National Pathology Year 2012
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Using the organ images resource kit

What is it?

The organ resource kit contains two sets of illustrations:

- A set of coloured organs
- A set of organ outlines

How to use the coloured organs

The organs are as close to life size as possible. They can be printed on standard copier paper or card and used as they are or cut out. The printed organs could be laminated to make them more durable. Two of the organs (liver and colon) have had to be printed over two pages so will need to be stuck together).

The organs can be used as part of events aimed at school students or the general public. Please feel free to change the organ weights or functions tables to suit your audience.

Pin the organ on the teacher

You will need:

- Set of printed coloured organs
- Scissors to cut out the organs
- Large piece of paper, roughly 6x3ft.
- Marker pen

1. Ask the teacher to lie on the floor on the large piece of paper.

2. Students or pathologist draw round the teacher to give an outline on the paper (take care not to draw on clothing).

3. The piece of paper can be placed on a table or pinned on the wall.

4. Ask the students to pin or Blu-tack the organs on the body.

5. Discuss the location and function of each organ.

Alternative version

Print the outlines of the organs and ask students to colour them in. Students can use a range of media to decorate the organs e.g. tissue paper, feathers, sponge – whatever's available.

Other uses

The organs can be used as prompts in discussions about organ transplantation, infections or cancer.

The organs function table can be cut into strips and each organs labelled with its function.

Organ Information

Organ	Average Weight	Weight comparison
Brain	1300g	melon
Heart	310g	grapefruit
Kidney	145g	avocado
Liver	1500g	water melon
Lung	500g	large tin of baked beans
Pancreas	100g	banana
Spleen	170g	orange
Uterus	60g	small pear

Organ	Function
Appendix	The appendix is a worm-like structure attached to the first part of the colon. It has no known function. It can get inflamed and cause pain (appendicitis). We don't miss our appendix if it is removed.
Brain	The brain is where we do our thinking. It also controls body functions that we don't think very hard about such as breathing and walking. The brain stores our memories and controls the nervous system.
Colon	The colon, also known as the large intestine, is the final part of the digestive tract. It packages any food waste and removes water to form solid poo (faeces).
Heart	The heart pumps blood around our body through a system of arteries. Blood picks up oxygen in the lungs and delivers it to where it is needed. Veins return the deoxygenated blood to the heart.
Kidney	The kidneys are involved in homeostasis, which means regulating the internal environment to keep conditions in the body stable. It does this by regulating excretion of water and other substances.
Liver	The liver has many functions including converting nutrients from the diet into a form that the body can use for energy and growth. The liver also breaks down drugs such as alcohol and Paracetamol.
Lungs	The lungs are the organs responsible for taking in oxygen from the air. The oxygen is transferred to the blood so that it can reach every cell in the body. Smoking seriously damages the lungs.
Oesophagus	The oesophagus is the muscular tube that joins the back of the mouth with the stomach. Waves of contractions called peristalsis move swallowed food to the stomach to be digested.
Pancreas	The pancreas secretes the hormone insulin, which controls levels of sugar in the blood. It also secretes enzymes that help digest food in the small intestine.
Small intestine	This is the part of the digestive tract between the stomach and the colon. It is where food is digested and nutrients absorbed. The small intestine is about 5 metres long.
Spleen	The spleen sits under your rib cage on the left and is involved in the filtration of blood to remove any dead cells and infective organisms. It is possible to live without a spleen.
Stomach	The stomach stores food that is swallowed, secretes enzymes to start digestion, produces acid to kill any infective organisms and contracts to break food into smaller pieces.
Testis	Men have two testes (the plural of testis). This is where sperm are made. The testes sit in the scrotum, which hangs outside the body to keep the testes cool.
Tonsils	The tonsils are a pair of organs at the back of the throat that help protect against infection. They can become enlarged and inflamed, resulting in painful tonsillitis.
Trachea	The trachea is the tube that links the back of the throat with the lungs. Air that is breathed in travels down the trachea. The trachea is held open by rings of hard cartilage.
Uterus	The uterus or womb is where babies grow. Eggs are produced in the ovaries and pass down the Fallopian tubes to reach the uterus. Fertilised eggs implant in the wall of the uterus and grow there.