CurriculumVisions VisionMasters

Comprehension Workbook 10

Oil spill

Environmental damage

Find out about the meaning of stories and articles

understand • key words • summarise • sequencing • AF2-3 • AF4-5 • AF6-7 • discuss • create

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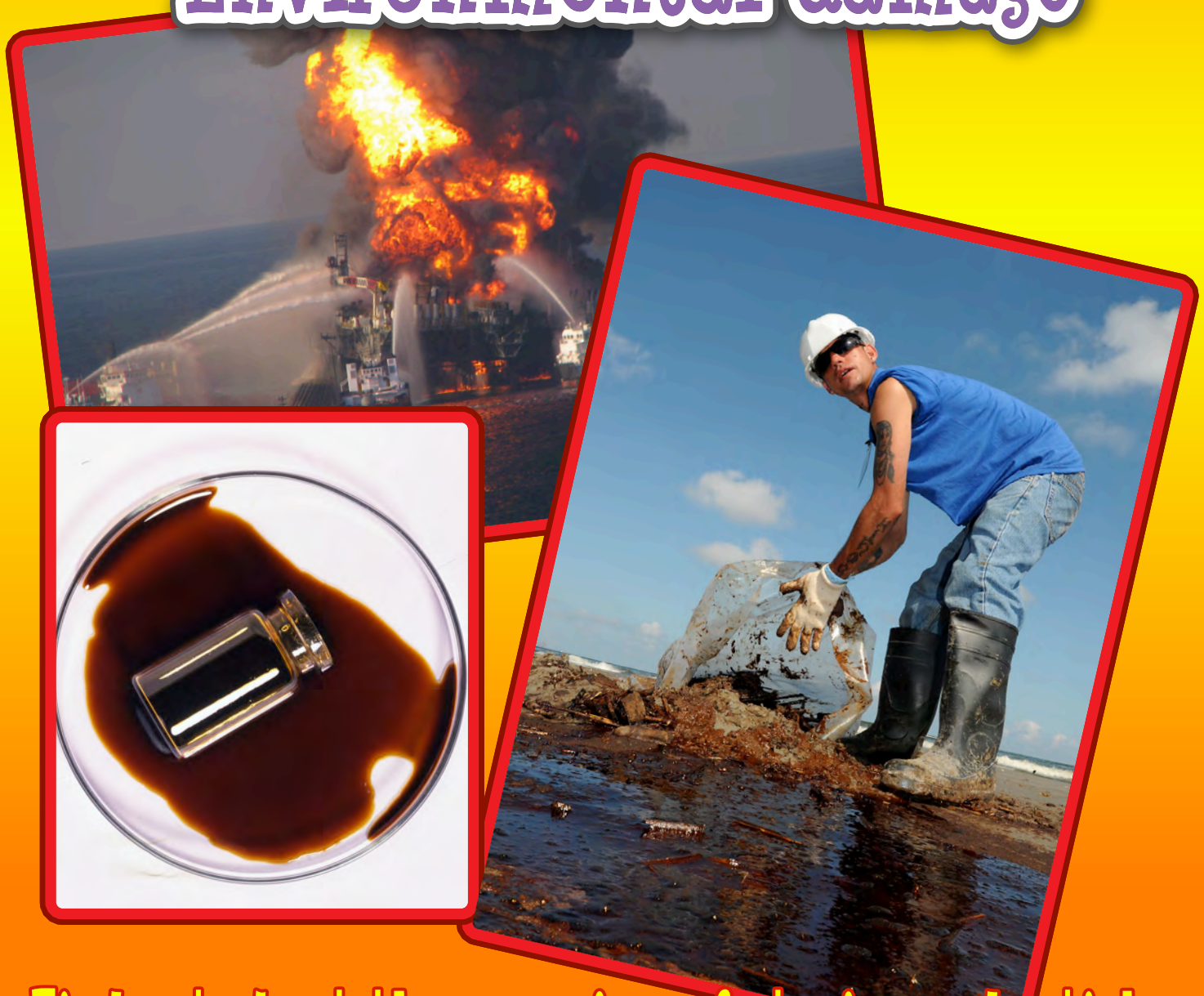

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Oil spill

Matches the requirements of the Literacy Strategy and designed to integrate with the study of river. (This material is independent of any specific text book and can be used alongside any publisher's books including our River Book.)

Contents

Unit 10: Oil spill

Clean-up

Oil now makes the world work. At the moment we can't do without it. But the oil that was found on land has run out in the places where it was easiest to drill. So, over the years, exploration has been done in places that are harder to work.

Most new exploration is in the sea bed. Working the sea bed has its own special problems. You may be working in depths of thousands of metres of water and the sea may experience stormy weather. This makes drilling much harder and getting the oil onshore much more difficult. The drilling rigs are usually enormous, more like blocks of offices in size, and the pipes that connect the rigs to the land are also large.

Just like pipes on land, these underwater pipes have valves along their length that automatically shut off the flow of oil if there is a problem.

The problem with oil spilling out of an undersea well is that it is one liquid flowing into another. It is much harder to capture liquids once they start to flow into one another.

What you need to know is that oil is a mixture. Some of the mixture is very runny oil, some is much thicker. When it comes out of a well and goes into the ocean, the thicker stuff actually forms into balls and sinks to the bottom where it can form a sheet and smother anything living on the sea bed. Heavy oil that forms balls may later wash up onshore where it is known as tar balls. You may have seen some on a beach. Some is lighter than water, so it floats on it. So you often have two problems to deal with.

To begin with, you have to deal with the lighter oil. That is because it can flow about so easily and the more it flows, the harder it is to deal with.

Light oil is like dirt, it does not mix with water. You might think that is a good thing. It rises to the surface and forms a sheet. You might think it is then relatively easy to put a boom (a long sausage of floats) around it and send in a ship to pump it all off the surface. That is certainly what people try first. But if there is stormy weather and a rough sea, the oil splashes over the booms. As the oil spreads out, the longer the booms have to be. So placing booms is a race against time, while hoping for calm weather.

If you can make oil mix with water it become harmless. Think of dirt and your washing machine. You add a detergent. This chemical dissolves in the washing water and it attracts the dirt, so pulling it off your clothes. It also keeps it spread out in the water, so it can be washed away. The tumbling of the washing machine helps the detergent mix with the dirt. So another way of dealing with an oil spill is to spray it with detergent. The sea is always choppy, so it acts like a natural washing machine. But a giant oil slick needs a vast amount of detergent sprayed on to it.

1 Understanding words

Before we can understand a story we have to know what all of the words mean. Let's try one...

a Write the sentence in which you found the word 'dirt'.

b From that sentence, suggest what 'dirt' means.

c Write a new sentence using the word 'dirt'.

d Use a dictionary to find words with a similar meaning (synonyms) to 'dirt'.

e Draw a small picture showing what you think 'dirt' means.

Try this for other words, too.

2 Finding key words

Next, we need to find the key words that tell us what the story is about...

Read the story and underline the key words. Write the most important of these key words in a list like the one below. Write next to it a word that means a similar thing (a synonym). You don't have to use all the spaces, but you should not use more.

Key word	Synonym (similar word)
Example: capture	trap

3

Summarising
(the gist of the story)

To summarise means to rewrite the story in a shorter version using as many of our key words from Task 2 as needed.

1 Write a heading for your summary.

2 Now write the main idea in one sentence.
e.g. "This story tells us..."

3 Now add some detail to the main idea by writing more sentences after it.

Finally, can you rewrite your summary to make it better?

1. **Look out for errors such as using the same word too often – use alternatives.**
2. **Make sure you have summarised the author's purpose in your OWN words.**
3. **Make sure your summary is in a logical order.**
4. **Is your summary informative AND interesting to others?**

There is nothing wrong with rewriting; even the best authors rewrite their work.

Sequencing

Sequencing means getting the events in the right order. Write these sentences in the correct order, so they make sense.

You can try to mix oil with detergent, but it needs huge amounts.

When oil reaches the shore it forms sticky brown tar balls.

Heavy oil sinks to the ocean floor and covers everything.

If you are quick, you may be able to catch the light oil in booms.

Light oil floats on the surface and soon spreads out.

The sooner you trap the oil the better.

5 Get to the facts

Answer these questions to see how much you know about the facts of the story.

1 Where is most new oil exploration?

2 How deep is much of the sea bed?

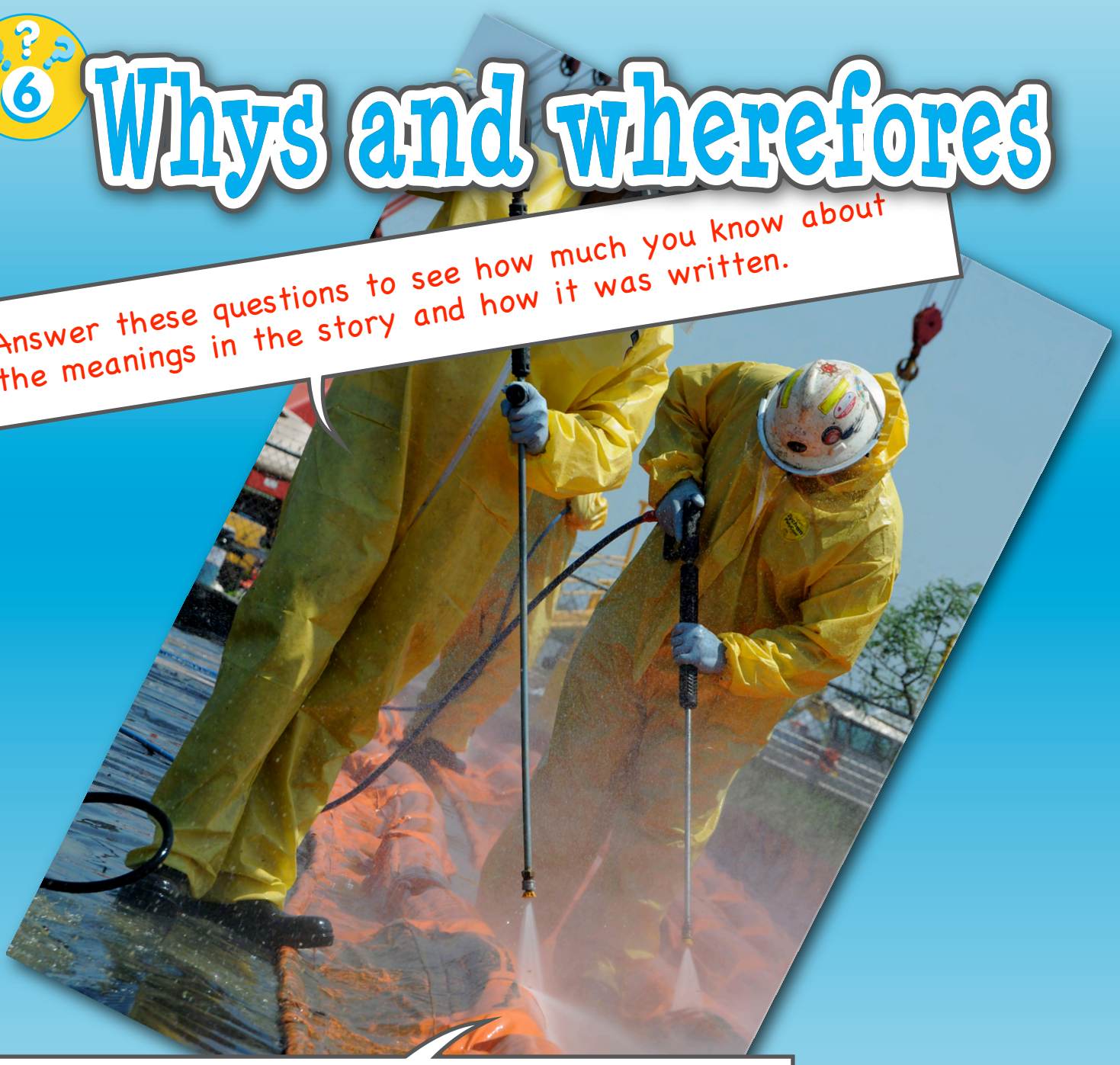
3 What do undersea pipes have along them?

4 What is the name for 'a sausage of floats'?

5 What is a detergent?

6 Whys and wherefores

Answer these questions to see how much you know about the meanings in the story and how it was written.



1 Which kind of oil do you have to trap first?

2 Why don't floating booms always work?

3 What is the size of an oil rig compared to?

4 Why can tar balls be a long-term problem?

7 Opinions matter

Answer these questions to give your views and to develop the story.

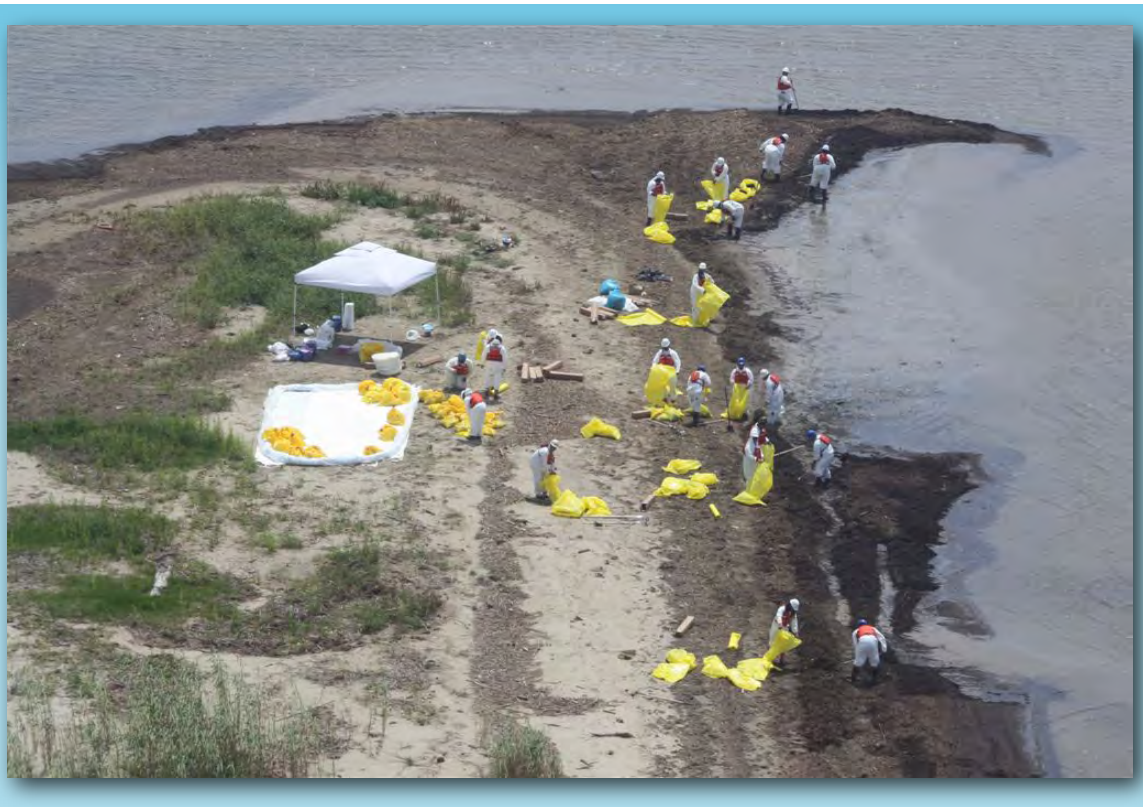
1 Do you think it is right to drill into the sea bed for oil?

2 Do you think the occasional oil spill is a price worth paying?

3 Write about whether it is right to splash oil spills across newspapers, or would it be better to say less and just get on with clearing up the mess?

4 Is an oil spill on land easier to deal with than one in the sea?

5 If you were one of the people cleaning up this beach (picture below) and getting paid for it, what would your opinion of the spill be?



8 Talking it through

Discussion topic: Dealing with an oil slick

Discuss when the best time would be to deal with an oil spill on the ocean surface. This is called an oil slick. Start with a point on a piece of paper. That is the trouble spot. Now draw rings using compasses to show the spread of the oil. That is a planning map to help you know what to do when.

9 Make a story...

When you read a description it often gives you ideas about how the event might be described differently.

Catastrophe!

Imagine you are on an oil rig and the alarms start to go telling you that there is a build up of pressure and the pipes on the sea floor might burst. But your boss tells you "Oh, don't worry, it's probably just a fault with the dial." Now continue your story.

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