

Science
Circulation and breathing
Book: Body Book
Pages 16-23

Students: Fill in the answers and return for assessment

Everything here is based on our Curriculum Visions Body Book.

In this segment, we are going to learn about how the circulatory and respiratory system work.

You will need to go to pages 16-17 of the book.

Part 1

What do these different parts of the respiratory (breathing) system do?

Nose and windpipe

Hairs in the nose

Mucus (sticky substance in the nose)

Hairs in the windpipe

Diaphragm (breathing muscle)

Lungs

Answer ...

Nose and windpipe: filter, moisten and warm the air as it is breathed in.

Hairs in the nose: filter out dust

Mucus (sticky substance in the nose): traps bacteria

Hairs in the windpipe: push dirt and bacteria back up the windpipe

Diaphragm (breathing muscle): creates room for the lungs to expand (taking in air) and makes lungs smaller (pushing out stale air)

Lungs: allow oxygen to move into the body/blood, and waste carbon dioxide to move out of the body/blood

Now turn to pages 18-19 of the book.

Part 2

What is the purpose of the blood?

What is the role of white blood cells?

What are the capillaries?

Answer ...

To deliver nourishment, heat and oxygen to the cells, and remove waste.

To help the body defend itself from disease or damage.

Tiny tubes that carry the blood.

Now turn to pages 20-21 of the book.

Part 3

Draw a diagram of the heart and label the different parts (hint: the shape can be hard to draw, but you can just draw it using circle or oval shapes and lines - it does not have to be exact).

Label how the blood moves through the heart by labelling which tubes carry blood into the heart and which tubes carry blood out.

Answer ...

Students' own drawings. You may want to demonstrate a simple way to draw the heart and emphasise that the labels are more important than getting the shape exactly right.

Part 4

Why does the heartbeat make two sounds (lub dup)? What does each sound mean?

Answer ...

The heart makes separate noises because it makes different movements. The 'lub' sound is the sound of the valves between the chambers closing. The 'dub' sound is made when the valves that push out the blood from the heart close.

Now turn to pages 22-23 of the book.

Part 5

What is the difference between capillaries, veins and arteries? What does each carry?

Answer ...

Arteries are large tubes that carry oxygen-rich blood from the lungs/heart to the capillaries. Capillaries are networks of small tubes that carry blood to tissues and cells around the body, and carry carbon dioxide waste out. Veins are large tubes that carry 'spent' blood (blood whose oxygen has been used up) and carbon dioxide back to the heart/lungs.

That is the end of this worksheet, and you can now turn to another one. Also, find out if your teacher has left you any other worksheets or special instructions on your school website.

If you are interested in this topic, continue to browse the book and watch our amazing videos. They start right on the book cover.

Or you may want to see related books. If so just go to the top of the screen, select science, and from the page that opens choose Body Book.