

**1. The second halves of the words in the following text were omitted, complete them.**

Food process \_\_\_\_\_ begins with ingestion \_\_\_\_\_. The tongue \_\_\_\_\_ aids in mechanical digestion by masticating \_\_\_\_\_ food. It permits \_\_\_\_\_ easier deglutition \_\_\_\_\_. During mastication, salivary \_\_\_\_\_ glands secrete \_\_\_\_\_ saliva to soften \_\_\_\_\_ the food into a bolus \_\_\_\_\_. Saliva contains \_\_\_\_\_ amylase \_\_\_\_\_, which digests starch \_\_\_\_\_, and mucin \_\_\_\_\_.

In deglutition \_\_\_\_\_, the tongue pushes \_\_\_\_\_ the bolus \_\_\_\_\_ toward the pharynx \_\_\_\_\_ and into the esophagus \_\_\_\_\_, a muscular \_\_\_\_\_ tube. To prevent \_\_\_\_\_ food or liquid \_\_\_\_\_ from entering \_\_\_\_\_ the windpipe \_\_\_\_\_, the epiglottis \_\_\_\_\_ closes over the opening \_\_\_\_\_ of the larynx \_\_\_\_\_ during \_\_\_\_\_ swallowing \_\_\_\_\_.

In the stomach \_\_\_\_\_, food undergoes \_\_\_\_\_ chemical and mechanical \_\_\_\_\_ digestion \_\_\_\_\_. Peristaltic \_\_\_\_\_ contractions churn \_\_\_\_\_ the bolus, which mixes \_\_\_\_\_ with strong digestive \_\_\_\_\_ juices. The stomach \_\_\_\_\_ walls contain \_\_\_\_\_ three layers of smooth \_\_\_\_\_ muscles arranged in longitudinal \_\_\_\_\_, circular \_\_\_\_\_ and oblique \_\_\_\_\_ rows.

Powerful hydrochloric acid \_\_\_\_\_ in the stomach helps break down \_\_\_\_\_ the bolus \_\_\_\_\_ into a liquid called chyme \_\_\_\_\_. When mucin \_\_\_\_\_ is limited \_\_\_\_\_ in the stomach \_\_\_\_\_, an ulcer \_\_\_\_\_ may form.

The small intestine \_\_\_\_\_ consists of duodenum \_\_\_\_\_, jejunum \_\_\_\_\_ and ileum \_\_\_\_\_. Bile \_\_\_\_\_ from the gallbladder \_\_\_\_\_ begins the final \_\_\_\_\_ part of digestion \_\_\_\_\_. The undigested \_\_\_\_\_ material enters \_\_\_\_\_ the colon \_\_\_\_\_, which has six \_\_\_\_\_ parts: the cecum \_\_\_\_\_, ascending \_\_\_\_\_ colon, transverse \_\_\_\_\_ colon, descending \_\_\_\_\_ colon, sigmoid \_\_\_\_\_ colon and rectum \_\_\_\_\_. The vermiform \_\_\_\_\_ appendix contains \_\_\_\_\_ lymphatic \_\_\_\_\_ tissue and intercalated \_\_\_\_\_ pathogenic \_\_\_\_\_ microorganisms. The final \_\_\_\_\_ stage of the digestive \_\_\_\_\_ process is defecation \_\_\_\_\_.

**2. Order these steps in the process of digestion by numbering them 1-7. Change the sentences so that the word in bold is a subject of the sentence.**

- Salivary glands in the mouth produce **enzymes**. \_\_\_\_\_
- Digestive juices which include powerful acid attack **food** in the stomach. \_\_\_\_\_
- When the food is in the small intestine, juices from the pancreas and bile from the gall bladder dissolve **undigested fat**. \_\_\_\_\_
- Food, in a liquid paste form, enters the colon where it removes **water**. \_\_\_\_\_
- Bowel movement expels **faeces**. \_\_\_\_\_
- The first swallow starts the **muscle action** and pushes **food** through oesophagus. \_\_\_\_\_
- The food, now in a semi-solid state, slowly empties into the small intestine. \_\_\_\_\_

**3. Rewrite the sentences starting with the word given so that you do not change the meaning of the original sentence:**

1) We do not allow flowers in our hospital.

Flowers \_\_\_\_\_

2) They explained the procedure to the patient in detail.

The procedure \_\_\_\_\_

3) Medical professionals are not doing enough to stop the spread of hospital acquired infections.

Not enough \_\_\_\_\_

4) We have not treated enough people with this new drug to understand its effects.

Not enough \_\_\_\_\_

5) We will clean soap dispensers every day from now on.

Soap dispensers \_\_\_\_\_

6) We have been developing a new drug for the past three weeks.

A new drug \_\_\_\_\_

- a) an action in the past that has continued up to the present      b) a past finished action  
c) future action      d) a regular activity      e) an action that is in progress at the moment

## Reading

### Getting medical information from faeces

- Discuss this question with a partner.
  - When a hunter is looking for animals, the faeces he finds on the ground give very important information. What do they reveal?
- Before you read the text about getting medical information from faeces, discuss and note down what you already know about the subject. Read the text and compare what you read with your own knowledge.
- Match headings 1–4 with paragraphs A–D.
  - Typical stools \_\_\_\_\_
  - Faeces and communication \_\_\_\_\_
  - Classifying faeces \_\_\_\_\_
  - Faecal odours \_\_\_\_\_

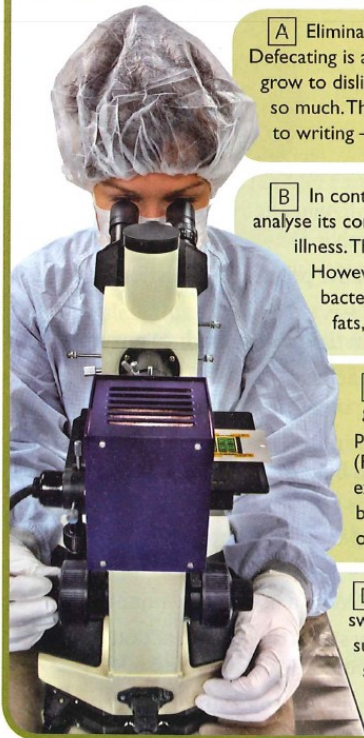
- Complete the chart using information in the text.

Observation of faeces	indicate
yellow-green infant faeces	1 _____
hard and dry faeces	2 _____
runny faeces	3 _____
small quantities of blood in stools	4 _____
faeces that float	5 _____
very smelly flatulence and faeces	6 _____

- Discuss these questions.

- Archaeologists get a lot of information by examining fossilised faeces (called coprolite analysis). What would they find out about ancient people in this way?
- Why have humans developed a disgust for the appearance and smell of faeces?
- Why do we avoid defecating and urinating in public places?

## WHAT FAECES REVEAL



**A** Eliminating the waste products of metabolism is an essential process for all forms of life. Defecating is as natural as breathing and it is one of the first things we do when we are born. However, we grow to dislike our own excrement and flush it away as soon as we produce it. Other animals don't worry so much. The way that cats, hippopotami, and bears, for example, use faeces and urine has been compared to writing – providing information without actually being present and 'reading' it by smell and taste.

**B** In contrast, humans generally leave the job of examining faeces to medical professionals who analyse its contents as well as its appearance, smell, frequency, and quantity to get information about illness. The faeces of healthy babies are a yellow-green colour and many people rather like their smell. However, as they are weaned, babies' faeces become brown and acquire that nasty smell of bile and bacteria. Healthy adult faeces are 75 per cent water. The rest is bacteria, indigestible food matter, fats, inorganic substances, and protein. They should be semi-solid and coated with mucus.

**C** Abnormal faeces are assessed using the Bristol Stool Scale which puts them into seven groups ranging from severe constipation ('separate hard lumps') to diarrhoea (watery, no solid pieces). Faeces can be analysed to screen for cancer using the Faecal Occult Blood Test (FOBT). In this test, chemicals are added to a small sample of stool in order to identify the existence of microscopic amounts of blood which may indicate a cancer somewhere in the bowel. Faeces with a high fat content tend to float and usually indicate disease of the pancreas or small intestine.

**D** It is perfectly normal to produce a lot of gas, and nervousness which causes us to swallow more air creates more flatulence. The distinctive smell of flatulence is hydrogen sulphide and the more sulphur in our diet, the stronger our flatulence smells. However, very smelly faeces and gas indicate that fat is not being digested because enzymes are blocked from getting into the intestines and there is something wrong.

### 1. Form nouns from the following verbs:

absorb, appear, behave, consume, contract, converse, die, detoxify, discover, excrete, eliminate, expand, improve, ingest, constipate, qualify, recover, distinct, secrete, stimulate, treat

- Complete the sentences with the correct form of words from 1.

- The sight, smell, and taste of food \_\_\_\_\_ glands to produce saliva.
- A major role of the digestion process is the \_\_\_\_\_ of waste from the body.
- Food is \_\_\_\_\_ through the mouth.
- The pancreas is involved in the \_\_\_\_\_ of enzymes that break down food molecules.
- Nutrition is when the body \_\_\_\_\_ food substances into energy.
- The digestive system breaks down food and transports it for \_\_\_\_\_ and defecation.
- The muscles in the oesophagus make wave-like \_\_\_\_\_ which push the food along.
- Too much \_\_\_\_\_ of certain foods can overload the digestive system.
- The stomach can \_\_\_\_\_ as it fills with undigested food.
- Digested products travel to the liver, which \_\_\_\_\_ blood of harmful substances.