



## Lesson Plan: Main Parts of Plants

**Grade Level:** 3

**Subject:** Life Science

**Duration:** 45–60 min

**NGSS 3-LS1-1:** Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

### Learning Objectives

By the end of this lesson, students will be able to:

- **Identify** the main parts of a plant: roots, stem, leaves, and flower
- **Describe** the specific functions of roots, stems, and leaves in plant survival
- **Explain** the process of photosynthesis and where it occurs



## PREVIEW

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- Main Parts of Plants Study Guide (<https://newpathworksheets.com/api/guide/study-guide-science-grade-3-main-parts-of-plants.pdf>)
- Activity Lesson 4 (<https://newpathworksheets.com/api/activity-lesson/activity-lesson-science-grade-3-main-parts-of-plants-4.pdf>)
- Worksheet 3: Labeling and Functions  
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-3.pdf>)



- Worksheet 0: Assessment Quiz (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-0.pdf>)
- Vocabulary Set 1 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-main-parts-of-plants-1.pdf>)
- Vocabulary Set 2 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-main-parts-of-plants-2.pdf>)

## Lesson Procedure

### Step 1: Introduction (5 minutes)

- Engage students by asking: "What body parts do you use to eat and drink? Do you think plants have parts for that too?"
- ~~Introduce the topic using the Main Parts of Plants Study Guide, focusing on the diagram of~~



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[of-plants-1.pdf](#)

- Have students work in pairs to match terms like 'Anther', 'Ovary', and 'Root hairs' to their definitions.
- Review the answers as a class to ensure understanding of the flower anatomy.

### Step 4: Independent Practice (15 minutes)

- Hand out Activity Lesson 4 for students to label plant parts and describe their functions. (<https://newpathworksheets.com/api/activity-lesson/activity-lesson-science-grade-3-main-parts-of-plants-4.pdf>)



- Provide Worksheet 3: Labeling and Functions for additional practice with open-ended questions about photosynthesis.  
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-3.pdf>)

## Step 5: Assessment (10 minutes)

- Administer Worksheet 0: Assessment Quiz to evaluate student understanding of plant functions. (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-0.pdf>)
- Check that students can correctly identify the roles of roots, stems, and leaves.

### Differentiation Strategies

For advanced learners:



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### Complete List of Available Resources:

- Topic: Main Parts of Plants (<https://newpathworksheets.com/science/grade-3/main-parts-of-plants>)
- Study Guide: Main Parts of Plants (<https://newpathworksheets.com/api/guide/study-guide-science-grade-3-main-parts-of-plants.pdf>)



- Activity Lesson 4 (<https://newpathworksheets.com/api/activity-lesson/activity-lesson-science-grade-3-main-parts-of-plants-4.pdf>)
- Worksheet 0 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-0.pdf>)
- Worksheet 1 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-1.pdf>)
- Worksheet 2 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-2.pdf>)
- Worksheet 3 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-3.pdf>)
- Worksheet: This and That 4 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-main-parts-of-plants-this-and-that-4.pdf>)
- Vocabulary Set 1 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-main-parts-of-plants-1.pdf>)
- Vocabulary Set 2 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-main-parts-of-plants-2.pdf>)



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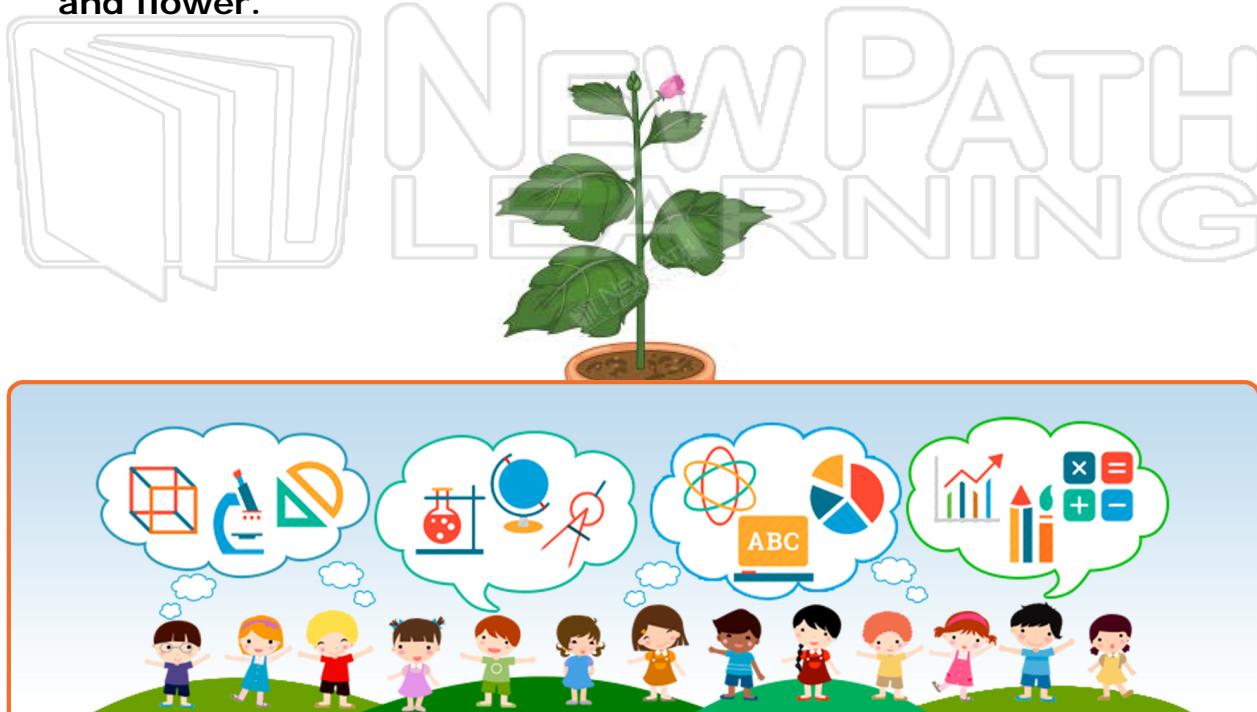
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## MAIN PARTS OF PLANTS

### Parts of Plants

A plant has many important parts, such as its **roots, stem, leaves, and flower**.



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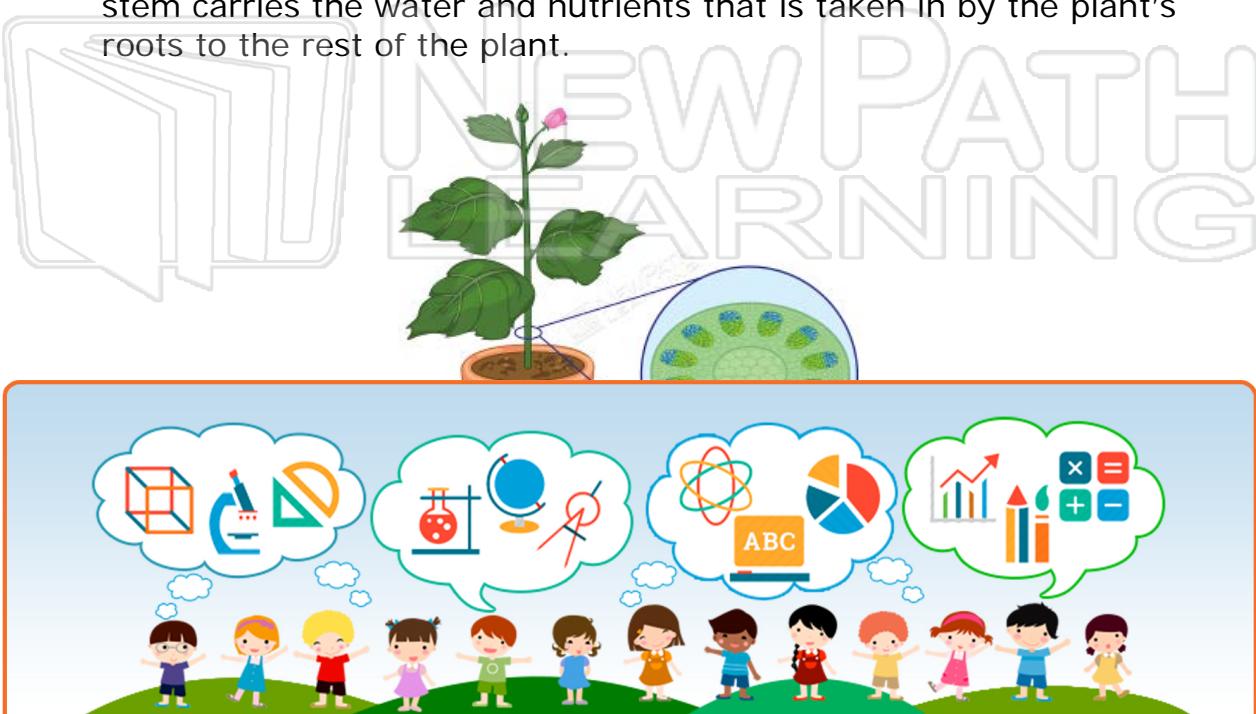
**Lesson Checkpoint:**

**What is one job of the ROOTS of a plant?**

## Stem

Let's now look at a plant's stem.

- A plant's **stem** is used to support the plant. The stem allows the plant's leaves to reach above the soil so that they may take in the sunshine.
- A plant needs sunshine to grow, make food, and live. A plant's stem carries the water and nutrients that is taken in by the plant's roots to the rest of the plant.



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### Lesson Checkpoint:

**What is one job of the LEAVES of a plant?**

## Photosynthesis

Plant leaves are the part of a green plant where the plant's own food is made. The plant makes food through a process called **photosynthesis**. In photosynthesis, a green plant uses energy from the sun, water it gets from the soil, and the air to make its food.

During the process of photosynthesis, the leaves of a green plant take in **carbon dioxide**, which is what the plant needs to make its own food. Humans and other animals breathe out carbon dioxide, which a plant then takes in through its leaves. **Photosynthesis** creates food for the plant and at the same time releases **oxygen** into the air.

### Lesson Checkpoint:

**What do plants take in during photosynthesis?**

**Flower**



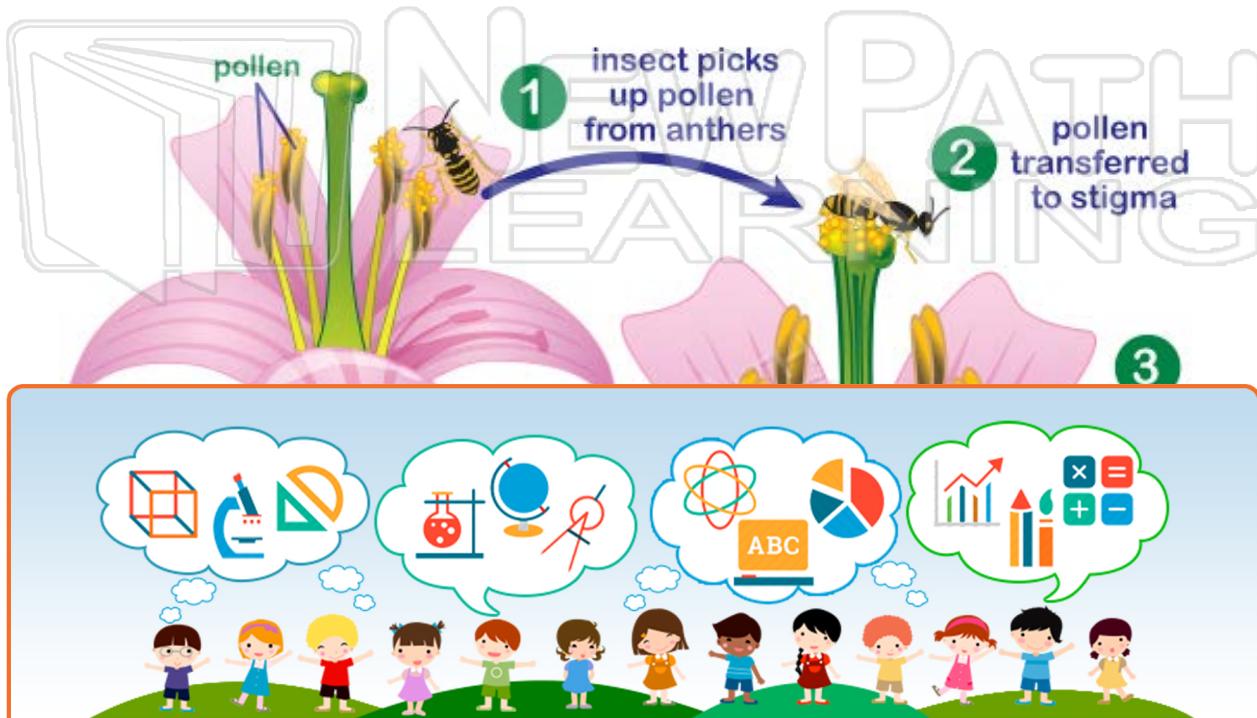
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The **stamen** of a flower is made up of two main parts: the **anther** and the **filament**.

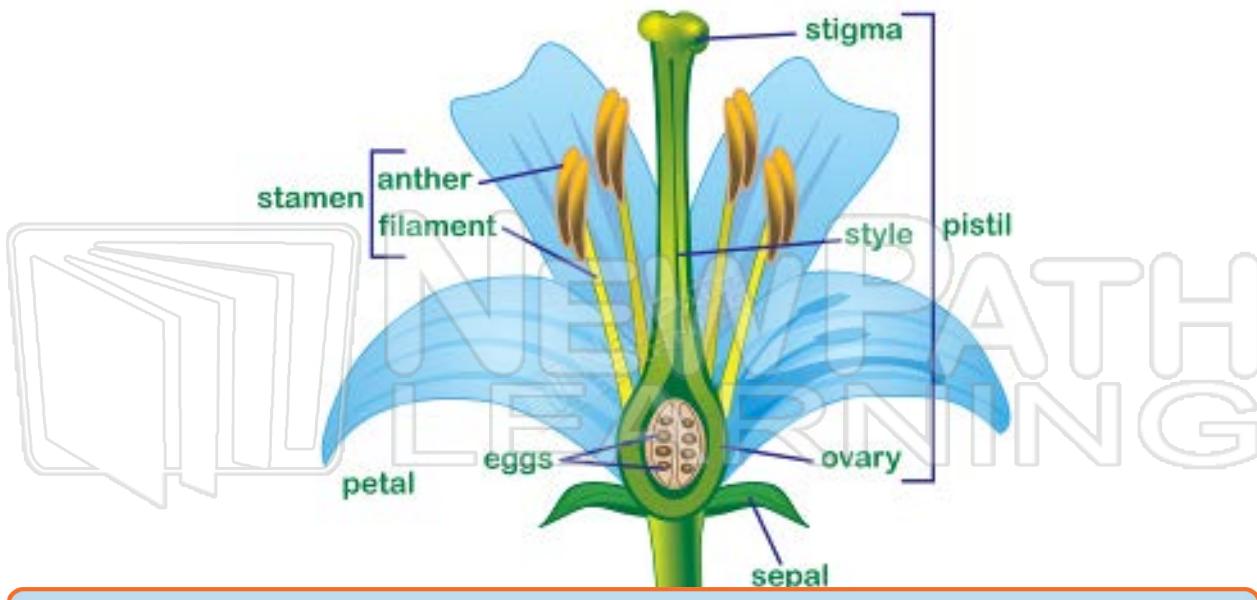
The **filament** is the extremely thin structure that holds up the anther.



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flowers, which is a necessary part of plant reproduction. Pollen is the fine yellow, powder like substance found on the anthers of a flower. Pollen is needed in order for flowers to reproduce.



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**Lesson Checkpoint:**

***Which part of the flower contains the pollen?***





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The parts of a plant have **many functions** that make it possible for the plant to live.

## Flower

The main job of the **flower** of a plant is to **make seeds**. New plants grow from these seeds. Some plants form **fruit** to help protect their seeds.



## Leaves

Leaves are where the plant's own

food

photo-

own

water

Photo-

plant

oxyg



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## Roots

**Roots** help support the plant by **anchoring** it into the ground. Roots have tiny hairs that **absorb** **nutrients** from the soil, which a plant needs to grow. These root hairs also **take in water** from the soil, which a plant needs to live and grow.





Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## Plant parts

Label each part and describe its function.



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Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Fill in the blanks. Color the images.

## Leaf Types

Draw and label 3 types of leaves.



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## Answer Key

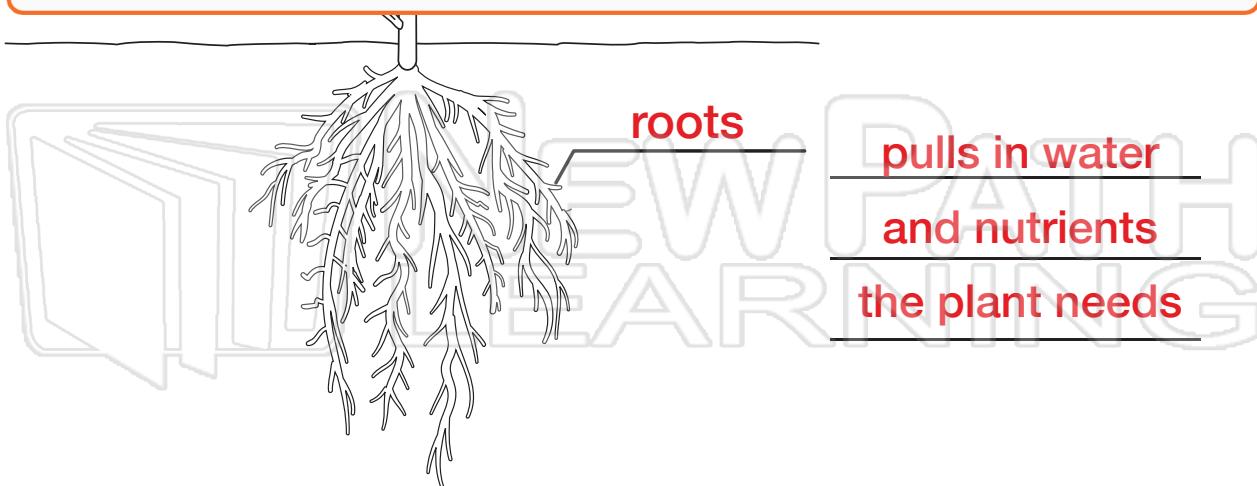
### Plant parts

Label each part and describe its function.



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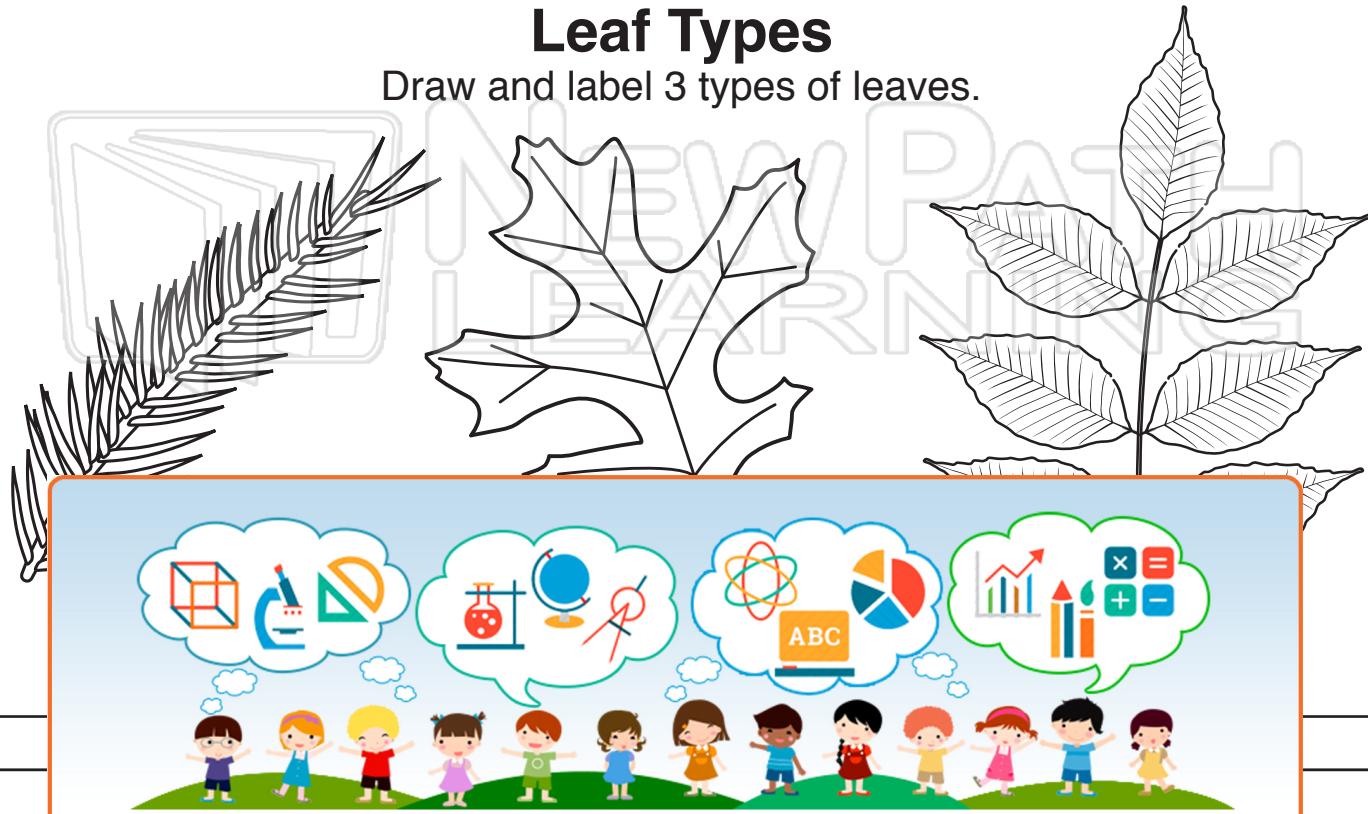


## Answer Key

Fill in the blanks. Color the images.

### Leaf Types

Draw and label 3 types of leaves.



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make seeds





# Main Parts of Plants

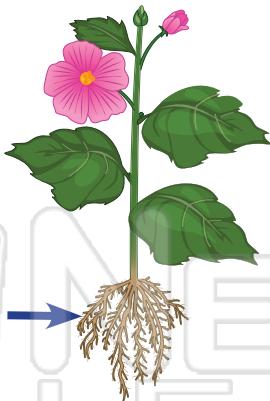
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C

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

1 What part of the plant is the **arrow** pointing to?



6 Plant \_\_\_\_\_ have many jobs. One job is to **take in sunshine**, which the plant needs to **make food** and to live.



2 Describe two important jobs or functions of a **plant's roots**.

7 What do **leaves** have in them which **allow air and water to move**?

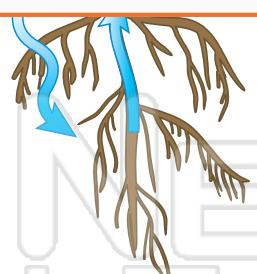
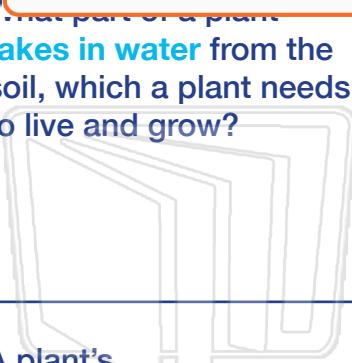


3 V \_\_\_\_\_

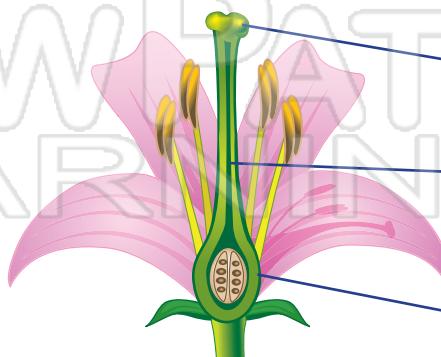
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4 What part of a plant **takes in water** from the soil, which a plant needs to live and grow?



10 The \_\_\_\_\_ of a flower is made up of three main parts: the **stigma**, **style**, and **ovary**. Label them on the flower.



5 A plant's \_\_\_\_\_ carries the **water and nutrients** that are taken in by the plant's roots to the rest of the plant.



# Main Parts of Plants - Answer Key

Sci  
C

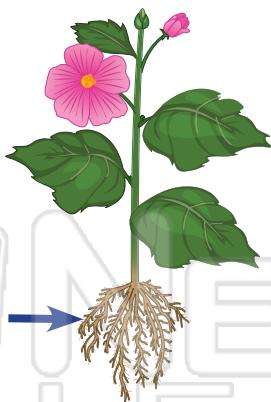
Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

1 What part of the plant is the **arrow** pointing to?

roots



2 Describe two important jobs or functions of a **plant's roots**.

Keep the plant in the ground

3 **Value** the **plants** in our **environment**.

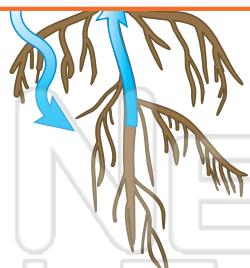


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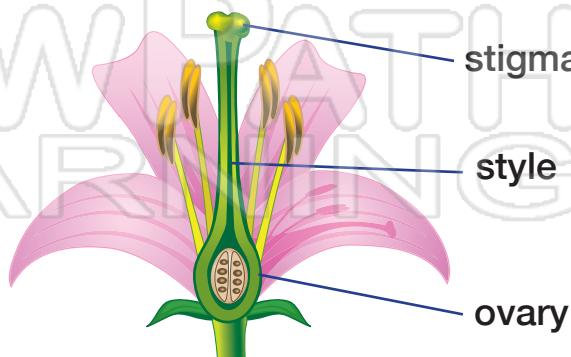
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4 What part of a plant **takes in water** from the soil, which a plant needs to live and grow?

roots and root hairs



10 The **parts** of a flower is made up of three main parts: the **style**, **stigma**, and **ovary**. Label them on the flower.



5 A plant's **stem** carries the **water and nutrients** that are taken in by the plant's roots to the rest of the plant.

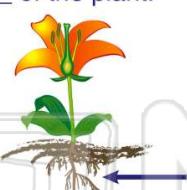


Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1

The **arrow** on the diagram is pointing to the \_\_\_\_\_ of the plant.

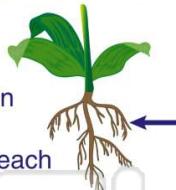
- A** leaf
- B** stem
- C** roots
- D** flower



2

What is an important job or function of a **plant's roots**?

- A** to attract insects
- B** to keep the plant in the ground
- C** to help the plant reach sunlight
- D** to make the plant smell nice



3

Tiny **root hairs** grow on the roots of a plant.

- A** true
- B** false



4

The **root hairs** on a plant's root help take in or absorb \_\_\_\_\_ from the soil, which a plant needs to grow.

- A** sunshine
- B** nutrients



5



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7

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- C** roots
- D** flower



- D** petals



9

The **stem** allows the plant's leaves to reach above the soil so they can take in the sunshine. A plant needs sunshine to \_\_\_\_\_.

- A** grow
- B** make food
- C** live
- D** all of the above



10

A plant's \_\_\_\_\_ carries the water and nutrients that are taken in by the plant's roots to the rest of the plant.

- A** roots
- B** stem
- C** flower
- D** leaves





Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 The **arrow** on the diagram is pointing to the \_\_\_\_\_ of the plant.

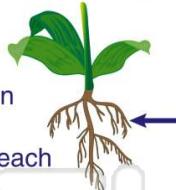
- A** leaf
- B** stem
- C** roots
- D** flower



C

2 What is an important job or function of a **plant's roots**?

- A** to attract insects
- B** to keep the plant in the ground
- C** to help the plant reach sunlight
- D** to make the plant smell nice



B

3 Tiny **root hairs** grow on the roots of a plant.

- A** true
- B** false



A

4 The **root hairs** on a plant's root help take in or absorb \_\_\_\_\_ from the soil, which a plant needs to grow.

- A** sunshine
- B** nutrients



B

5



A

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- C** roots
- D** flower



- D** petals



9 The **stem** allows the plant's leaves to reach above the soil so they can take in the sunshine. A plant needs sunshine to \_\_\_\_\_.

- A** grow
- B** make food
- C** live
- D** all of the above



10

A plant's \_\_\_\_\_ carries the water and nutrients that are taken in by the plant's roots to the rest of the plant.

- A** roots
- B** stem
- C** flower
- D** leaves



B



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## Match each of the following terms to its definition:

Pollen	Stem	Anther	Pistil
Root hairs	Ovary	Filament	Photosynthesis

1. - the part of the plant that supports the plant, allows plant to reach above soil to take in sunshine, and carries water and nutrients from the roots to the rest of the plant

2. - a process by which green plants, algae, and some bacteria, use energy from the Sun to convert carbon dioxide and water into simple sugars



3. collect  
4. the a  
5. when  
when  
6. cells  
the stigma, style and ovary

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7. - the fine yellow, powder-like substance found on the anthers of a flower; needed in order for flowers to reproduce

8. - hairs found on the roots of the plant that absorb water and nutrients from the soil

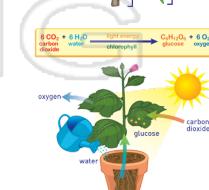


Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

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Pollen	Stem	Anther	Pistil
Root hairs	Ovary	Filament	Photosynthesis

**1. stem** - the part of the plant that supports the plant, allows plant to reach above soil to take in sunshine, and carries water and nutrients from the roots to the rest of the plant



**2. photosynthesis** - a process by which green plants, algae, and some bacteria, use energy from the Sun to convert carbon dioxide and water into simple sugars

**3. anthers**



**4. filaments**

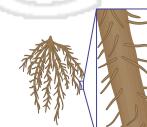
**5. ovaries**

**6. pistils**

**7. pollen** - the fine yellow, powder-like substance found on the anthers of a flower; needed in order for flowers to reproduce



**8. root hairs** - hairs found on the roots of the plant that absorb water and nutrients from the soil





Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## Match each of the following terms to its definition:

Style

Stem

Stigma

Sepal

Pollen

Root hairs

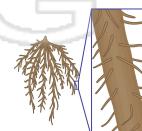
Photosynthesis

Stamen

1. \_\_\_\_\_ - the fine yellow, powder-like substance found on the anthers of a flower; needed in order for flowers to reproduce



2. \_\_\_\_\_ - hairs found on the roots of the plant that absorb water and nutrients from the soil



3. flower



4. anther

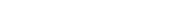
5. pistil

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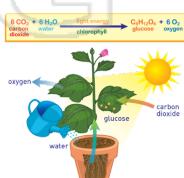
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7. \_\_\_\_\_ - the part of the plant that supports the plant, allows plant to reach above soil to take in sunshine, and carries water and nutrients from the roots to the rest of the plant



8. \_\_\_\_\_ - a process by which green plants, algae, and some bacteria, use energy from the Sun to convert carbon dioxide and water into simple sugars





Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## Match each of the following terms to its definition:

Style

Stem

Stigma

Sepal

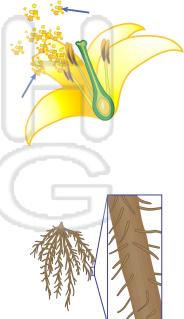
Pollen

Root hairs

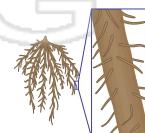
Photosynthesis

Stamen

**1. pollen** - the fine yellow, powder-like substance found on the anthers of a flower; needed in order for flowers to reproduce



**2. root hairs** - hairs found on the roots of the plant that absorb water and nutrients from the soil



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**4. st**  
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**5. st**

**7. stem** - the part of the plant that supports the plant, allows plant to reach above soil to take in sunshine, and carries water and nutrients from the roots to the rest of the plant



**8. photosynthesis** - a process by which green plants, algae, and some bacteria, use energy from the Sun to convert carbon dioxide and water into simple sugars

