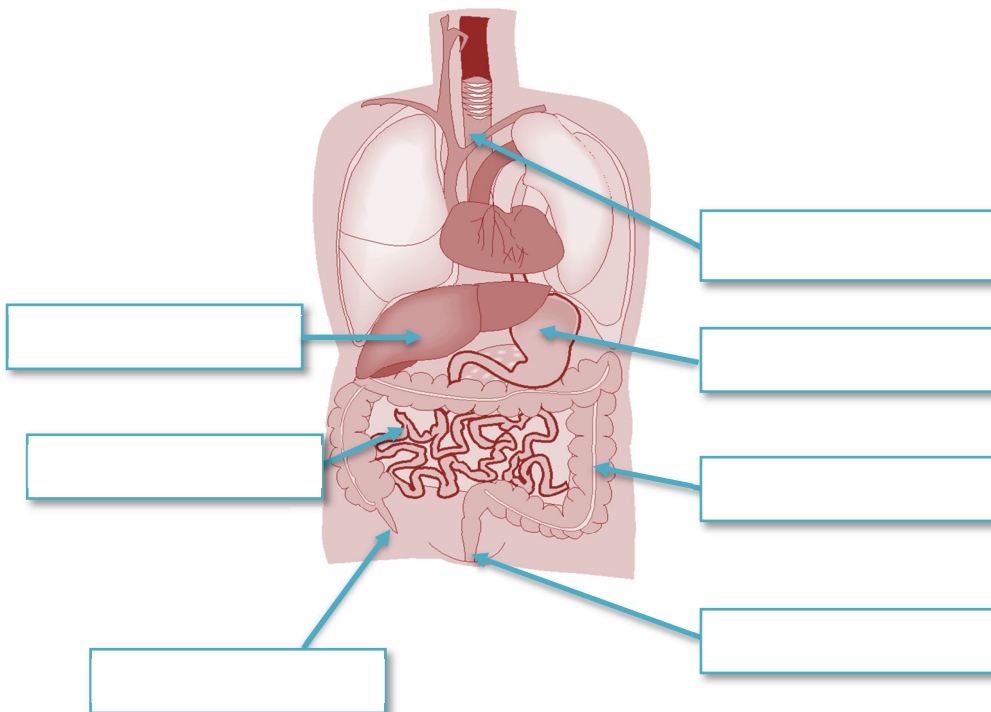


Digestive Dilemma



The digestive system is made up of many specialised organs working together to obtain nutrients. These nutrients are used as building blocks to make new cells for growth and repair. They are also a source of energy for movement and producing heat.

1. The diagram below shows the human digestive system. Label the organs indicated.



Did You Know?

In the average human adult, the digestive system stretches for 9m.

The muscles in our oesophagus are so strong that when we are upside-down, we can swallow water.

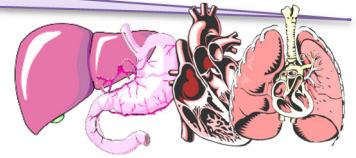
We eat about 500kg of food per year.

1.7L of saliva is produced each day.

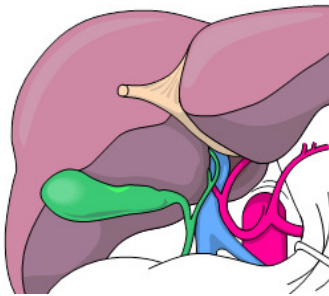
An adult's stomach can hold approximately 1.5L.

2. Is the digestion that occurs in the stomach an example of physical digestion or chemical digestion? Explain your answer.

The Liver



The liver carries out a range of vital functions. It regulates, produces, stores, secretes, transforms and breaks down a variety of substances, including glucose, proteins and bile.



Labels

- Right lobe
- Left lobe
- Round ligament
- Gall bladder
- Bile duct
- Hepatic artery
- Hepatic portal vein
- Stomach
- Small intestine

Key Words

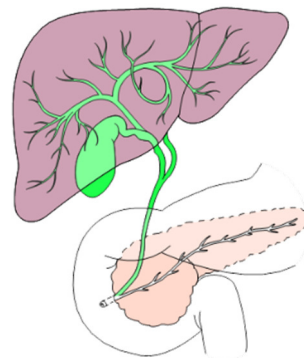
- | | |
|----------------|-----------|
| Regulation | Glucose |
| Synthesis | Protein |
| Secretion | Bile |
| Storage | Lipids |
| Purification | Ammonia |
| Transformation | Bilirubin |
| Clearance | Hormones |
| Hepatitis | Drugs |
| Liver disease | Toxins |

Research Ideas

- Which substances are stored in the liver?
- Which substances are removed by the liver?
- What is the function of bile?
- Describe the damage alcohol can cause to the liver.
- List the symptoms of liver disease.

Advanced Research

- What does the hepatic portal vein carry?
- How are glucose levels regulated in the body?
- What is Hepatitis?
- How are gallstones treated?



Presentation Ideas

- Create a wall display with diagrams and facts.
- Give a talk to your class.
- Write and perform a poem, play or song.
- Tell a story.
- Create a Prezi or PowerPoint.

Internet Search Terms

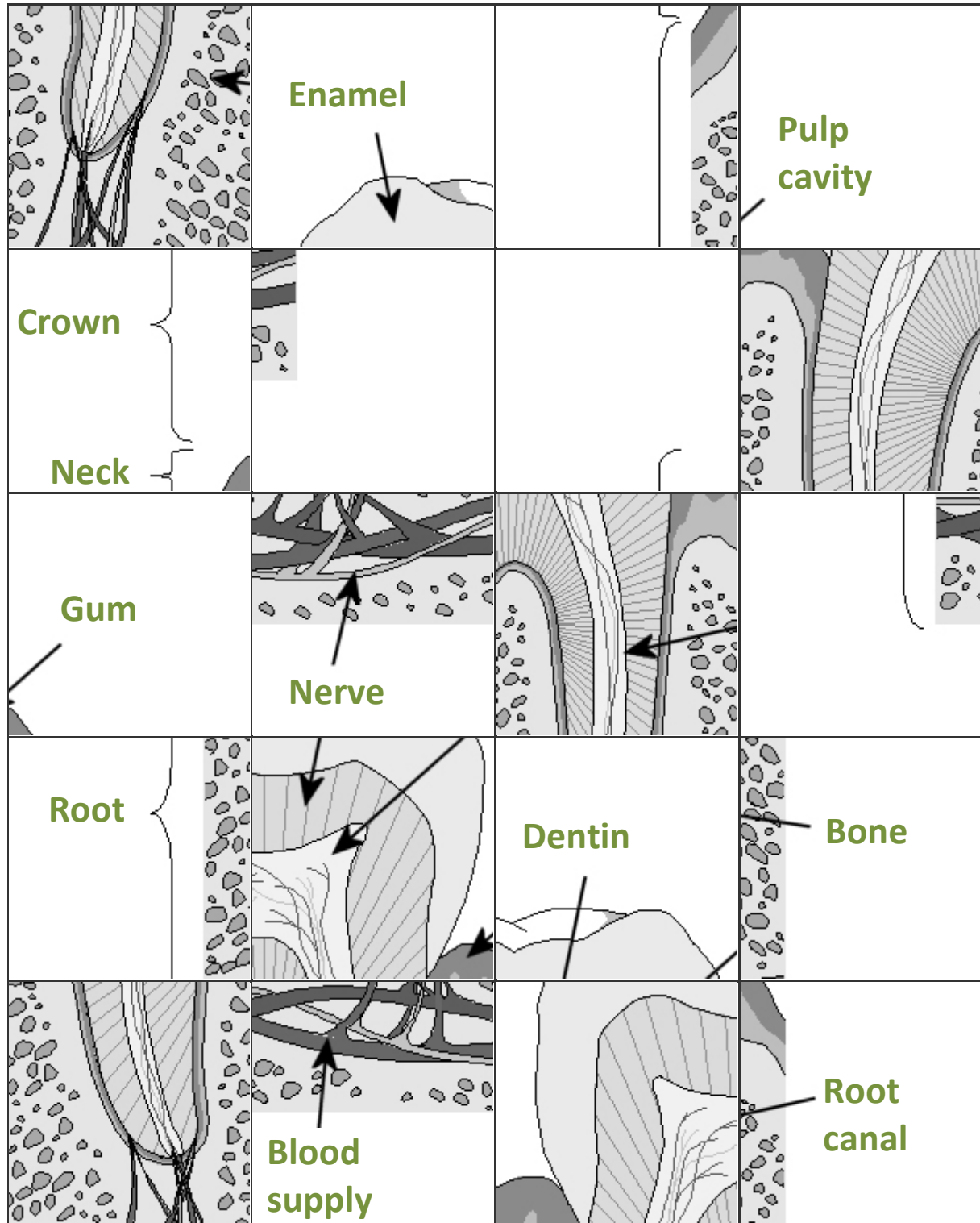
- "liver removes"
- liver + functions
- bile + fats
- liver + alcohol
- liver + disease

Webpages

- kids.kiddle.co/Liver
- health.howstuffworks.com/liver-cleansing
- en.wikipedia.org/wiki/Liver
- en.wikipedia.org/wiki/Liver_function_tests
- www.youtube.com/watch?v=wbh3SjydnQ



Tooth





Many people suffer from a lung disease known as asthma. This respiratory disease is typically associated with breathing difficulties. People who suffer from this disorder have very sensitive (or hyper-responsive) airways and react to *stimulants* by narrowing the passageway through which air travels to and from the lungs. Two main factors cause the airways to become narrow:

A. Airway Inflammation

The airways become inflamed (the lining swells) when exposed to certain ‘triggers’. This response reduces the diameter of the airway. The main types of triggers are:

- i. Substances that cause an allergic reaction (allergens), for example:
 - Pollen (grasses, trees and weeds)
 - Animal secretions (cats and horses tend to cause most allergies)
 - Moulds
 - House dust mites

- ii. Viral Infections

B. Bronchoconstriction

This occurs when substances irritate the airways. They cause the muscles that surround the airways to tighten causing the airway to narrow. The main triggers causing this type of irritation include:

- Cold air
- Dust
- Smoke
- Inhaled irritants
- Pollutants

Questions

3. Think of other words that use the prefix ‘hyper’. Use this knowledge to write a definition for the word **hyper-responsive**.

‘Hyper’ means →

‘Response’ means →

Therefore, ‘hyper-responsive’ means →

Did You Know?

Asthma affects twice as many boys as girls in childhood, but more girls than boys develop asthma as teenagers.

Asthma is a chronic lung condition that can develop at any age.

Cigarette smoke lingering in the home can remain harmful for days.

Exercise induced asthma can be controlled.

Life Processes



Vocab		Explanation	
1	MRS GREN	a	Sight, hearing, smell, taste and touch.
2	Movement	b	A useful acronym for the 7 characteristics of life.
3	Respiration	c	An increase in size.
4	Sense	d	A change of place, position or posture.
5	Growth	e	Producing offspring (babies).
6	Reproduction	f	Taking in and using food.
7	Excretion	g	The burning of glucose in the body to produce energy.
8	Nutrition	h	A collection of similar cells (e.g. a muscle).
9	Cells	i	Getting rid of waste products.
10	Tissue	j	The <i>building blocks</i> of living things.
11	Organ	k	The system that breaks down food for the body to use.
12	Breathing system	l	Collection of cells and tissues with a certain function.
13	Digestive system	m	The system that carries blood around the body.
14	Circulatory system	n	The system that carries signals to and from the brain.
15	Nervous system	o	The system that passes oxygen to the blood.

Vocab-busters

These tasks could be used as pre-topic assessments, checklists to cross off as ideas are taught, or revision tools.