LEARN WITH AKSHADA · DIAGRAM LESSON

The journey of food

Every bite of idli, roti or banana goes on a long trip through your body. On the way it is broken into tiny bits, and the goodness goes into your blood to help you grow, play and think.



For the parent *read in 1 minute*

The parts that carry and break down food make up the **digestive system**. Food goes in at the mouth, down the **food pipe** (oesophagus) to the **stomach**, then through the **small intestine** and the **large intestine**.

On the way it is broken into tiny pieces. In the small intestine the useful parts (**nutrients**) pass into the blood, which carries them around the body. The large intestine takes back **water**, and what is left leaves the body as **waste** (poo).

At Class II, aim for the **order of the parts** and **one job for each**. The stomach sits on the child's **left** side: that is on *your* right as you look at the picture.

mouth → food pipe → stomach → small intestine → large intestine → out

Talk about it *before turning the page · 5 minutes*

1. **Where does your food go after you swallow it?**
   Listen for: down a tube into the tummy (stomach). Any idea that it keeps travelling is a great start.
2. **Why do we have different kinds of teeth?**
   Listen for: front teeth bite or cut; back teeth crush or grind.
3. **What happens to the parts of food the body does not need?**
   Listen for: they leave the body as poo when we go to the toilet.

How to use these pages

- Read one or two steps a day (pages 2 and 3). Point to each part on the big picture as you go, and trace the route with a finger from mouth to way out.
- At a meal, play "Where is my food now?": just after swallowing, after lunch, and the next morning.
- Try an activity on page 4, then do the quick check on page 5. The answers are on page 6.

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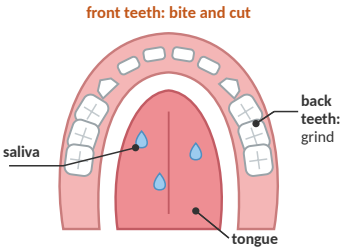
Step by step: from mouth to stomach



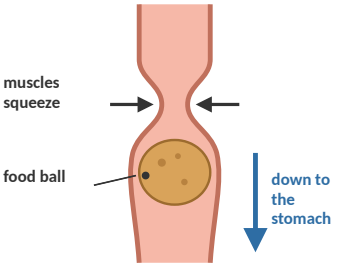
1 The mouth: the journey begins

Your **front teeth** are thin and sharp, so they **bite** off a piece of food. Your **back teeth** are wide and bumpy, so they **grind** it into a mash.

Your **tongue** moves the food around and **rolls** it into a soft ball. **Saliva** (spit) makes the food wet and soft, so it slides down easily.

> **Remember: bite, grind, roll, wet, then swallow.**

For curious minds: chew a small piece of plain roti for a long time and it begins to taste a little sweet. Saliva has started to turn some of its starch into sugar.



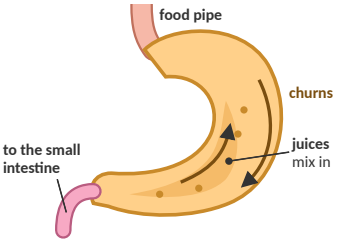
2 The food pipe: a squeezy slide

When you swallow, the food ball goes into the **food pipe** (oesophagus). This stretchy tube runs from the back of your mouth, down through your neck and chest, to your stomach.

Muscles in its walls **squeeze** behind the food, one after another, like squeezing toothpaste along a tube. Because muscles push it, food reaches your stomach **even if you lie down or hang upside down**.

> **Remember: the food pipe squeezes food down to the stomach.**

For curious minds: when you swallow, a small flap closes over your windpipe, so food goes to the stomach and not into the lungs. That is why we do not talk or laugh with food in our mouth.



3 The stomach: a stretchy, churning bag

The **stomach** is a **stretchy bag** on the left side of your tummy, just under your ribs. It gets bigger as you fill it up.

Its strong walls **churn** the food, and mix it with **juices** that the stomach makes. After a few hours the food has become a thick, **soupy mix**.

> **Remember: the stomach churns food with juices into a soupy mix.**

For curious minds: stomach juice is an acid, a bit like very strong lemon juice. A thick layer of slime (mucus) keeps it from hurting the stomach's own walls.

Feel it, say it

- **Feel it:** rest your fingers gently on the front of your neck and swallow. Feel the bump move up and down? That bump is your voice box. It lifts up when you swallow, to help close off the windpipe so food goes down the food pipe.
- **Say it:** oesophagus sounds like **"ee-SOF-a-gus"**. Intestine sounds like **"in-TES-tin"**.

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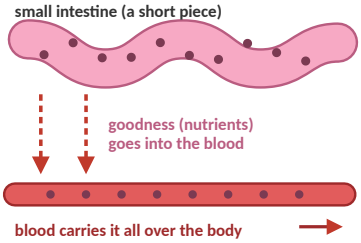
Step by step: from stomach to the way out



4 The small intestine: long and coiled

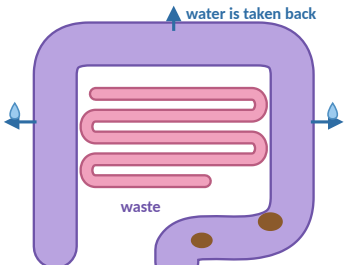
Next, the soupy food moves into the **small intestine**: a long, thin tube **folded and coiled** in the middle of your tummy. More juices break the food into very tiny pieces.

The **goodness** in food (**nutrients**) passes through its walls **into your blood**. Your blood carries it all over your body.

How long? In a grown-up it is about **6 metres** long: about as long as **three beds** placed end to end! Yours is shorter, but still much longer than you are tall.

> **Remember: goodness from food goes into the blood.**

For curious minds: it is called "small" because it is thin, not because it is short.



5 The large intestine: taking back water

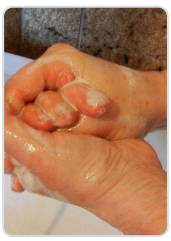
What the body cannot use moves on into the **large intestine**. It is wider but shorter than the small intestine, and goes **up, across and down** around the coils.

It **takes back water** from the leftovers, so they become thicker and firmer. What is left is **waste**, which we call **poo**.

> **Remember: it takes back water; the leftovers become waste.**

For curious minds: billions of tiny friendly germs (bacteria) live here. They break down some fibre and make some vitamins.


toilet


wash with soap

6 Leaving the body

The waste waits at the end of the large intestine until you go to the toilet. It leaves through an opening in your bottom called the **anus**.

When your body tells you that you need to go, go! Afterwards, always **wash your hands with soap** and water.

> **Remember: waste leaves the body; then wash hands with soap.**

For curious minds: the whole journey, from mouth to toilet, usually takes about one to three days.

Help your food on its journey



Chew well

Small bites, chewed slowly, are easy to swallow and easy for the stomach and intestines to break down.



Drink water

Water helps the food move along and keeps the waste soft, so it is easy to pass.



Eat fibre

Fruit, vegetables, dal and whole-wheat roti have **fibre**. It helps waste move along, so you do not get hard, painful poo (constipation).

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Try it at home

Pick one or two each day. Talk about which part of the journey each activity shows.

1. The sweet roti test

Chew a small piece of plain roti (or a spoon of plain rice) slowly for about a minute before swallowing. Does it start to taste a little sweet? Saliva is already starting to break the food down.

You need: a small piece of plain roti. **Safety: Skip any food your child is allergic to.**

2. Squeeze it down: a food-pipe model

Put a ping-pong ball (or a small orange) into an old long sock or the cut-off leg of old tights. Squeeze just behind the ball with your hands to push it along, like the food-pipe muscles. Now hold the sock upside down and try again: the squeezing still moves it!

You need: an old sock or tights, a ping-pong ball. **Safety: Never put the ball in the mouth.**

3. Stomach in a bag

Put a broken biscuit or a piece of bread in a zip-lock bag with 3 spoons of water and a few drops of lemon juice (the "juices"). Seal it and squash and squeeze it for two minutes. Watch it turn into a soupy mush, like food in the stomach.

You need: a zip-lock bag, a biscuit or bread, water, lemon. **Safety: An adult checks the bag is sealed. Do not eat the mush; throw it away and wash hands.**

4. How long is 6 metres?

With a measuring tape, measure 6 metres of string or wool and lay it straight along the floor or corridor. Lie down next to it: how many of you fit along it? Then coil it up loosely; see how it can fit into a small space, like the small intestine in a grown-up's tummy.

You need: string or wool, measuring tape, scissors. **Safety: An adult does the cutting.**

5. Water and fibre detective

For one day, draw a glass for every glass of water your child drinks, and a tick for every fruit, vegetable or bowl of dal they eat. At bedtime, count them together. Which helpers did your food get today?

You need: paper and a pencil.

Key points to remember

1. Food travels: **mouth → food pipe → stomach → small intestine → large intestine → out of the body**.
2. In the mouth, **front teeth bite**, **back teeth grind**, the **tongue rolls** the food and **saliva softens** it.
3. The **food pipe squeezes** food down; the **stomach churns** it with juices into a soupy mix.
4. In the **small intestine**, the goodness (nutrients) from food passes **into the blood**.
5. The **large intestine takes back water**; the waste leaves the body. **Chewing well, water and fibre** help the journey.

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Quick check 10 questions · answers on page 6

1. Which teeth **grind** food into a mash?
   (a) front teeth (b) back teeth (c) no teeth

2. Another name for the food pipe is the:
   (a) windpipe (b) tongue (c) oesophagus (d) stomach

3. What does saliva do?
   (a) colours the food (b) makes food wet and soft (c) cooks the food

4. Which of these has the most **fibre**?
   (a) a toffee (b) a fizzy drink (c) dal and vegetables (d) potato chips

5. True or false: the stomach is a stretchy bag that churns food with juices.
   ☐ True ☐ False

6. True or false: if you lie down, food cannot go down your food pipe.
   ☐ True ☐ False

7. **Put in order.** Write 1 to 5 to show where food goes first, second, and so on.

___ stomach	___ mouth	___ large intestine	___ food pipe	___ small intestine

8. Match each part to its job. Write the letter.

1. Tongue ___	A. lets goodness pass into the blood
2. Saliva ___	B. rolls food into a soft ball
3. Small intestine ___	C. takes back water from the leftovers
4. Large intestine ___	D. makes food wet and soft

9. **Why** should we chew our food well before we swallow it?

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10. **Who am I?** I am a long, thin tube, coiled up in the middle of your tummy. Goodness from your food passes through my walls into your blood.

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Answers

1. **(b) back teeth.** They are wide and bumpy, made for grinding. Front teeth bite and cut.
2. **(c) oesophagus.** The windpipe is a different tube: it carries air to the lungs.
3. **(b) makes food wet and soft.** Wet, soft food is easy to roll into a ball and swallow.
4. **(c) dal and vegetables.** Fruit, vegetables, dal and whole grains have fibre; toffee, fizzy drinks and chips have very little.
5. **True.** Its strong walls churn the food with juices into a soupy mix.
6. **False.** Muscles in the food pipe squeeze the food down, so it works lying down or even upside down.
7. **stomach 3, mouth 1, large intestine 5, food pipe 2, small intestine 4.** Mouth, food pipe, stomach, small intestine, large intestine.
8. **1-B, 2-D, 3-A, 4-C.**
9. **Sample answer: chewing makes food small and soft, so it is easy and safe to swallow, and easier for the stomach and intestines to break down.** Any answer about smaller, softer pieces or safer swallowing is right.
10. **The small intestine.** In a grown-up it is about 6 metres long.

A note on the numbers

Lengths vary from person to person. In grown-ups the small intestine is roughly 6 to 7 metres long and the large intestine about 1.5 metres. Food usually stays in the stomach for a few hours, and the whole journey usually takes one to three days.

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