippines
11. Java – Indonesia
12. Cape of Good Hope – South Africa
13. Sierra Leone

Drake's journey (i)

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet, map, atlas or globe.

Using the worksheet

This is a good chance for students to become familiar with some different places around the world. Students can also get a feel for how many places Drake travelled to. The places given here are only some of the places that Drake and his men stopped at. Many of them are mentioned in the student book and you may like the students to research some of these places further, and perhaps try to find out what they were like in Drake's day.

If students have done the previous exercise, they can also compare Drake's journey to Magellan's. You may also like to ask students what they would think of making such a journey today, even by plane. It would take a very long time even using modern forms of transport, so they could imagine how it must have been for Drake and his men.

Younger students

You may want the students to do this activity in groups. Students may also like to write on the map where the events described in the student book took place.

Outcomes

The students can:

- Learn the locations of some of the places where Drake stopped on his voyage.
- Practise finding locations on a map.
- Understand something of the length of Drake's journey.

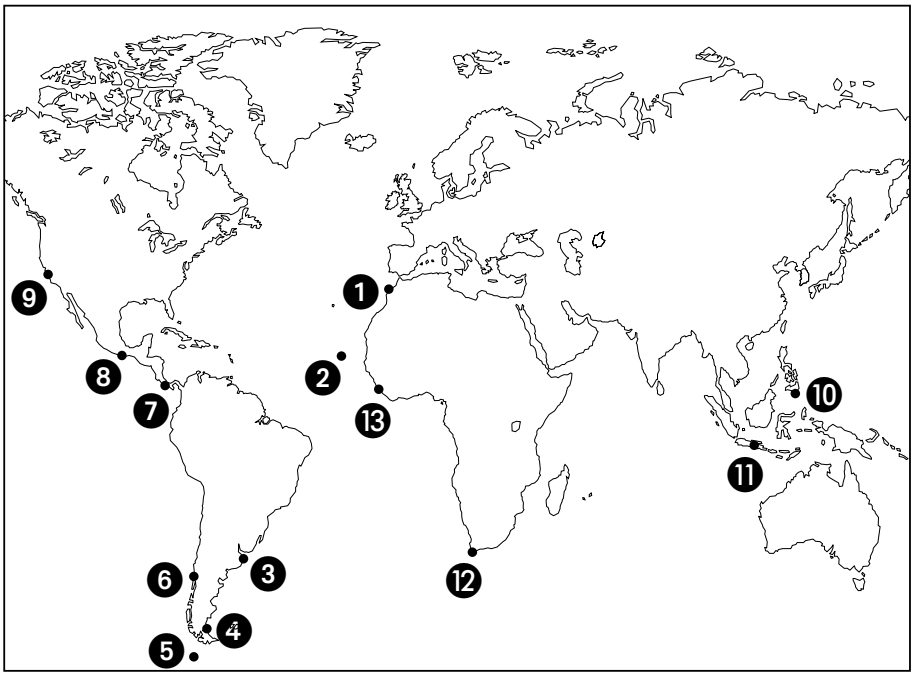
Older students

The students can work on their own, or in groups. Students can compare this map with the map of Magellan's journey.

Outcomes

The students can:

- Learn the locations of some of the places where Drake stopped on his voyage.
- Practise finding locations on a map.
- Understand something of the length of Drake's journey.



Name:..... Form:.....

Based on **pages 30 and 31** of *Tudor Age of Discovery*

Drake's journey (ii)

Here is some information about Drake's voyage. It is not in chronological order. Write it on your timeline correctly.

Date	Location	Notes
18/6/1580	Cape of Good Hope	Drake and his men didn't land.
27/1/1578 –10/2/1578	Cape Verde Islands	One of the islands is volcanic.
13/10/1579	Caroline Islands	The Golden Hind is met by men in canoes.
9/1/1580	Celebes	The Golden Hind ran onto a rock. Cargo was jettisoned.
5/4/1578	Coast of Brazil	They hadn't seen land for 54 days.
29/11/1578	La Mocha	The people living here brought potatoes to Drake's crew.
13/2/1579	Lima	Drake took silks and linen cloth from a Spanish vessel in Lima.
14/11/1579	Moluccas	Spice islands where Drake and his crew took many spices on board ship.
8/2/1580	Moluccas	Drake set sail for Java then England.
June 1579	Nova Albion	Drake put up a monument.
15/11/1577	Pelican and 4 other ships sailed from Plymouth	There were 164 men on board the ships.
3/11/1580	Plymouth	Before landing, Drake had the Queen informed that he had returned.
20/6/1578	Port St Julian	They found a gallows used by Magellan.
27/4/1578	River Plate	There was deep fresh water.
22/7/1580	Sierra Leone	They took on provisions.
7/9/1578	South Pacific	A great storm blew the ship 600 miles south.
8/10/1578	Strait of Magellan	Captain Winter sailed the Elizabeth back to England.
August 1578	Strait of Magellan	Drake changed Pelican's name to the Golden Hind.
5/6/1579	West coast of America	Drake was looking for the Northwest Passage.

Drake's journey (ii)

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet, atlas.

Using the worksheet

This is a different way of looking at Drake's trip. You may wish to use it together with the previous activity, or instead of the previous activity. Or, you may like some of the students to work on this activity, while others do the previous one.

In addition to learning more about Drake's trip, this activity gives students the chance to make a timeline and to place dates in the proper order.

You may like the students to write the events on a calendar, rather than make a timeline. Or, you could challenge the students to make a timeline of their own devising to 'plot' the events on.

Younger students

You may want the students to do this activity in groups or on their own. Students may also like to make a timeline of events.

Outcomes

The students can:

- Learn some of the things that happened to Drake on his journey.
- Make a timeline.
- Place dates in the correct order.

Older students

The students might want to research to find out some more of the events that happened on Drake's journey to add to their timeline. Students could devise different styles of timeline.

Outcomes

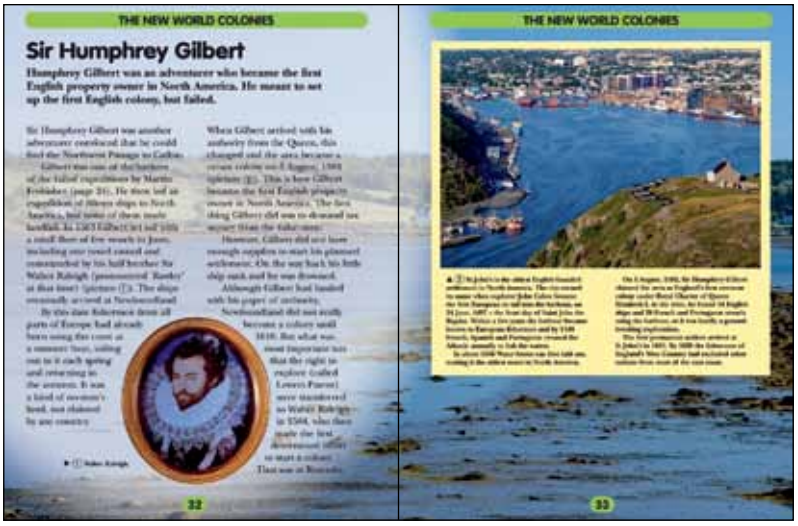
The students can:

- Learn some of the things that happened to Drake on his journey.
- Make a timeline.
- Place dates in the correct order.

Chapter 4: The New World colonies

Spread 15 (pages 32–33)

Sir Humphrey Gilbert



15A

15B

Humphrey Gilbert was an ambitious, educated man who set in motion two of the great quests of the Elizabethan age – the hunt for the Northwest Passage and the attempt to settle America.

Gilbert was born into a Devon seafaring clan and was Walter Raleigh's half-brother. He studied at Oxford and then did service in Ireland, putting down rebellions. His real ambition, however, was to find the mythical Northwest Passage – a sea strait believed to lead through the northern land masses (Canada) to Asia. Gilbert laid out his plans for the expedition in a treatise – Discourse of a Discoverie for a New Passage to Cathaia – and presented it at court. Elizabeth was unimpressed and ordered him back to Ireland, but she did agree to another of his plans, to found a colony in the Irish county of Munster.

In the 1570s, Gilbert – knighted for his success in Munster – joined fellow Devonian seaman John Hawkins as a Plymouth MP. He advanced at court and was made surveyor of artillery. However, he still nurtured his explorer's ambitions: the Discourse was published and he championed Frobisher on his expeditions to find the passage. Meanwhile Gilbert argued the case for establishing English colonies overseas.

A visionary theorist, Gilbert was not a good practical seaman. In 1578, he led a huge and disastrous reconnaissance trip to the New World with Raleigh, in which only Raleigh's ship made it across the Atlantic, and two years later sent a smaller, more successful expedition to America without him. Finally, in 1583, Gilbert sailed with a fleet of five small ships and 260 men to settle America. Four of the ships made it to Newfoundland and Gilbert claimed St John's for Elizabeth and England, but many of the crew died of sickness and others deserted or turned to piracy.

On arriving at the port of St John's, Gilbert found himself temporarily blockaded by the fishing fleet under the organisation of the port admiral (an Englishman) on account of piracy committed against a Portuguese vessel in 1582 by one of Gilbert's commanders.

Once this resistance was overcome, Gilbert waved his letters patent about and, in a formal ceremony, took possession of Newfoundland (including the lands 200 leagues to the north and south) for the English crown on 5 August, 1583. This involved the cutting of turf to

symbolise the transfer of possession of the soil, according to the common law of England. He claimed authority over the fish stations at St John's and proceeded to levy a tax on the fisherman from several countries who worked this popular area near the Grand Banks.

Within weeks his fleet departed, having made no attempt to form a settlement, due to lack of supplies. During the return voyage, Gilbert insisted on sailing in his hardy old favourite, the Squirrel.

A chapter of accidents followed during the voyage back to England. Against his navigator's advice, Gilbert ordered a controversial change of course for the fleet, and one of the vessels ran aground with some loss of life (probably on the western shoals of Sable Island).

Gilbert then refused to transfer into a larger, safer vessel when a storm blew up. When the Golden Hind, which was accompanying the Squirrel back to England, came within hailing distance, the crew heard Gilbert cry out repeatedly, "We are as near to Heaven by sea as by land!" as he lifted his palm to the skies to illustrate his point. Gilbert was last seen on the deck of his small, capsizing ship, a book still in his hand.

Gilbert was typical of Elizabeth's pirates and was at heart an adventurer. He dabbled in many things, including alchemy, but was convinced that the future lay in founding settlements in the New World. In that he was correct. The formality of his annexation of Newfoundland eventually achieved reality in 1610; but perhaps of more significance was the reissue to Raleigh in 1584 of Gilbert's patent, on the back of which he undertook the Roanoke expeditions, the first sustained attempt by the English crown to establish colonies in North America.

Gilbert Sound near Greenland was named after him by John Davys.

Name:..... Form:.....

Based on **pages 32 and 33** of *Tudor Age of Discovery*

St John's

Here is some information about St Johns. Read the information and answer the questions below.

Today Newfoundland is part of Canada. The oldest known settlement anywhere in the Americas built by Europeans is located at L'Anse aux Meadows, Newfoundland. It was first settled around 1000 AD by Vikings.

St John's is the oldest English-founded settlement in North America. According to tradition the city earned its name when explorer John Cabot became the first European to sail into the harbour, on 24 June, 1497 – the feast day of Saint John the Baptist. However, no one knows the exact locations of Cabot's landfalls. A series of expeditions to St John's by the Portuguese in the Azores followed in the early 16th century, and by 1540 French, Spanish and Portuguese ships crossed the Atlantic annually to fish the waters off the Avalon Peninsula. In the Basque Country, it is a common belief that the name of St John's was given by Basque fishermen because the bay of St John's is very similar to the Bay of Pasaia in the Basque Country, where one of the fishing towns is also called St John (in Spanish, San Juan).

On 5 August, 1583, Sir Humphrey Gilbert claimed the area as England's first overseas colony under Royal Charter of Queen Elizabeth I. At the time, he found 16 English ships and 20 French and Portuguese ships using the harbour.

The first permanent European settlers arrived at St John's in 1605. By 1620 the fishermen of England's West Country had pushed other nations from most of the east coast. St John's was by far the largest settlement in Newfoundland when English naval officers began to take censuses around 1675. Every summer the population swelled with the arrival of migratory fishermen. In 1680, fishing ships (mostly from South Devon) set up fishing rooms at St John's, bringing hundreds of Irish men into the port to operate inshore fishing boats.

Questions

1. Who were the first people to come to Newfoundland? ✎ .....

2. What are two of the stories about how St John's got its name?

✎ .....

.....

3. How many different nationalities are mentioned in this reading? List them.

✎ .....

4. Why did the population of St John's grow in the summer months?

✎ .....

Teacher's sheet

Based on **pages 32 and 33** of *Tudor Age of Discovery*

St John's

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

Students may be amazed to learn that Columbus was not the first person to set foot in the Americas. In fact, the Vikings had summer settlements in Newfoundland as early as 1000AD. You may want to show students a map and point out the location of Newfoundland and Greenland (where there were also Viking settlements). They are not actually that far apart.

In fact, when Gilbert arrived at St John's, it was a thriving summer fishing port, although there was no permanent settlement and people did not stay the winter.

The other interesting thing about St John's is that Gilbert found people of many nationalities all sharing the port. After Gilbert, the English soon put a stop to this and other nationalities were excluded from using the port.

This activity gives students a chance to learn a bit about the history of St John's and also to get a feel for the way that different nationalities used the port as a fishing base. They would have been fishing primarily for Atlantic cod, which they would have brought ashore to dry and salt so the fish would last out the long journey home. They may also have cut local trees for wood to build barrels to store the fish in. And they may have traded with the local Indians for supplies.

Younger students

You may want to go through the reading to make sure the students understand all of the words used. Students can answer questions on their own or in groups.

Outcomes

The students can:

- Extract information from a text.
- Learn about St John's, the first European settlement in the Americas.
- Understand how different nations used St John's and how this changed after Gilbert.

Older students

You may want the students to look up any words they do not understand. Students can work alone or in groups to answer the questions.

Some students may want to research the history of St John's.

Outcomes

The students can:

- Extract information from a text.
- Learn about St John's, the first European settlement in the Americas.
- Understand how different nations used St John's and how this changed after Gilbert.

Name:..... Form:.....

Based on **pages 32 and 33** of *Tudor Age of Discovery*

A newspaper story

Imagine that you are a newspaper reporter on Newfoundland when Humphrey Gilbert arrives. Write a newspaper story describing what happens and how the local fishermen felt about Gilbert taking over the settlement. Remember that you need to tell what happened, where it happened, who was involved and when it happened. Here are some facts you can use. You should also include how people felt about Gilbert arriving.

There were people from many European countries living at the settlement of St John's when Gilbert arrived.

Gilbert waved his letter of patent from the Queen around as he walked through the settlement.

Gilbert took over the settlement in a ceremony that included cutting the turf to stand for the transfer of ownership of the soil, according to the common law of England.

When he arrived at the port of St John's, Gilbert found himself blockaded by the fishing fleet under the organisation of the port admiral (an Englishman) because of piracy committed against a Portuguese vessel in 1582 by one of Gilbert's commanders.

Gilbert took possession of Newfoundland and the lands 200 leagues to the north and south for the English crown on 5 August, 1583.

After taking possession, Gilbert tried to tax the fishermen who lived there.

Gilbert left three weeks later because he did not have enough supplies.

A newspaper story

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This is an opportunity for students to practise a particular style of writing. You may like to begin by first explaining that newspaper stories are always written in a certain way – they always try to tell who, what, where, why and when – the five 'w's'. You may like to read a short newspaper story to the students and point out the five 'w's' in the story.

Then tell the students that they are going to use the facts on the sheet to write up a story of their own about how the fishermen of St John's felt when Gilbert arrived.

It is likely that the English fishermen did not mind too much, although they would have been just as upset as everyone else at the levy of the tax by Gilbert. The fishermen of the other nations were no doubt upset and worried.

You might like to get students to role play being fishermen of various nationalities. Some students could be 'reporters' and interview them about how they felt when Gilbert arrived. You might also want to see how many different interpretations of events students come up with from the information given. There are likely to be several and you may want to point out that it is the reporter's job to try and find the truth from interviewing people and doing research.

Younger students

Some of the students may need some help in finding the five 'w's' in the information given.

Outcomes

The students can:

- Write a newspaper story.
- Extract information from a text.
- Learn how some people in St John's may have felt at Gilbert's arrival.
- Learn more about Gilbert's trip to Newfoundland.

Older students

Each student could play the role of a fisherman from a different country and the students could interview each other for their article.

Outcomes

The students can:

- Write a newspaper story.
- Extract information from a text.
- Learn how some people in St John's may have felt at Gilbert's arrival.
- Learn more about Gilbert's trip to Newfoundland.
- Interview someone to find out information.

Spreads 16, 17 and 18 (pages 34–39)

The first English settlement in the New World: Roanoke


THE NEW WORLD COLONIES

The first English settlement in the New World: Roanoke

The first English settlement in the New World was founded as a result of the ambitions of Sir Walter Raleigh.

Exploration

Hazards of the Roanoke Journey

34

35

16

The story of the first English colony in the Americas sets an all too familiar pattern for the future. When they first landed, the colonists and Native Americans got along very well. In fact, it is easy to see why the first English visitors thought they had found a place that was perfect for settlement. The Native Americans were robust and healthy, and in the eyes of the English the land must be bountiful because even 'primitive' peoples could thrive on it.

However, these 'primitive' people thrived because they had thousands of years of experience in living on the land. When settlers came, they quickly realised that it was not that easy. None of the crops they brought from home would grow easily in the new land, and they had little idea how to grow and harvest the foods the Native Americans thrived on.

For their part, it is likely, from what we now know, that the Native Americans had no idea that the colonists felt they owned the land they colonised. Native Americans had no concept of land ownership and probably thought the colonists would stay a while and then move on.

Similarly, almost all aboriginal people's in North America shared a similar belief system. The idea that some people would consider themselves superior because of their different beliefs would never have occurred to the Native Americans.

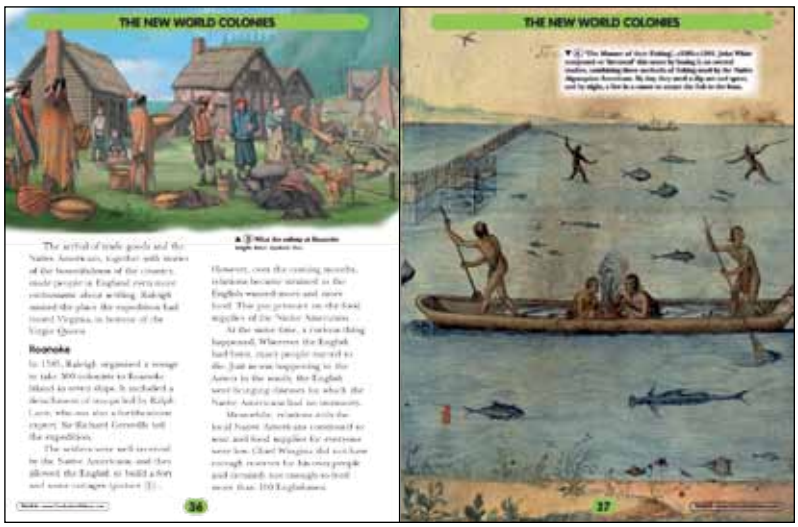
The low, narrow Roanoke island lies between the treacherous Outer Banks and the mainland. Although it is influenced by the Atlantic Ocean, Roanoke is a verdant oasis compared to the harsh winds and pounding surf of the barrier islands. The island is characterised by thick marshlands and stands of live oaks teeming with wildlife.

After the failure of the first mission, Raleigh was angry with Lane but not deterred from his mission to build a colony in America. He recruited 117 men, women and children for a more permanent settlement, and appointed John White as governor of the new 'Cittie of Raleigh'.

Raleigh had also decided that the Chesapeake Bay area was a better site for settlement, and he hired Simon Fernandes, a Portuguese pilot familiar with the area, to transport the colonists there.

Three vessels – the 120-tun Lyon, a flyboat, and a pinnace – sailed from Portsmouth on 26 April 1587. Off the coast of Portugal, they lost the flyboat in a storm. On 16 July they sighted the mainland. Finally, on 22 July they arrived off the Outer Banks. They planned to look in on the men left behind on Roanoke, then sail north to Chesapeake Bay.

However, Fernandes was by trade a privateer in the escalating war between Spain



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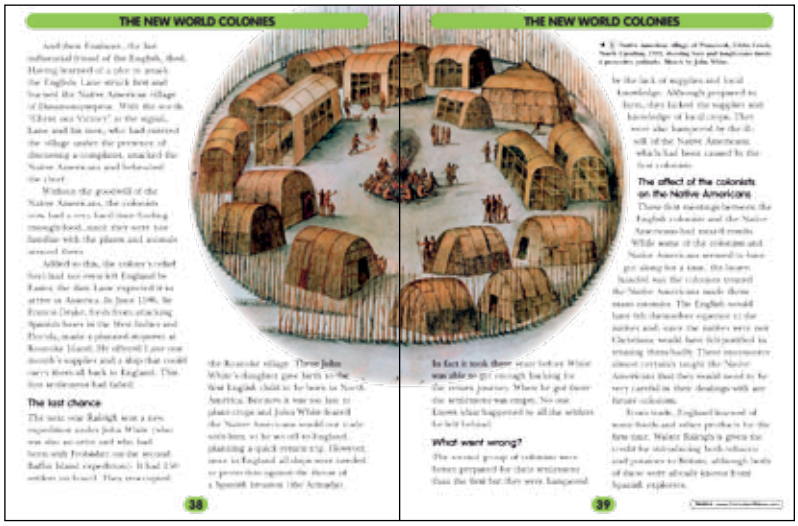


18 A

18 B

and England. By the time the ships arrived at Roanoke Island in July, 1587, to check on the 15 men left behind a year earlier, he had grown impatient with White and anxious to resume the hunt for Spanish shipping. Instead of continuing on to Chesapeake Bay, he ordered the colonists ashore on Roanoke Island.

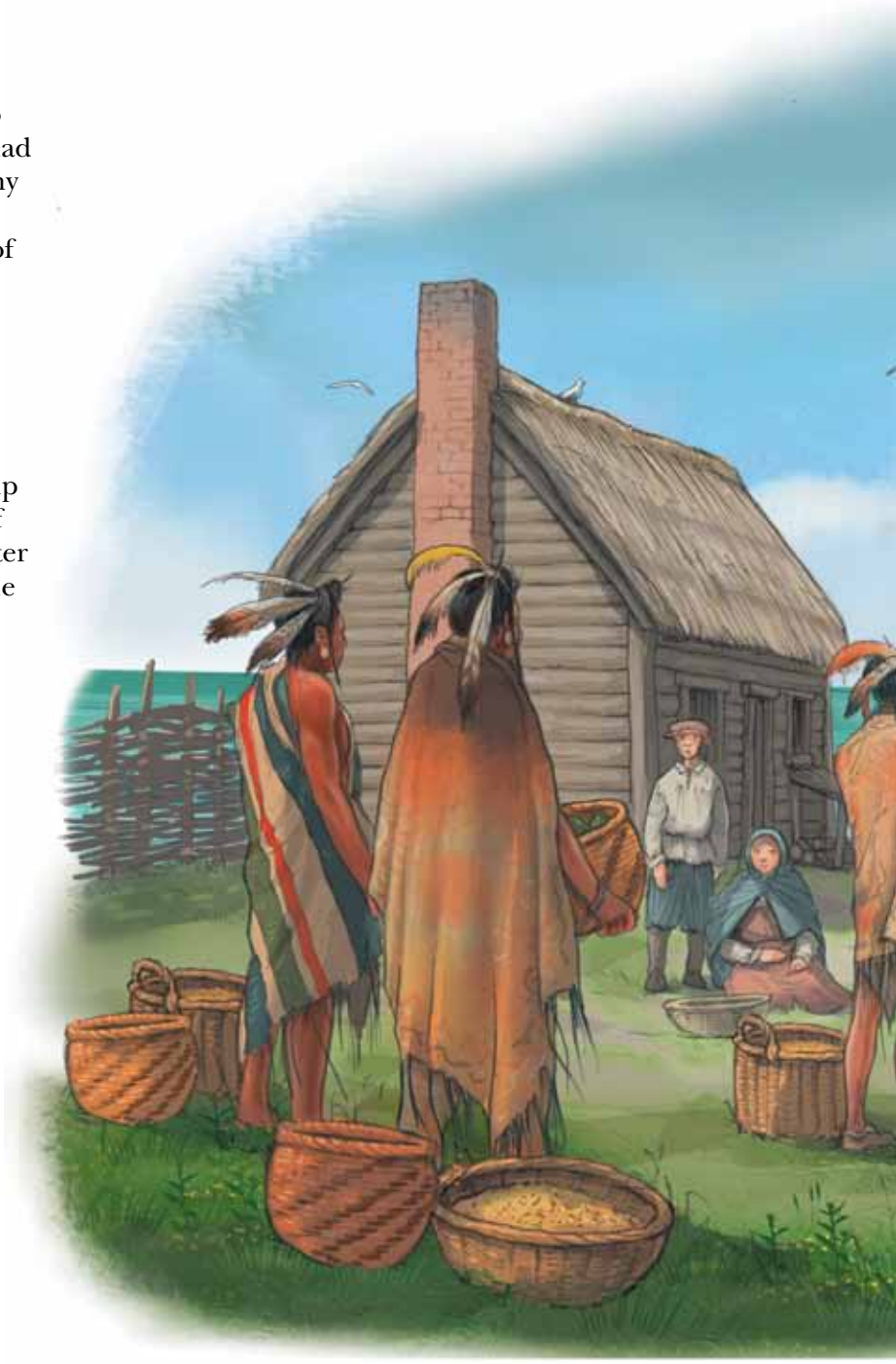
Arriving on Roanoke Island, White and his men found the fort razed and the houses abandoned. Of the fifteen men left by Grenville, the only trace was the skeleton of one man. It appeared that Indians had murdered the 15 men and the colonists were uneasy at the prospect of remaining on Roanoke Island. But Fernandes left them no choice. They unloaded their belonging and supplies and repaired Lane's fort. On 18 August, 1587, Eleanor Dare (John White's daughter) gave birth to a daughter she named Virginia, thus earning the distinction of being the first English child born on American soil. Ten days later, Fernandes departed for England, taking along an anxious John White, who had decided to return to England for supplies. It was the last time he would ever see his family.

Upon his arrival in Britain, White found himself trapped by the impending invasion of the Spanish Armada. Finally, two years after the defeat of the Armada, he again sailed for Roanoke Island. He arrived on 18 August, 1590, and found the Cittie of Raleigh deserted, plundered, and surrounded "with a high pallisado of great trees, with cortynes and flankers, very fort-like". On one of the palisades, he found the single word "CROATOAN" carved into the surface, and the letters "CRO" carved into a nearby tree.

White knew the carvings were "to signifie the place, where I should find the planters seated, according to a secret token agreed upon betweene them and me at my last departure from them... for at my coming away, they were prepared to remove 50 miles into the maine". White had every hope that he would locate the colony and his family at nearby Croatoan Island (present-day Hatteras Island), the home of Chief Manteo's people.

Before he could make further exploration, however, a great hurricane arose, damaging his ships and forcing him back to England. Despite repeated attempts, he was never again able to raise the funding and resources to make the trip to America. Raleigh had given up hope of settlement, and White died many years later on one of Raleigh's estates, ignorant to the fate of his family and the colony.

The 117 pioneers of Roanoke Island had vanished into the great wilderness. Their fate is still debated today.



Name:..... Form:.....

Based on **pages 34 to 39** of *Tudor Age of Discovery*

Indian towns

The settlers found many Native American towns near Roanoke. Here is a description of them written by Thomas Harriot, a member of the colony.

"They are a people clothed with loose mantles made of Deere skins, & aprons of the same rounde about their middles; all else naked; having no edge tooles or weapons of yron or steele to attack us withall, neither know they how to make any: those weapons that they have, are onlie bowes made of Witch hazle, & arrowes of reeds; flat edged truncheons also of wood about a yard long, neither have they any thing to defend themselves but shields made of barcks; and some armours made of stickes woven together with thread.

Their townes are but small, & neere the sea coast, some containing but 10 or 12 houses: some 20. The greatest that we have seene have bene but of 30 houses: if they be walled it is only done with barks of trees made fast to stakes, or else with poles only fixed upright and close one by another.

Their houses are made of small poles made fast at the tops in rounde forme after the maner as is used in many arbories in our gardens of England, in most townes covered with barkes, and in some with artificiall mattes made of long rushes; from the tops of the houses downe to the ground. The length of them is commonly double to the breadth, in some places they are but 12 and 16 yardes long, and in other some wee have seene of foure and twentie."

Meaning of some words:

mantle – coat

witch hazel – a type of tree

truncheon – club

made fast – fastened

Teacher's sheet

Based on **pages 34 and 39** of *Tudor Age of Discovery*

Indian towns

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

Again, this is only a small part of the lengthy description written by Harriot. Harriot also wrote about the native plants and animals, but here he gives his description of the natives. You may like to point out the way that he dwells on descriptions of the Indians' lack of armour and metal weapons. He is clearly thinking about how well the settlers would do against them in battle.

Students may be surprised to see that the Indians here did not live in tepees, as we see in the movies. In fact, teepees were only used by Indians living on the Great Plains of the midwest (where large animals such as buffalo were plentiful, and so they had lots of skins for building teepees).

The Indians described here lived in houses made of reed mats or bark. Houses covered with bark were less draughty and easier to heat. Since suitable bark was hard to obtain in large quantities for construction and repair, such houses were probably reserved for kings and noblemen, and their families.

Individuals of lower rank probably live in the mat-covered houses. Mats could be raised and lowered to let in light and fresh air, but were less-efficient insulators. Some large houses may also have had a shrine. Their length, which according to Harriot ranged from 36 to 72 feet, was "commonly double to the breadth".

Indian towns also provided residences for priests and healers, and central places for feasts and religious ceremonies.

There is a picture of an Indian town in the student book, but you may like students to draw their own pictures, based on this information.

Younger students

You may also like to read through this with the students and then have them draw the town or write a description of the Indians and their town in their own words. They may like to discuss how the Indian town was likely to be different from the settler town. Settler houses were probably made all of wood, settlers would have had different clothes and been fully clothed; settlers were armed with guns while Indians had bows and arrows, etc.

Students will probably need some help with many of the words used here. You may like to make a list on the board of words as they are spelled here and as they are spelled today. You could ask the students to tell you the modern spellings as a class exercise.

Outcomes

The students can:

- Learn a little of how the Native Americans near Roanoke lived and looked.
- Understand some of the vocabulary used at the time.
- Learn something of what the settlers thought of the Native Americans.

Older students

Students may like to write a description or draw a picture of the Native Americans and their houses based on the information given here.

Students may need some help in working out the modern spellings of the words used in the description. You may like the students to rewrite the description using modern spellings. They could do this individually or in groups.

Students may want to research further information about the Native Americans. The full version of this can be found on http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1009. There is also a modern English version.

Outcomes

The students can:

- Learn a little of how the Native Americans near Roanoke lived and looked.
- Understand some of the vocabulary used at the time.
- Learn something of what the settlers thought of the Native Americans.

Name:..... Form:.....

Based on **pages 34 to 39** of *Tudor Age of Discovery*

Animals of Roanoke

Here is part of a description written by John White of some of the animals found on Roanoke.

"Of great importance were the furbearing creatures. All along the Sea coast there are great store of Otters, which being taken by weires and other engines made for the purpose, wil yeeld good profite. There are also many Marterne furres (martens) and saquenuckot (muskrat) and Maquowoc (mink). Conies (rabbits), those that we have seene, are of a grey colour like hares: in some places there are such plenty that all the people of some townes make mantles (coats) of the furre.

The deer differ from ours only in this – their tailes are larger, and the snags of the hornes looke backward.

There is also a little Beast of a strange incredible nature, call'd the Apossume, it is about the bigness of a pig of 2 months old; she hath comonly 7 young ones at a time, sometimes fewer, and til the young ones be 5 months old, she at her pleasure can take them all up into her belly, and putteth them forth again without hurt to herself or them at all.

Sometimes in feeding on muscles were found some pearles and one man gathered a fayre chaine of them."

Questions

1. What are some of the animals that White described?

✎ .....

2. Describe the "apossume" in your own words.

✎ .....

3. How are the deer on Roanoke different from the deer in England?

✎ .....

4. What animals do the people of the towns make into coats? ✎ .....

5. Were there a lot of valuable animals on Roanoke? ✎ .....

Teacher's sheet

Based on **pages 34 to 39** of *Tudor Age of Discovery*

Animals of Roanoke

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This is only a small part of the lengthy description John White wrote of the plants and animals of Roanoke. While the settlers did not find any gold or other precious metals, it would be clear to anyone back in England reading this description that the land in the 'New World' was very bountiful and would make a good settlement. This is probably why people persisted in settling in this area, despite the hardships and dangers.

The names of the animals in the first paragraph are the Native American names.

The furbearing animals would have been of great interest back in England as well, since there was a lot of money to be made in the fur trade. In fact, the animals described here were so thoroughly hunted in the next hundred years after White wrote this description, that they disappeared from this part of North America, and many of them almost disappeared entirely from North America. Martins and minks are still rare in North America and otters have only recently made a comeback.

Here, White talks about finding pearls in mussels, and they are sometimes found in mussels, but he might also have been talking about oysters, which were plentiful. In fact, although today we consider oysters a delicacy, they were so plentiful in North America at this time that settlers considered them a food you ate only when you had nothing else to eat. The Native Americans ate a huge amount of oysters.

The animal described by White as an "apossume" is, of course, a possum, which is a marsupial. This explains why it appears to "take its young into its belly". It is actually taking them into its pouch. The possum is the only marsupial in the Americas and, at this time, English people would not have been familiar with the marsupials of Australia.

Younger students

Students may need some help in understanding the language and spelling used here.

Where White talks about people in the towns making coats, he means Native American towns.

Outcomes

The students can:

- Learn some of the animals found on Roanoke.
- Understand some of the vocabulary used in John White's time.
- Learn about what the settlers may have used some of the local animals for.

Older students

Students may want to research further the animals and plants as John White described them (he also made drawings). More information can be found on www.virtualjamestown.org/fhaccounts_desc.html#roanoke.

Outcomes

The students can:

- Learn some of the animals found on Roanoke.
- Understand some of the vocabulary used in John White's time.
- Learn about what the settlers may have used some of the local animals for.

Answers

1. Otter, mink, muskrat, martin, rabbit, hare, deer, mussels, possum.
2. Answers will vary.
3. Their tails are larger and their horns point the other way.
4. Rabbits.
5. Yes.

Name:..... Form:.....

Based on **pages 34 to 39** of *Tudor Age of Discovery*

In John White's words

This is part of a report written by John White when he came back to the settlement to rescue the settlers. Instead of the settlers, he found everyone gone.

"We came to the place where I left our Colony in the year 1586. As we entered up the sandy bank, upon a tree were curiously carved the letters CRO: which letters we knew to signify the place where I should find the settlers.

We found the houses taken down and one of the chief trees or posts at the right side of the entrance had the bark taken off, and 5 feet from the ground in fair Capital letters was carved CROATOAN.

We entered into the settlement, where we found many bars of Iron, two pigs of Lead, four iron fowlers, and such like heavy things, thrown here and there, almost overgrown with grass and weeds.

Presently Captain Cook and I went to the place, which was in the end of an old trench made two years ago, where we found five chests, that had been carefully hidden by the settlers. Three of the chests were my own, and about the place many of my things were spoiled and broken, and my books torn from the covers, and my armour almost eaten through with rust. This could be no other but the deed of the Savages, our enemies. They had watched the departure of our men to Croatoan; and as soon as they were gone, digged up every place where they suspected any thing to be buried: but although it much grieved me to see such spoil of my goods, yet on the other side I greatly joyed that I had safely found a certain token of their safe being at Croatoan, which is the place where Manteo was born, and the Savages of the Island our friends."

Questions

1. What does John White think happened to the settlers?

✎ .....

.....

2. What evidence does John White have for his theory about where the settlers are?

✎ .....

.....

In John White's words

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

When White returned to Roanoke, three years after he left, he found the settlers' colony gone and the words Croatoan and CRO carved on a tree and a post. He believed that this meant the colonists had picked up and gone to live on Croatoan, where he knew there were friendly Indians. This is why he is happy, because he believes the colonists are safe.

He also finds that some chests the settlers had buried had been dug up and their contents scattered around. White sees this as further evidence that the settlers are alive. He believes the local Indians, who were not friendly to the settlers, watched them leave and then came back and dug up their chests.

There were also some things strewn around the camp (pigs of lead are lead weights, a fowler is a gun). These were heavy items and the settlers may have left them behind, rather than carry them, especially if they left in a hurry. However, the houses were also gone. The settlers may have dismantled them and moved the wood and other goods with them. This is what White believed.

The tragedy is that White had to leave before he could go on to Croatoan and try to find his family. He was never able to raise the money to return to look for his family and it was decades before anyone from England went to Croatoan – by which time there was no trace of them.

Younger students

Students will probably need some help with many of the words used here. You may like to make a list on the board of words as they are spelled here and as they are spelled today.

You may also like to read through this with the students and then discuss what White thought about where the settlers went and why he thought that.

Students may have other theories about what happened. You may like to ask them what evidence there is for their theory.

Outcomes

The students can:

- Learn what White thought happened to the colony.
- Learn how the colony looked when White returned.
- Understand some of the words used by White.
- Understand how evidence can be used to try and prove a theory.

Older students

Students may need some help with some of the words used here. You may also like to read through this with the students and then discuss what White thought about where the settlers went and why he thought that.

Students may have other theories about what happened. You may like to ask them what evidence there is for their theory.

Outcomes

The students can:

- Learn what White thought happened to the colony.
- Learn how the colony looked when White returned.
- Understand some of the words used by White.
- Understand how to use evidence to try and prove a theory.

Name:..... Form:.....

Based on **pages 34 to 39** of *Tudor Age of Discovery*

The missing colonists

The fate of the missing colonists has remained a mystery all these years.Here are six explanations for what happened to the missing colonists of Roanoke.

1. The people of Roanoke simply left the settlement

One explanation is that the colonists left Roanoke and moved somewhere else, where they thought there would be more food, possibly to somewhere near Chesapeake Bay. The evidence for this is that an Indian chief in the Chesapeake Bay area later told English people that he had killed some colonists who were there, to prevent more English settlers from stealing their land. But we do not know if this chief was telling the truth. Maybe he was trying to scare off the new settlers.

2. The whole population of Roanoke Island was killed by a disease

The English brought many diseases with them to the New World. However, there were no bodies found at Roanoke and the houses had disappeared. It is possible that the colonists died and were then buried by Indians, who also destroyed their houses, so that no one else would get sick.

3. The village was destroyed by a severe storm such as a hurricane

This area does get hurricanes and other severe storms. A hurricane could have washed away the colonists and destroyed the houses. The biggest problem with this theory is that the fence around the settlement was still standing when White returned. It is not possible for a storm to do as much damage as clearing away the whole settlement when the fence remained untouched.

4. The people of Roanoke decided to leave Roanoke Island to live with the natives

John White found the word Croatoan carved on a post at the settlement, and the letters CRO carved on a tree. This is the name of another island close to Roanoke. It was also the name of the group of friendly natives that inhabited it. It is possible that when food ran low the colonists decided to live with the natives of Croatoan.

5. The colonists were killed by the Native Americans near Roanoke

One important fact supports this theory. Fifteen men left behind from the earlier colony had been killed by Native Americans. However, there is no reason to think that the same thing happened to the missing colonists and no bodies were ever found.

6. The Spanish destroyed the colony

Earlier in the century, the Spanish had destroyed evidence of the French colony of Fort Charles in southern South Carolina and then massacred Fort Caroline, the French colony near present-day Jacksonville, Florida. So, the Spanish were familiar with the area and had caused violence there before. The problem with this theory is that in 1600, ten years after the colony disappeared, the Spanish claimed they did not know there was ever a colony on Roanoke. They could be lying, but they have no reason to lie, since the Spanish never settled the area.

Which theory do you think is the most likely and why?

The missing colonists

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

There are no right or wrong answers here, since historians still do not know with any certainty what happened to the colonists. The idea here is for children to present an argument based on what they know and what they think is likely.

Modern archaeologists believe the most likely scenario is that some of the colonists died and the remaining ones decided, or were invited, to go and live with the Indians on Croatoan island. There is actually now some evidence for this. If true, it is likely that those colonists who went to live with the Indians died of natural causes before they could be found.

East Carolina University organised 'The Croatoan Project', an archaeological investigation into the events at Roanoke. The excavation team sent to Croatoan uncovered a 10 carat (42%) gold 16th century English signet ring, a flintlock musket, and two 16th century copper farthings at the site of the ancient Croatoan capital, 50 miles (80 km) from the old Roanoke colony. Genealogists were able to trace the lion crest on the signet ring to the Kendall coat of arms, and concluded that the ring most likely belonged to one 'Master' Kendall who is recorded as having lived in the Ralph Lane colony on Roanoke Island from 1585 to 1586. If this is the case, the ring represents the first material connection between the Roanoke colonists and the Native Americans on Hatteras Island.

A new effort is also underway by the Lost Colony Center for Science and Research to use DNA testing to prove or disprove that some Lost Colony survivors assimilated with the local Indian tribes either through adoption or enslavement. A large percentage of the surnames of people at Roanoke do exist among these tribes, although they were common surnames. Also, deeds and wills have been discovered to bear this theory out.

Younger students

You may want to go over the letter line by line with the students. Students could then answer the question on their own or as a class discussion.

Outcomes

The students can:

- Evaluate a theory based on what they know.
- Make an argument in support of a theory.
- Learn some of the possible fates of the Roanoke colonists.

Older students

Students might want to investigate further. More information can be found on www.lost-colony.com; digital.lib.ecu.edu/special/ead/findingaids/1061/1061.pdf; www.ecu.edu/rcro/Newsletter/4-1/Search.htm; www.ecu.edu/rcro/Newsletter/6-1/Croatan4.htm; and www.artsci.ecu.edu/newschp/Roanokeconference.html.

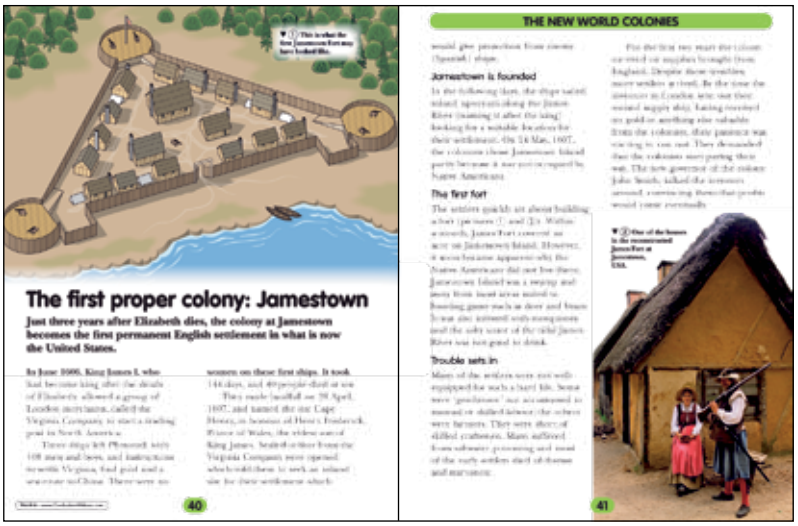
Outcomes

The students can:

- Evaluate a theory based on what they know.
- Make an argument in support of a theory.
- Learn some of the possible fates of the Roanoke colonists.

Spreads 19 and 20 (pages 40–43)

The first proper colony: Jamestown



19 A

19 B

19 C

The story of Jamestown is where the real history of the settlement of North America begins. This was the first colony to take hold and flourish (although it took many years). Once Jamestown began to prosper and to export tobacco back to England, the real flood of settlers began. Of course, this also marks the real beginning of the end of the Native Americans.

Jamestown followed no fewer than eighteen earlier failed attempts at European colonisation of North America, including the famous 'Lost Colony' at Roanoke Island in what is now Dare County, North Carolina, and the ill-fated Spanish Ajacan Mission, established thirty-six years earlier by Jesuit priests less than fifteen miles from Jamestown, Virginia.

Three ships, named Susan Constant, The Discovery, and The Godspeed, under Captain Christopher Newport, made land in April 1607 at a place they named Cape Henry. Under orders to select a more secure location, they set up a cross and gave thanks for safe landing, then set about exploring.

On 14 May, 1607, Captain Edward Maria Wingfield, elected president of the governing council the day before, selected Jamestown Island on the James River, some 40 miles (67 kilometres) inland from the Atlantic Ocean, as a prime location for a fortified settlement. The island was surrounded by deep water, making it a navigable and defensible strategic point. However, the island was swampy and isolated, offered limited space, and was plagued by mosquitos and brackish tidal river water unsuitable for drinking. Even the nearby Native American tribes regarded the site as too poor and remote for agriculture.

The first five years were very difficult for the colony. Colonists had planned on trading with the Native Americans for food, rather than growing their own, and made little attempt to learn how to harvest or grow local foods. Most of the colonists were not farmers and had few practical skills.

Despite the inspired leadership of Captain John Smith early on, many of the colonists and their replacements died within the first five years. In 1608, arriving ships brought supplies and experts from Poland and Germany, who would help to establish the first factories in the colony. As a result, glassware became the first American product to be exported to Europe.

After Smith was forced to return to England, the colony was led by George Percy, who proved incompetent in negotiating with the native tribes. It would have mattered little in any case, as the area was in the midst of a terrible drought and the local Indians did not have enough food to share in any case. This is what led to the 'Starving Time'.


THE NEW WORLD COLONIES

Smith was a good leader and he managed to set up some trade with the local Native Americans. But relations with them were never good. Smith was attacked by the local Powhatan Americans during a trip upriver and (legend has it) was only saved by the pleas of Chief Powhatan's young daughter, Pocahontas (picture 2).

Edge of starvation

The colonists had not planned to grow their own food. Instead, they expected that trade with the locals would supply them with enough food between supply ships. But the Native Americans had very little spare food to start with. The Jamestown colonists could not have known it, but they had arrived during a bad drought.

The winter of 1609–1610 became known as the "starving time" as over 80 per cent of the 300 settlers died of starvation. It took a new governor, Lord de la Warr, and his supply ships to get the colony back on its feet.

John Rolfe

John Rolfe was the first man successfully to grow and export tobacco in the colony. Rolfe was able to make his fortune. It was he who married the Native American Princess Pocahontas on 24 April, 1614.

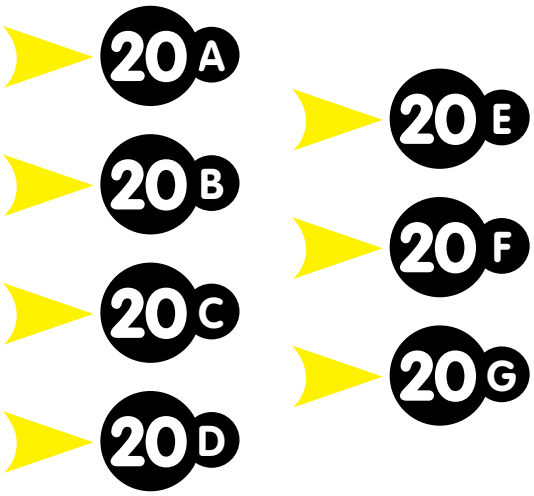
Once tobacco had been established as an export cash crop, farmers became more interested and groups of them united to create PLANTATIONS called 'hundreds'.

By 1617, the colonists were exporting 50,000 pounds of tobacco a year to England and were beginning to make enough money to make sure they could survive and prosper. Meanwhile the Native Americans were beginning to realise that the colonists were here to stay.

42

Plymouth Colony

43



The island was briefly abandoned in spring of 1610, but on 10 June, 1610, retreating settlers were intercepted a few miles downriver by a supply mission from London headed by a new governor, Lord De La Warr (after whom the state of Delaware is named), who brought much-needed supplies and additional settlers.

Among the new colonists was John Rolfe, who carried with him a cache of untested new tobacco seeds from the Caribbean.

In 1614, John Rolfe began to successfully harvest American tobacco. Prosperous and wealthy, he married Pocahontas, daughter of Chief Powhatan, bringing several years of peace between the settlers and natives. However, at the end of a public relations trip to England in 1616, Pocahontas became sick and died. The following year, her father also died. As the settlers continued to take more land for tobacco farming, relations with the natives worsened. Powhatan's brother, a fierce warrior named Opchanacanough, became head of the Powhatan Confederacy.

In 1619, the first representative assembly in America convened in a Jamestown church, "to establish one equal and uniform government over all Virginia" which would provide "just laws for the happy guiding and governing of the people there inhabiting." This became known as the House of Burgesses. Individual land ownership was also instituted, and the colony was divided into four large 'boroughs' or 'incorporations' called 'cities' (sic) by the colonists. Jamestown was located in James Cittie.

After several years of strained coexistence, Chief Opchanacanough and his Powhatan Confederacy attempted to eliminate the English colony once and for all. On the morning of 22 March, 1622, a Good Friday, they attacked outlying plantations and communities up and down the James River in what became known as the Indian Massacre of 1622.

The attack killed over 300 settlers, about a third of the English-speaking population. Jamestown was spared only through a timely warning. There was not enough time to spread the word to the outposts.

Despite such setbacks, the colony continued to grow. In 1624, King James revoked the Virginia Company's charter, and Virginia became a royal colony. Ten years later, in 1634, by order of King Charles I, the colony was divided into the original eight shires of Virginia (or counties), in a fashion similar to that practised in England. Jamestown was now located in James City Shire, soon renamed the 'County of James City', better-known in modern times as James City County, Virginia, Americas oldest county.

Another large-scale 'Indian attack' in 1644 resulted in the capture of Chief Opchanacanough. He was murdered while in custody, and the Powhatan Confederacy was decimated. Most survivors assimilated into the general population, or began living on two reservations in present-day King William County, Virginia, where the Mattaponi and Pamunkey reservations continue in modern times.

The history of Jamestown continues down to the modern day – the city has been continuously inhabited and students may like to research a timeline of Jamestown up to the current year to watch a city grow from nothing to a thriving and large city.

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Finding James Fort

Modern archaeologists have found the remains of the original Jamestown fort. But this was not easy. They knew the general area where it was, but not the exact site. The only map archaeologists had of Jamestown Fort was drawn by a Spanish spy. So, when they tried to find the fort in modern times there were two things they needed to prove. First, they needed to find a fort that matched the descriptions in the documents of the time, and the second thing they needed was to prove the fort they had found dates to 1607.

Here are some quotations describing James Fort, from some historic documents from 1607–1608. You also have a description from the archaeologists at Jamestown, describing what they discovered and the drawing by a Spanish spy in 1608.

Spanish spy sketch

Written descriptions

"The fifteenth of June we had built and finished our Fort, which was triangle wise, having three Bulwarkes, at every corner, like a halfe Moone, and foure or five pieces of Artillerie mounted in them. We had made ourselves sufficiently strong for these Savages. We had also sowne most of our Corne on two Mountaines."

George Percy, 15 June, 1607

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

"the fort growing since to more perfection, is now at this present in this manner: . . . about half an acre . . . is cast almost into the form of a triangle and so palisaded. The south side next the river (howbeit extended in a line or curtain sixscore foot more in length than the other two, by reason the advantage of the ground doth require) contains 140 yards, the west and east sides a hundred only. At every angle or corner, where the lines meet, a bulwark or watchtower is raised and in each bulwark a piece or two well mounted . . . And thus enclosed, as I said, round with a palisade of planks and strong posts, four feet deep in the ground, of young oaks, walnuts, etc. . . . the fort is called, in honour of His Majesty's name, Jamestown. The principal gate from the town, through the palisade, opens to the river, as at each bulwark there is a gate likewise to go forth and at every gate a demiculverin and so in the market-place."

William Strachey, 1609

"The Towne [James Town] it selfe by the care and providence of Sir Thomas Gates, who for the most part had his chiefest residence there, is reduced into a handsome forme, and hath in it two faire rowes of houses, all of framed Timber, two stories, and an upper Garret, or Corne loft high, besides the three large, and substantial Storehouses, joyned together in a length some hundred and twenty foot, and in breadth forty, and this town hath been lately newly, and strongly impaled, and a faire platforme for Ordence in the west Bulwark raised."

Ralph Hamor, 1611

The archaeological evidence:

The archaeologists dug at the place where they thought the fort was located and found these things:

The south fence of the fort and a trash pit dating to 1610–11.

Part of the west fence.

The east side of the fence. The two sides of the fort came together at 46 degrees, the exact angle the reported dimensions of the fort would create.

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Finding James Fort

Questions

1. How did the artefacts help the archaeologists decide that they had found the original James Fort?

✎ .....

.....

.....

.....

2. Why were the written documents important in discovering the location of James Fort?

✎ .....

.....

.....

.....

3. Read the descriptions of the fort. Which one do you think is the most accurate?

✎ .....

4. Which one is the easiest to understand today?

✎ .....

5. Did any of the written description tell you exactly where the fort was?

✎ .....

.....

.....

Finding James Fort

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheets.

Using the worksheet

Historic documents are not always complete. They can be very helpful to historical archaeologists, but can often give a limited point of view. Archaeologists use a term for seeing what was really there: ground proofing. This means that the only way you can know how accurate different descriptions of James Fort are, is to look in the ground and see it themselves.

The only drawing of the original James Fort was made in 1608 by Pedro Zuñiga, a Spanish spy. So, when archaeologists went to excavate the fort, they needed to know they had the exact location. To do this, they turned to the primary sources – the written descriptions made by the settlers.

You may like to begin this activity by discussing what archaeologists do and how they work to uncover evidence of the past. Archaeology is not only digging in the dirt, it also involves a lot of research – digging in records. This activity is a chance for students to see how archaeologists combine the two.

You may also like to discuss the difference between primary and secondary sources. Written documents and pieces of the fort that are dug up and both primary evidence.

For more information: visit Jamestown Rediscovery at www.apva.org, www.historyglobe.com, and www.bermuda-online.org/forts.htm.

Younger students

You may like to do this as a class exercise. You could go over the readings, the drawing and the archaeological finds as a group and then have the students answer the questions on their own.

Outcomes

The students can:

- Use primary sources to understand historical events.
- Describe Jamestown Fort.
- Examine types of evidence to draw a conclusion.
- Understand how archaeologists work

Older students

You may want students to work in groups to go over the evidence and answer the questions. You may also want to ask the students the following additional questions:

- How did the archaeology add information to the written documents? (The archaeology helped the historic documentation by showing exactly where the fort was, how large it might be, and by adding artefacts and other information to the historic record.)
- Did the historic documents help the archaeologists? (The documents helped the archaeologists understand which fort they were excavating. James Fort took on many forms over its life. The archaeologists can identify the different phases of building because of the early descriptions in the primary sources.)
- What are some other ways that archaeology can help us to understand history? (Archaeology can tell us about buildings that are not described in historic documents. It can also help us understand some of the everyday ways that people lived in the past. This includes not just the famous people we study, but the Native Americans, Africans, women and children who are not always well represented in written histories.)

Outcomes

The students can:

- Use primary sources to understand historical events.
- Describe Jamestown Fort.
- Examine types of evidence to draw a conclusion.
- Understand how archaeologists work.

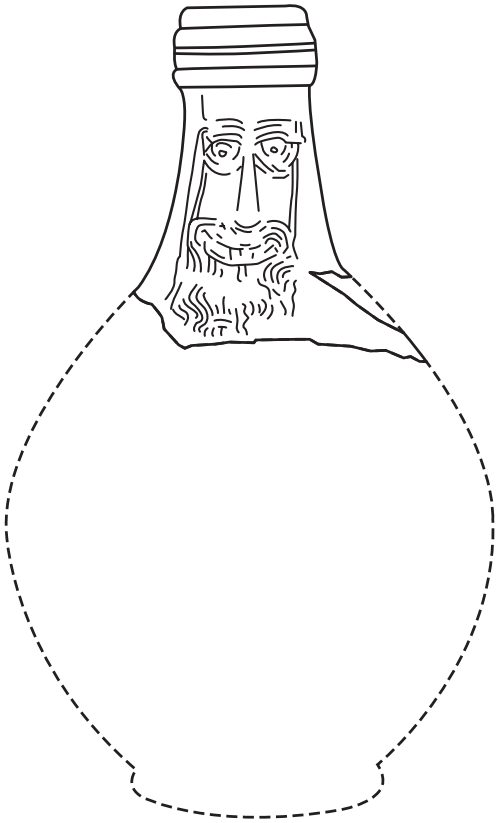
Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Making faces

There are many different kinds of artefacts that have been excavated at James Fort on Jamestown Island. Most of them were used by the English settlers in the fort, from 1607 to 1629. Some of the more interesting types of artefacts are the jugs that are called 'Bartmann Jugs'. These jugs were called Bartmann because of the bearded faces found on the front. Bartmann in German means 'bearded man'. These jugs were first made in Germany in 1550. Some of the faces on these jugs are friendly looking, while others look more menacing.

Look at the picture here of a Bartmann that was excavated by archaeologists at Jamestown. In the space below, draw a face with any expression you like.



You can cut your face out and paste it onto a jug made from paper.

Write a description of your face, tell what expression it has, who it might be and why you chose it.

Making faces

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet. Plastic jug or paper for making jug shapes.

Using the worksheet

This is an opportunity for students to study and think about one of the unusual artefacts found at Jamestown. You may like to begin by getting students to imagine they were going to a new place to live. What things would they bring with them? They would probably bring the things that were familiar to them.

Similarly, the first colonists brought all the things they wanted to have, so this jug probably meant something to the person who brought it all the way to Jamestown. Because the jug was decorated, it was more than just a jug for carrying water, it had additional meaning to its owner.

Made in Frechen, Germany, salt glazed stoneware vessels such as this jug were produced and exported in great quantities to England and were very common in the early 1600s. The jugs are known as Bartmann or 'bearded man' because of the bewhiskered face that adorns the neck. Bartmann jugs were also called 'Bellarmines', because the face looked a bit like the much-despised Cardinal Robert Bellarmino (1542–1621), who was an opponent of Protestantism, and who criticised King James I for his treatment of English Catholics.

A Bartmann jug, circa 1610, was excavated from within the palisaded walls of James Fort. It has three medallions around its belly. The medallions consist of a coat-of-arms depicting a crowned shield that has been divided into four quarters. In the upper left-hand corner of the shield, there is a heraldic device known as a fess with a label on chief. This is a band with three stylised fleurs-de-lys. It is this label that identifies the medallion as Italian and, more specifically, as representing a member of the Tuscan Anjou party of Guelfs who from medieval times were staunch supporters of the Pope.

Guelf coats-of-arms have never before been recorded on German stoneware. Further, there is no documented trade of the ware in Italy, so the Bartmann jug from the fort is extremely rare. It must have been commissioned by an individual, perhaps an Italian merchant, who had trade or other contacts with Northwest Europe. It may have been brought by one of the original settlers, or by a later visitor.

Younger students

You may like to ask the students if they have any objects at home that have pictures of familiar characters on them? Cartoons on glasses, bookbags and lunchboxes are common, as are pieces of familiar art work on dishes and calendars.

Explain to the students that the jug here was the type of drinking container used by the settlers of James Fort. Have them discuss the expression on the jug's face. Once they have made their drawing, they may like to make a jug out of paper or use a plastic jug and attach the face to it. They can also write out a description of who the face represents and why they chose to put it on a jug.

Outcomes

The students can:

- Learn about one of the artefacts found at Jamestown.
- Understand that settlers brought things that were important to them to Jamestown.
- Learn about a type of art that was common in Tudor times.

Older students

The students may like to use secondary sources to research other artefacts found at Jamestown.

Outcomes

The students can:

- Learn about one of the artefacts found at Jamestown.
- Understand that settlers brought things that were important to them to Jamestown.
- Learn about a type of art that was common in Tudor times.

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

What we eat then and now

Here is a description of how the Powhatan Indians in Virginia in the 1600s gathered food. The writer was Englishman William Strachey, who settled at Jamestown. This was written in 1609.

"About their houses they have commonly square plots of cleared ground which serve them for gardens, some 100, some 200 foot square, wherein they sow their tobacco, pumions, and a fruit like into a muskmillion . . . They plant also the field apple, the maracock – a wild fruit like a kind of pomegranate which increaseth infinitely and ripens in August, continuing unto the end of October when all other fruits be gathered. But they sow neither herb, flower, nor any other kind of fruit.

They neither do impale for deer nor breed cattle, nor bring up tame poultry, albeit they have great store of turkeys; nor keep birds, squirrels, nor tame partridges, swan, duck, nor geese. In March they live much upon their weirs and feed on fish, turkeys, squirrels, and then, as also in May they plant their fields and set their corn, and live after those months most off acorns, walnuts, chestnuts, chechinquamins and fish.

In June, July, and August they feed upon the roots of tockohow berries, groundnuts. Fish, and green wheat, and sometime upon a kind of serpent, or great snake, of which our people like to eat."

What we eat then and now

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

The Native Americans lived relatively simple lives, but they were not savages, far from it. The Indians around Jamestown were settled and relied largely on agriculture. Students may be amazed to see just how sophisticated the Indians were in the variety of foods that they grew. One big difference, however, is that they had few domesticated food animals, relying more on hunting. However, they would have known where to find animals like deer and squirrel and probably hunted only as many as the environment could bear.

Another difference from the settlers is that the Indians here did not grow food grains (green wheat is similar to wheat, but not a domesticated grass). Instead, they would have made flour from chestnuts and acorns to make into a type of bread. Many of the foods given here are not really around today, such as the maracock.

The Indians would also have relied heavily on gathering, rather than growing. Again, their knowledge of the area would have been vast and they would have known exactly where to go to harvest the foods of each season. You may like students to compare this with the settlers, who were used to eating an unvaried diet of grain and meat, with a few seasonal vegetables and fruits. While settlers certainly knew about foods like chestnuts, it would not have occurred to them to make them into a flour, or to eat foods like acorns.

Younger students

You may like to go over the reading as a class exercise, and discuss the meaning of any words the students do not understand. Or have them work in groups to underline any words they do not understand. The students can then look these words up or discuss their meaning in class. They can then work individually to answer the questions, or work in groups.

Outcomes

The students can:

- Learn some of the foods eaten by Powhatan Indians.
- Compare the foods eaten by the Powhatan Indians to those eaten by the settlers.
- Understand a little of how the Powhatan Indians lived.

Older students

Older students may like to answer both sets of questions.

Outcomes

The students can:

- Learn some of the foods eaten by Powhatan Indians.
- Compare the foods eaten by the Powhatan Indians to those eaten by the settlers.
- Understand a little of how the Powhatan Indians lived.

Answers to questions (i)

1. Tobacco, pumions, a fruit like the muskmillion (muskmelon), field apple, the maracock
2. Tobacco, pumions, a fruit like the muskmillion (muskmelon), field apple, the maracock, turkey, fish, squirrels, corn, acorns, walnuts, chestnuts, chechinquamins, roots of tockohow berries, groundnuts. green wheat, snake.
3. Answers will vary, but may include meat and wheat (bread).
4. He meant Œto fence in, but answers will vary ˆ students should explain why they answered what they did. If archaeologists found deer bones it would indicate they did eat deer, so again, they second meaning.

Answers to questions (ii)

1. Answers will vary, but could include, bones, seeds, tools used for cooking and eating, hunting equipment, fire pits.
2. Answers will vary, but students should label the different plants and animals. What is missing is a description of how they cooked, what their houses looked like, where the animals lived, how they hunted and the tools they used, etc.

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Questions (i)

1. What foods did the Powhatan Indians grow?

✎ .....

.....

.....

2. What foods did they eat?

✎ .....

.....

.....

3. Do you think this was different than foods the settlers ate?

✎ .....

4. Read the following statement from Strachey:

   "They neither do impale for deer nor breed cattle"

   The word impale can mean two different things, to impale can mean to stab or skewer. This can make you think that they did not hunt deer. Impale can also mean to build a fence around something. This meaning would say to the reader that the Native Americans did not fence in the deer. Which one do you think Strachey meant?

✎ .....

.....

   If archaeologists found deer bones in a Powhatan Indian site, which interpretation would you believe?

✎ .....

.....

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Questions (ii)

1. If you were an archaeologist digging up a Powhatan settlement, what things would you look for? What might you expect to find?

   You might look for things that would leave impressions in the ground, or would last in the earth for hundreds of years. After making a list of what you would expect to find, go to the following websites and see if any of the evidence you expected to see was discovered by archaeologists. Remember, the types of food found at James Fort would also be something you could find on a Powhatan site from the same time period.

   www.apva.org/exhibit/trade.html

   www.apva.org/exhibit/eats.html

   www.apva.org/ngex/xfood.html

2. Draw a picture of how you think a Powhatan garden might have looked, using Strachey's descriptions. What is included? What is missing?

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Job assignments

Council

Person chosen by the king to advise and assist in the governing of the colony.

Preacher

Person responsible for the spiritual health of the colony. He conducted services and performed religious rites for settlers.

Gentleman

A man of the upper-middle class (below the royal family, titled and lesser nobility) who was entitled to display arms (that is, had been granted a heraldic shield by the College of Heralds). The gentlemen settlers were all men who had bought shares in the Virginia Company while still in London. A gentleman might hire labourers to work for him or pay the passage of others in hopes of building an estate in the New World.

Carpenter

Craftsman who built furniture, tools, farm implements, wagons and houses. The carpenter also took care of the wooden hull of a ship and repaired damage. The carpenter's skills were crucial because the primary route for transportation in the colony was by water.

Blacksmith

Made iron tools for farming and building in a hot forge.

Sailor

Knew workings of ship and had navigational skills. Sailors were important to the Jamestown settlement even after they arrived because the major form of transportation was still by water up and down the James river.

Barber

Not only trimmed beards and hair but performed or assisted surgeries and dental operations.

Bricklayer

Craftsman who made and arranged bricks for buildings.

Mason

A builder and worker in stone; cut stone to fit buildings.

Tailor (Taylor/Tailers)

Made clothes from cloth material and leather for gentlemen of fashion.

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Labourer (Labourers)

Worked to grow whatever their gentleman masters wanted, generally corn or tobacco; worked building houses and other essential tasks.

Fueller

Person who supplied wood for fires. Wood was the major fuel source in the colony and was burned for heat, light, cooking, forging and probably defence.

Refiner

Person who refined gold. The refiner would take gold in its rough natural state, remove any rocks or other debris, and mould it into a pure form.

Gunner

An officer under the Crown, responsible for artillery and ammunition.

Apothecary

Person who kept a store or shop of non-perishable items like spices, drugs, preserved fruits and vegetables. Apothecaries were like pharmacists because they make powders, syrups, tinctures, and pills to medicate illness or prevent it.

Surgeon

Medical man, often on a ship, who practised healing by manual operation. Surgeons treated wounds, fractures, deformities and disorders through surgery.

Cooper (Couper)

Craftsman who made and repaired wooden vessels of storage such as casks, buckets, tubs and barrels. Coopers made barrels to store a variety of foodstuffs, water, wine, and other goods as well. The cooper's task was a difficult art which is passed down from master to apprentice.

Tobacco-Pipe-maker

Artisan who made pipes for the smoking of tobacco.

Tradesman

Person who went into the interior of the colony to trade British items for Indian furs and goods, often food. For many years, Jamestown survived solely on the food Indians gave or traded with them.

Name:..... Form:.....

Based on **pages 40 to 43** of *Tudor Age of Discovery*

Number of settlers

Occupation (Total)	Group	Number
Councell (9)	Original	6
	First Supply	1
	Second Supply	2
Preacher (1)	Original	1
Gentlemen (83)	Original	29
	First Supply	28
	Second Supply	26
Carpenters (6)	Original	6
Blacksmith (2)	Original	1
	First Supply	1
Sailor (1)	Original	1
Barber (1)	Original	1
Bricklayers (2)	Original	2
Mason (1)	Original	1
Taylor/Tailers (7)	Original	1
	First Supply	6
Drum (1)	Original	1
Labourers (44)	Original	12
	First Supply	21
	Second Supply	11
Boyes (6)	Original	4
	Second Supply	2
Fueller (1)	First Supply	1
Refiners (4)	First Supply	4
Gunner (1)	First Supply	1
Perfumer (1)	First Supply	1
Apothecaries (2)	First Supply	2
Surgeon (2)	Original	1
Couper (1)	First Supply	1
Tobacco-Pipe-maker (1)	First Supply	1
Tradesmen (14)	Second Supply	14
Divers others	Original and First Supply	unknown
Mistresse Forrest, and Anne Burras, her maide; 8 Dutch Men and Poles, with some others	Second Supply	unknown

The original group came in May 1607, the first supply group in January 1608, and the second supply group in the autumn of 1608. Occupations are given with original spellings.

Number of settlers

Age range

- Years 3/4 (SP4/5)
- Years 5/6 (SP6/7).

Resources

Copies of the worksheets and additional paper, pens and pencils.

Using the worksheet

The job assignments are the actual jobs done by settlers. The 'Number of settlers' sheet shows how many people did each job.

There are a variety of activities that you could do with the information given here, but here we give an idea for a class exercise.

Print out 'Job assignments' sheets for the class, and cut pages so that there are enough slips with individual jobs and their descriptions for each student.

Ask students to imagine there were travelling to a far-off, wild place. "What kinds of people would they bring with them? What kinds of tasks would they want someone to know how to do? What skills do they think would be important?" (Suggestions: grow food, build houses, make clothing, etc.) Tell students to pretend that they are all going to be new settlers in the Jamestown colony, and give each student a 'job assignment'. Students could use secondary sources to research their new occupations.

Students can then make individual job applications to live in the colony. Students can write a short paragraph explaining what they are doing and why they are the best candidate for the job of 'Jamestown Carpenter', for example. You may also want to suggest that they draw a picture of what they are going to do when they get there (as a carpenter, labourer, etc).

Explain that the occupations they have now were all real occupations held by the first Jamestown settlers. Students can use the second sheet to find out how many people performed which jobs.

You may also like students to make a bar graph which shows how many men performed each job, using different colours to show different categories. They should also make a colour key. (Older students may create a pie chart to show the percentages of men in each category).

Once this has been done, you may like to bring the students together for a whole class discussion. Here are a few questions you might like to ask:

- Which jobs do you think were the most important? Why?
- Are there any jobs not mentioned in the census that you think the Jamestown settlers should have included? What other kinds of duties do you think would be important for a new settlement? Who did the cooking and cleaning? (This was women's work in the early 17th century. But, there were no women at all at Jamestown in the first year and few came afterwards. The distribution of these 'women's tasks' caused much internal conflict and disruption, because many settlers were unwilling to perform these tasks. This may have been one reason for the colonies initial failure.)
- The Jamestown settlement had a lot of problems. Captain John Smith, who at one point became leader of the colony, once threatened that if you didn't work, you didn't eat. Look at your bar graphs. Why do you think John Smith made this threat? Based on what you just learned about these different roles, who do you think wasn't working his share? Why? Encourage students to explain their answers.

Outcomes

The students can:

- Follow instructions to make a job application.
- Discover what types of jobs were needed in a colony in the 1600s.
- Draw a graph.
- Think of reasons why the colony had difficulties, based on the number of people who did different jobs.

Further activities

The census data can be used as a maths exercise. You could ask students to add up the number of jobs in each ship, or to work out what percentage of the colony did each job.

Spread 21 (pages 44–45)

What effect has Tudor exploration had on our lives today?


THE NEW WORLD COLONIES

What effect has Tudor exploration had on our lives today?

The Age of Discovery opened up new links across the world and began a period of colonisation that lasted for centuries.

Colonisation

Diseases

Slave trade

Wealth

Cheaper goods

Adding to maps and knowledge

44

45

21

Students may be surprised to realise just how important Tudor exploration was to our lives today and in the recent past. In many ways, we can think of Tudor exploration as an important part of the beginning of modern times.

The Elizabethan Age (when Tudor exploration really began) was a time of great modernisation in Europe. New technologies were making exploration and many other things possible and people all over Europe were becoming more aware of other parts of the world. Much of this was due to the rise of printing and of incomes.

The rise of Protestantism and the religious upheavals that followed also had a lot to do with both exploration and settlement. In the student book we have seen how the English and Spanish became enemies partly because of religious differences, but of course many of the early settlers were also inspired by religion. Some religious settlers were looking for a place where they could practise their religion more freely, others were looking for a 'new Eden' of unspoiled land where they could put their religious ideas into practice; and yet others were hoping to live in a place free from their enemies.

Exploration brought new ideas, new foods, new wealth, new lands and new challenges to a world that was eager for all these things. But unfortunately, it came at a price. Exploration also brought slavery and the genocide of the Native American peoples and empires. This is why today when we study the age of exploration, we temper our enthusiasm at the exuberant achievements of the age with a consideration of all that was lost at the same time.

It may be wrong to judge the Tudors by the standards of our own age. In fact, the Tudor explorers most likely saw life as brutal, and therefore genocide and slavery were to them simply an extension of that brutality. Yet many of the explorers were also venal, heartless men, which is how they rose to such prominence in the first place and why they chose a life of adventure.

Don't forget that many of the explorers won their initial fame and wealth by brutally putting down rebellions in Ireland. To these men, the death of a few thousand 'savages' would not be seen as a problem.

Yet without their daring exploits, England would have been left out of the colonial game altogether and would never have amassed the wealth she used to become a world power. The explorers and pirates allowed England, with few resources, to build a vast empire.

Exploration also changed people's attitudes. As people read and learned more about far off places, their horizons broadened

and they began to think in different ways. Explorers brought back many new species and specimens and this caused a flowering of science, especially biology and medicine.

Taken as a whole, the Tudor Age of Discovery helped bring much of the modern Western world into being – good and bad.

Name:..... Form:.....

Based on **pages 44 and 45** of *Tudor Age of Discovery*

What the Tudor explorers did for us

Here are some things that the Tudor explorers brought or gave the world. In your opinion, which ones are good and which bad and why?

	Good	Bad	Why
potatoes			
tomatoes			
chillies			
corn			
cheap cotton			
discovery of new lands			
squash			
tobacco			
cheap sugar			
slavery			
spices for cooking			
war with Spain			
colonies in the Americas			
cocoa			
sweet potatoes			
gold			
iron			
knowledge			
new ideas			
gems			
conquer of the Native American peoples			
settlements in Asia and Africa			
trade with Asia and Africa			

Teacher's sheet

Based on **pages 44 and 45** of *Tudor Age of Discovery*

What the Tudor explorers did for us

Age range

- Years 3/4 (SP4/5).
- Years 5/6 (SP6/7).

Resources

Copies of the worksheet.

Using the worksheet

This is an opportunity for students to review what they have learned and to have a discussion about some of the outcomes of the Age of Discovery. You may like to use this as a class discussion rather than individual exercises.

Students may have different ideas about what is good and what is bad, for example, tobacco can be either good or bad. Smoking is bad for you, but tobacco allowed the colonists to earn a lot of money. Similarly, sugar is very useful, but cheap sugar meant that people started to eat a lot of it.

Students might also like to review what they have learned about Tudor exploration by discussing where each of the items on the list came from or who brought it to England.

Younger students

Students can answer the question as a group activity, a whole class activity or on their own.

Outcomes

The students can:

- Review what was brought to Europe during the Age of Discovery.
- Understand that the Age of Discovery brought both good and bad.
- Understand that a new discovery can be both good and bad.

Older students

Students can answer the question as a group activity, a whole class activity or on their own. The students may like to use secondary sources to research other things brought to Europe from the Age of Discovery.

Outcomes

The students can:

- Review what was brought to Europe during the Age of Discovery.
- Understand that the Age of Discovery brought both good and bad.
- Understand that a new discovery can be both good and bad.