

Humans – Nutrition

Food is needed to build, maintain and repair the body. Food provides the energy and raw materials needed to do this. Humans require a **balanced diet**. This is one that supplies the different types of food in the right amounts. It also provides the body with sufficient energy for its needs.

The seven parts of a balanced diet are:

Part of diet	Use in the body
Carbohydrates (sugars and starches)	To provide energy
Fats	To provide energy, insulation, and to construct parts of cells
Proteins	To build muscle, make enzymes and hormones, and construct parts of cells
Vitamins: complex substances	Needed in tiny amounts for the healthy functioning of the body
Minerals: simple substances	Needed in tiny amounts for the healthy functioning of the body
Water	Makes up 60-80 per cent of the body. The body's chemical reactions take place in it
Fibre (roughage)	Stimulates the smooth passage of food through the gut

The amount of energy a person requires in their diet each day depends on a number of factors, including the person's sex, size, age and degree of physical activity.

Teeth

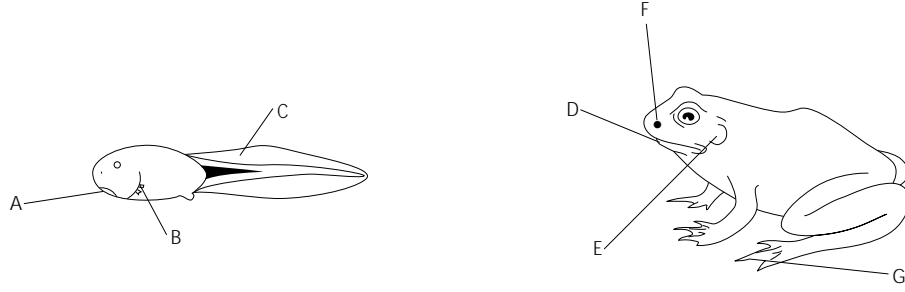
The number and arrangement of teeth is called the **dentition**. 20 milk teeth develop first and are then pushed out and replaced by 32 adult (permanent) teeth. Tooth decay and gum disease can be effectively prevented by:

- 1 Restricting the amount of sugar in the diet.
- 2 Removing plaque by regular thorough cleaning using a toothbrush, toothpaste and dental floss.
- 3 The use of fluoride (in drinking water and/or toothpaste).
- 4 Regular visits to the dentist.

The gut

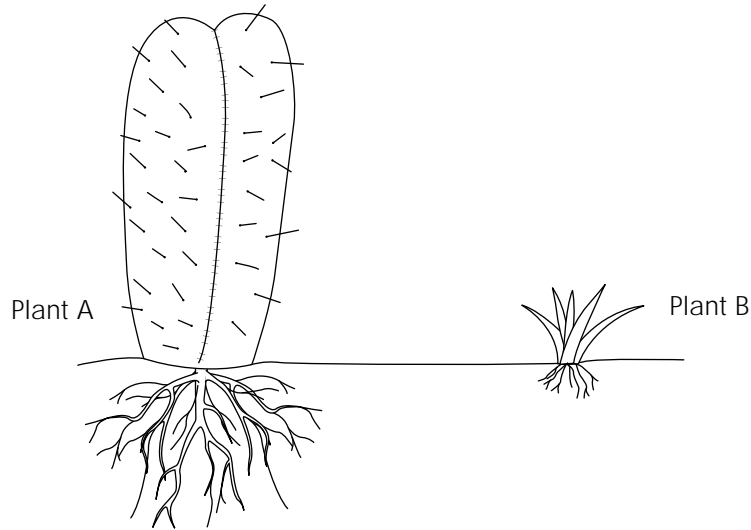
The gut (alimentary canal) is the muscular tube running from mouth to anus. Different parts of the gut have different functions. From mouth to duodenum (the first part of the small intestine) the gut is mainly concerned with the physical breakdown and chemical digestion of food. Absorption occurs in the ileum (the second part of the small intestine) and in the colon. The rectum prepares indigestible waste for disposal (egestion).

- 5 In the key, explain the function of each of the features. Label, in blue, two features which help the adult live in water. Label, in red, two features which help it to survive on land.



- A.....
 B.....
 C.....
 D.....
 E.....
 F.....
 G.....

6



- a Give three features which help Plant A to survive in a difficult environment.

- b During a long, dry spell, Plant B might not survive. Give three reasons why.

