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Plants we use: food, fibre and more

From the roti on your plate to the cotton shirt you wear and the pencil in your hand, plants give us so many things. Let us find out what we get from plants, and from which part of the plant it comes.













For the parent *read in 1 minute*

This topic comes up often in Class II quizzes and Olympiads. The big idea: **plants give us food, fibre and many other useful things**, and different things come from **different parts** of a plant.

We eat **roots** (carrot), **stems** (potato), **leaves** (spinach), **flowers** (cauliflower), **fruits** (mango, and also tomato and bhindi) and **seeds** (rice, dal). Plants also give us **fibres** (cotton, jute, coir), **wood**, **paper**, **rubber**, **spices**, **oil** and plants used in **home remedies**.

Quiz setters love the tricky ones: **potato is a stem**, not a root; **tomato is a fruit**; **cinnamon is bark**; **cloves are flower buds**. Each one is explained in these pages.

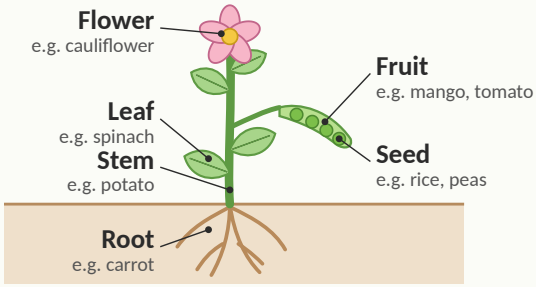
Talk about it *before turning the page · 5 minutes*

1. **What did you eat today that came from a plant?**
   Listen for: roti, rice, dal, fruit, vegetables, tea, sugar. Most of the food on our plate comes from plants; milk, eggs, fish and meat come from animals.
2. **Is your shirt made from a plant?**
   Listen for: many shirts are cotton, from the cotton plant. Wool and silk come from animals, and some cloth, such as polyester, is made from chemicals in factories.
3. **Can you find three things made of wood in this room?**
   Listen for: door, table, chair, pencil, cupboard. Wood comes from trees.

How to use these pages

- Read two or three panels a day (pages 2 to 4). At meal times, play **"Which part of the plant is this?"**
- Try an activity on page 5. The 20 practice questions on pages 6 and 7 are in the styles used in quizzes and Olympiads. Answers are on page 8.

Which parts of plants do we eat?



Most plants have **roots**, a **stem**, **leaves**, **flowers**, **fruits** and **seeds**.

We eat **every one of these parts**, but from different plants! From some plants we eat two parts: we eat both the leaves and the root of a radish.



1 Roots

Some plants store food in their **roots**, under the soil. The root grows fat and juicy.

We eat the roots of **carrot** (gajar), **radish** (mooli), **beetroot** and **sweet potato** (shakarkandi).

> **Remember: carrot, radish, beetroot and sweet potato are roots.**





2 Stems

The **potato** grows under the soil, but it is a **stem**, not a root! Its little "eyes" are buds that can grow into new shoots.

Ginger and **turmeric** are stems that grow under the ground too. **Sugarcane** is a tall, juicy stem.

> **Remember: potato and ginger are underground stems.**

For curious minds: an **onion** is an underground **bulb**. Its juicy layers are thick, fleshy leaves wrapped round a tiny, flat stem.



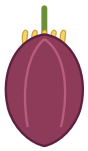
3 Leaves

We eat the **leaves** of **spinach** (palak), **cabbage**, **lettuce** and methi. We add **coriander** (dhania) and **mint** (pudina) leaves for flavour.

Leafy greens are full of goodness that keeps us healthy.

> **Remember: spinach, cabbage, lettuce, coriander and mint are leaves.**





4 Flowers

A **cauliflower** is a big bunch of tiny flower buds packed tightly together. **Broccoli** is the same, but green.

In many Indian homes, the **banana flower** (the big purple bud of the banana plant) is cooked as a sabzi.

> **Remember: cauliflower, broccoli and banana flower are flowers.**



5 Fruits

Fruits grow from flowers, and most fruits hold **seeds**. Mango, apple and banana are sweet fruits.

In science, **tomato, cucumber, brinjal** and **okra** (bhindi) are fruits too: they grow from a flower and have seeds inside, even though we call them vegetables.

> **Remember: if it grows from a flower and holds seeds, it is a fruit.**



6 Seeds

Seeds hold a baby plant and its packed food. We eat the seeds of **rice**, **wheat** and **corn** (maize), and of **peas**, **beans** and **peanuts**.

Every dal you eat is made of seeds too!

> **Remember: rice, wheat, corn, peas, beans and peanuts are seeds.**

For curious minds: a peanut flower grows above the ground. Then its stalk bends down and pushes the young pod into the soil, so peanuts are dug up.

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Plant foods in our kitchen

Open the kitchen cupboards: grains, dals, oil, spices, sugar, tea. Nearly all of them come from plants.





7 Cereals: our main food

Cereals are grains: the seeds of tall, grass-like plants. **Rice**, **wheat**, **maize** (corn) and millets such as **ragi**, **jowar** and **bajra** are cereals.

Roti, rice and poha come from cereals, and idli and dosa are made mostly of rice. Cereals are our main (**staple**) food and give us **energy**.

> **Remember: cereals give us energy to work and play.**





8 Pulses: our dals

Pulses are the dried seeds of pea and bean plants, which grow their seeds in **pods**. We cook them as dal: **moong**, **masoor**, **chana** (gram), **arhar** (tur) and **rajma**.

Pulses give us **protein**, which helps our body to grow and build strong muscles.

> **Remember: pulses (dals) give us protein.**



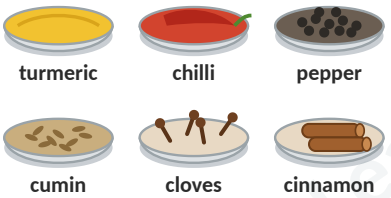


9 Oilseeds: oil for cooking

Cooking oil is pressed out of **oilseeds** such as **mustard** (sarson), **groundnut** (peanut), **sunflower** and **sesame** (til), and from the dried white flesh of the **coconut**.

> **Remember: cooking oil comes from seeds such as mustard, groundnut and sunflower.**

For curious minds: the seeds are in the middle of the sunflower head, not in its yellow petals.

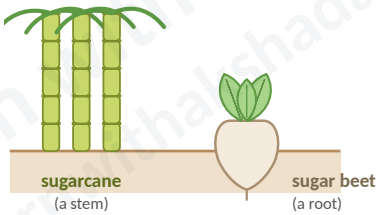


10 Spices: flavour from many parts

Spices add taste and smell to food. They come from different parts of plants:

turmeric (haldi) and **ginger**: underground stems · **cinnamon** (dalchini): the bark of a tree · **cloves** (laung): dried flower buds · **chilli**, **black pepper**, **cumin** (jeera) and **cardamom** (elaichi): fruits and seeds.

> **Remember: cinnamon is bark; cloves are flower buds.**



11 Sugar plants

Sugar and **gur** (jaggery) are made from the sweet juice of the **sugarcane stem**.

In cooler countries, sugar is also made from **sugar beet**, a fat white root.

> **Remember: sugar comes from sugarcane (a stem) and sugar beet (a root).**





12 Drinks from plants

Tea is made from the dried **leaves** of the tea plant. It grows in Assam, and on the hills of Darjeeling and Munnar.

Coffee is made from roasted seeds called coffee **beans**. **Cocoa**, for chocolate, comes from the seeds of the cacao tree.

> **Remember: tea is leaves; coffee and cocoa are seeds.**

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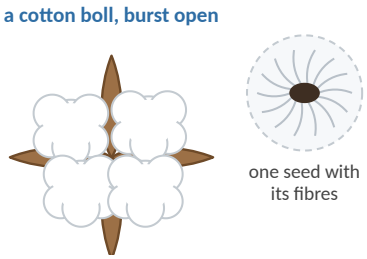
Plants for clothes, homes and more

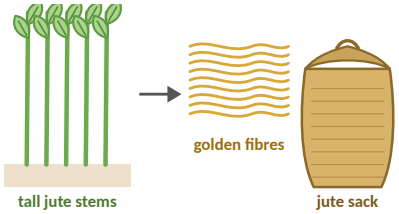


13 Cotton

Cotton grows in a fruit called a **boll**. When the boll bursts open, out comes soft, white fluff: fibres growing on the **seeds**.

The fibres are cleaned, spun into thread and woven into cloth for shirts, sheets and towels.

> **Remember: cotton fibres are fluffy hairs that grow on cotton seeds.**

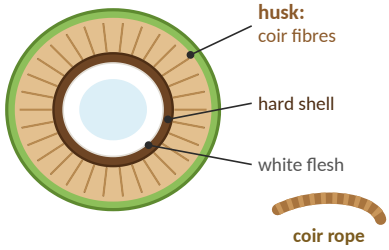


14 Jute

Jute fibre comes from the **stem** of the tall jute plant. The stems are soaked in water, and the long fibres are pulled out.

It is shiny and golden, so it is called the **golden fibre**. It makes sacks, bags and ropes.

> **Remember: jute comes from the stem.**



15 Coir

Coir is the rough, brown fibre from the thick **husk** around a coconut.

It is strong and lasts long in water, so it makes ropes, doormats and brushes. Kerala is famous for coir.

> **Remember: coir comes from the coconut husk.**

Not from plants: silk is spun by silkworms, and **wool** comes from the hair of sheep and goats. These are **animal fibres**.

For curious minds: linen cloth is made from the stem fibres of the flax plant.

More gifts from plants



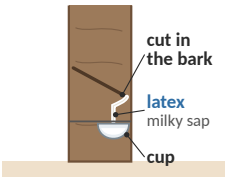
Wood

Trees such as **teak** (sagwan), **sal**, **sheesham** and deodar give strong **wood** for furniture, doors and windows.



Paper

Most paper is made from **wood pulp** (wood mashed with water) or **bamboo**. Old paper can be made into new paper.



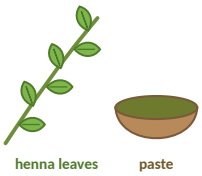
Rubber

A cut in the bark of the **rubber tree** lets out a milky sap, **latex**. It is made into rubber for tyres, balloons and rubber bands.



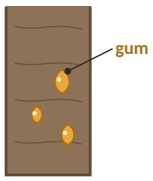
Plants in home remedies

Tulsi, **neem** and **aloe vera** are used in many home remedies. Never try one on your own: ask a grown-up, and see a doctor when you are ill.



Mehndi and dyes

Henna (mehndi) leaves are ground into a paste that colours hands. **Turmeric** gives a yellow colour, and the **indigo** plant a blue dye.



Gum

Some trees, such as **babool** (acacia), give a sticky **gum** from their bark. It is used in glue, and in gond laddoos.



Shade and fresh air

Trees give us cool **shade** and give out **oxygen**, which we need to breathe. They are homes for birds, squirrels and insects too.



Save plants!

Plant a tree and water it. Use both sides of paper. Do not break branches or pluck leaves for fun. Plants look after us, so let us look after them.

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Try it at home

Pick one or two each day. Talk about which part of the plant each thing comes from.

1. Kitchen part hunt

With a grown-up, look in the kitchen for one **root**, one **stem**, one **leaf**, one **flower**, one **fruit** and one **seed** that we eat. Line them up on a tray and say the name of each part. Was anything hard to decide? (Hint: potato, onion, tomato.)

You need: vegetables, fruits and dals from the kitchen. **Safety: Only a grown-up uses the knife.**

2. Grow moong sprouts

Soak a handful of moong in water overnight. In the morning, drain it, wrap it in a damp cloth and keep it in a bowl. Look again after one or two days: tiny shoots come out. Each seed holds a baby plant and its food!

You need: moong, water, a cloth, a bowl. **Safety: Ask a grown-up before eating any sprouts; wash them well.**

3. Is a potato a stem?

Find the little "eyes" on a potato. Keep one old potato in a dark cupboard for two or three weeks and look again: shoots grow from the eyes, just as shoots grow from buds on a stem. Then, with a grown-up, peel an onion layer by layer: those layers are fleshy leaves.

You need: an old potato, an onion. **Safety: Wash your hands after touching sprouted potatoes; never eat green or sprouted potato.**

4. Feel the fibres

Collect a cotton ball (or an old cotton cloth), a piece of jute rope or a jute bag, and a coir doormat or brush. Feel each one with your eyes closed. Which is softest? Which is roughest? Which would make the best rope?

You need: cotton, jute and coir things from home.

5. My plant diary for one day

Make a list of everything you use in one day that comes from plants: the wooden pencil, the paper in your notebook, your cotton clothes, a rubber band, the rice and dal at lunch. Can you reach 20?

You need: paper and a wooden pencil (paper and wood both come from plants!).

Key points to remember

1. Plants give us **food, fibre, wood, paper, rubber, oil, spices** and plants for home remedies.
2. We eat **roots** (carrot), **stems** (potato), **leaves** (spinach), **flowers** (cauliflower), **fruits** (mango, tomato) and **seeds** (rice, peas).
3. **Cereals** (rice, wheat, millets) give energy; **pulses** (dals) give protein; cooking oil comes from **oilseeds**.
4. **Cotton** comes from seeds, **jute** from the stem and **coir** from the coconut husk. **Silk** and **wool** come from animals.
5. **Tea** is leaves, **coffee** is seeds, **cinnamon** is bark and **cloves** are flower buds. Plants help us, so let us save plants.

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Practice: quiz and Olympiad style 20 questions · answers on page 8

A. Choose the correct answer (circle one)

1. Which part of the **carrot** do we eat?
   (a) stem (b) root (c) leaf (d) flower

2. **Jute** fibre comes from which part of the jute plant?
   (a) seed (b) leaf (c) stem (d) root

3. Which of these is a **pulse**?
   (a) wheat (b) moong (c) mustard (d) mango

4. Tea is made from the _____ of the tea plant.
   (a) leaves (b) roots (c) seeds (d) flowers

5. Which of these gives us **cooking oil**?
   (a) groundnut (b) spinach (c) jute (d) potato

B. Fill in the blanks (use the words in the box; one word is extra)

wheat **coir** **rubber** **sugarcane** **henna** **cotton**

6. Sugar and gur are made from the juice of _____.

7. Doormats and ropes can be made of _____, from the coconut husk.

8. Balloons and rubber bands are made of _____, which comes from latex.

9. Our roti is made from the flour of _____ grains.

10. _____ leaves are ground into a paste to put mehndi on our hands.

C. Picture labelling

11. Write the name of each plant product. Choose from:

cabbage **coffee beans** **cucumber** **groundnut** **rajma** **wheat**


(a) _____


(b) _____


(c) _____


(d) _____


(e) _____


(f) _____

D. Odd one out (circle the odd one and say why)

12. rice · wheat · maize · mustard

13. cotton · jute · coir · wool

14. carrot · radish · beetroot · potato

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E. Match the columns (write the letter)

15. Which part of the plant does each come from?

1. Tea ___	A. bark
2. Coffee ___	B. underground stem
3. Cinnamon ___	C. leaves
4. Cloves ___	D. seeds
5. Turmeric ___	E. flower buds

F. One-word answers

16. Which plant fibre is called the **golden fibre**? _____

17. Name the tall, hollow plant (a kind of grass) used to make paper, baskets and flutes. _____

G. Riddles: Who am I?

18. I grow in a boll on a plant. When the boll bursts, I come out white and fluffy, wrapped round the seeds. You may be wearing me as a shirt today. **Who am I?**

.....

19. I am green and long, with tiny seeds and a sticky inside. You call me a vegetable, but in science I am a fruit. You eat me as bhindi sabzi. **Who am I?**

.....

H. Which part do we eat? (sort the words: write each one in the right column)

20. **carrot** **ginger** **spinach** **cauliflower** **tomato** **wheat** **sweet potato** **sugarcane** **mint (pudina)** **banana flower** **okra (bhindi)** **peas**

Root	Stem	Leaf	Flower	Fruit	Seed

Score yourself

Give 1 mark for each question (for question 11 and question 20, give 1 mark if most are right). 17 or more: plant expert! 12 to 16: great work. Under 12: read pages 2 to 4 again and try once more.

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Answers

1. **(b) root.** A carrot stores food in its fat orange root.
2. **(c) stem.** The stems are soaked and the long fibres are pulled out.
3. **(b) moong.** Moong is a dal. Wheat is a cereal, mustard is an oilseed and mango is a fruit.
4. **(a) leaves.** Tea leaves are picked, dried and used to make tea.
5. **(a) groundnut.** Groundnut (peanut) seeds are pressed to get oil.
6. **sugarcane.** Its stem is full of sweet juice.
7. **coir.** Coir is the rough fibre from the coconut husk.
8. **rubber.** Latex, the milky sap of the rubber tree, is made into rubber.
9. **wheat.** Wheat grains are ground into atta (flour) for roti.
10. **Henna.** Henna (mehndi) leaf paste colours the skin orange-brown. "Cotton" was the extra word.
11. **(a) coffee beans, (b) groundnut, (c) wheat, (d) rajma, (e) cabbage, (f) cucumber.**
12. **mustard.** It is an oilseed; rice, wheat and maize are cereals.
13. **wool.** Wool comes from an animal (sheep); cotton, jute and coir come from plants.
14. **potato.** A potato is a stem; carrot, radish and beetroot are roots.
15. **1-C, 2-D, 3-A, 4-E, 5-B.** Tea: leaves; coffee: seeds; cinnamon: bark; cloves: flower buds; turmeric: underground stem.
16. **Jute.** It is shiny and golden in colour.
17. **Bamboo.** Bamboo is a giant grass; most bamboo stems are hollow.
18. **Cotton.** Cotton fibres grow on the seeds inside the boll.
19. **Okra (bhindi).** It grows from a flower and holds seeds, so it is a fruit.
20. **Root: carrot, sweet potato. Stem: ginger, sugarcane. Leaf: spinach, mint. Flower: cauliflower, banana flower. Fruit: tomato, okra. Seed: wheat, peas.**

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