

Student Learning Booklet

Welcome to *BODY WORLDS Vital*

Instructions

The *BODY WORLDS Vital* exhibition provides an incredible opportunity for you to learn about the magnificence of the human body in a truly unique way. This will enable you to make informed decisions about things that can affect your health and well-being in the future.



We value curiosity and encourage you to use your inquiring mind as you explore the *BODY WORLDS Vital* exhibition. The following questions will encourage you to think about what you are seeing, prompt you to search for answers and share your opinions based on your past experiences. The questions are grouped according to the major systems in the body just as the *BODY WORLDS Vital* exhibition is.

Think like a scientist and ask yourself questions about the things you are seeing. Make sure you write down things that you are wondering about as you tour through the *BODY WORLDS Vital* exhibition.

Locomotive System

Making Motion Happen

1. What would it be like if we didn't have any bones? _____

2. What types of foods help to keep our bones strong? _____
3. Joints are where two bones meet. Tick the different types of moveable joints you can see in the specimen.
 - Ball and socket (hip or shoulder)
 - Hinge (fingers and toes)
 - Gliding (wrist)
 - Pivot (neck)
4. Look at the vertebrae in the spine. How many do you see? _____
5. If the spine was a long solid bone we wouldn't be able to _____.
6. Cartilage is flexible, rubbery tissue at the end of bones. How might this help the body?

7. What do our muscles do? _____

The three major types of muscles are:

- Skeletal muscles – we can control the movement of these
 - Cardiac muscles – are only found in the heart
 - Smooth muscles – we do not consciously control these with our mind
8. Where might we find the skeletal muscles and smooth muscles? _____

Things I'm wondering about...



The Nervous System

The Messenger and the Boss

1. The brain and the spinal cord make up the N_____ S_____
2. The biggest part of the brain is the cerebrum (also known as the cortex). This is the thinking part of the brain.
List two things you can do, thanks to your cerebrum.

3. The cerebellum is at the back of the brain, below the cerebrum. It helps with balance and co-ordination. Name something you do that requires balance and co-ordination.
4. The brain stem connects the brain to the rest of the body through a long bundle of nerves called the spinal cord. This is how messages travel around the body. How fast can nerve cells travel? _____

5. Try these brain challenges:
 - a. Test your recall – name the three different parts of the brain as you look at the specimen.
 - b. Listen to all the voices you hear around you. Can you recognise your classmate’s voices without looking to see who is talking?

6. What things can we do to protect our brain and keep it healthy?

Things I’m wondering about...



The Respiratory System

Oxygen in, Carbon Dioxide out

1. Which body parts make up the respiratory system?

2. Why do we need to breathe clean air?



3. The part of the air we need to breathe is called _____.

4. Our lungs remove _____ from the body.

5. What do you notice about the size of the right lung compared to the left?

6. Why do you think this is? _____

7. Both the trachea (windpipe) and the oesophagus (food tube) are connected to the mouth. What stops food from going down into the trachea?

8. What are the effects of smoking?

Things I'm wondering about...

The Cardiovascular System

The Body's Great Pump

1. The size of a person's heart is roughly the size of their _____.
2. Oxygen travels away from the heart in _____ and blood.
that has used up its oxygen is carried back to the heart in _____.
3. How many major arteries are there in the body? _____
4. The heart has three valves that open and close. What might the purpose of these valves be?

5. Name some things that are carried in the blood.

6. If all of the blood vessels in the body were joined end to end there would be enough to travel:

7. What are some things that can affect the health of the heart?

8. Name some positive things people can do to take care of their heart.

Things I'm wondering about ...

The Digestive System

Converting Food Into Energy

1. These body parts are involved in digestion. Number them in the order that food travels through them.

- Stomach
- blood stream
- mouth
- small intestine
- oesophagus

2. Unusable food parts (waste) pass into the _____.

3. Name three things that help to break down food in the mouth

_____, _____, _____

4. How does the stomach protect itself from the acids it produces?

5. What is the job of the villi in the small intestine?

6. How does the liver help with digestion? _____

7. What happens to food that is not used for energy?

8. Which nations appear to have the unhealthiest food options?

Things I'm wondering about ...

Reflection

The Beauty of The Body

What was your favourite part of the exhibit?

How would you describe the **BODY WORLDS Vital** Exhibit to someone who has not yet been?

Do you think the **BODY WORLDS Vital** exhibit might help people to consider how they can take better care of their bodies? Why / Why not?

