



Lesson Plan: How Do Plants Grow?

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 essential needs of plants for growth: water, air, nutrients, sunlight, and space
- **Describe** the stages of a flowering plant's life cycle from seed to adult
- **Explain** the processes of germination and photosynthesis



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

- Activity Lesson: Plant Life Cycle (<https://newpathworksheets.com/api/activity-lesson/activity-lesson-science-grade-3-how-do-plants-grow-4.pdf>)
- Worksheet: Plant Needs & Diagrams (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-how-do-plants-grow-3.pdf>)
- Assessment Quiz (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-how-do-plants-grow-0.pdf>)
- Vocabulary Set 1 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-how-do-plants-grow-1.pdf>)



- Vocabulary Set 2 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-how-do-plants-grow-2.pdf>)

Lesson Procedure

Step 1: Introduction (5 minutes)

- Engage students by asking: "What do you think a tiny seed needs to become a giant tree?"
- Review 'What a Plant Needs to Grow' using the Study Guide.
(<https://newpathworksheets.com/api/guide/study-guide-science-grade-3-how-do-plants-grow.pdf>)

Step 2: Direct Instruction (15 minutes)

- Discuss the process of photosynthesis and how plants make their own food using sunlight.
- Walk through the stages of a plant life cycle: seed, germination, seedling, adult plant, and



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

(<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-how-do-plants-grow-2.pdf>)

Step 5: Assessment (10 minutes)

- Administer the lesson quiz to evaluate understanding of plant needs and life cycle stages.
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-how-do-plants-grow-0.pdf>)
- Review answers as a class to correct any misconceptions.



💡 Differentiation Strategies

For advanced learners:

- Research and compare the life cycles of flowering plants versus seedless plants (like ferns).

For learners needing support:

- Provide a word bank and the labeled diagrams from the Study Guide to assist with worksheet completion.

🎨 Extension Activities

- Plant bean seeds in the classroom and observe germination over one week, recording changes in a journal.
- Create a poster illustrating the process of photosynthesis.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-how-do-plants-grow-2.pdf>)

- Worksheet: Plant Needs & Diagrams (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-how-do-plants-grow-3.pdf>)
- Vocabulary Set 1 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-how-do-plants-grow-1.pdf>)
- Vocabulary Set 2 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-how-do-plants-grow-2.pdf>)

HOW DO PLANTS GROW?

What a Plant Needs to Grow

Plants need many essential things in order to grow, such as: water, air, nutrients, sunlight, and warm temperature. Plants need their space too! If a plant grows too close to other plants, it may not grow healthy and strong, because the plants may compete over the available water, nutrients, and space in the soil for their roots to grow.

An illustration of a group of diverse children standing on a green patch of grass. Above them are four thought bubbles containing various icons: a cube, a microscope, a protractor, a globe, a balance scale, a target, an atom, a pie chart, a bar graph, and math symbols like multiplication, division, addition, and subtraction. The entire scene is enclosed in a rounded rectangular frame with an orange border.

PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

Too much of a good thing, they can die. For instance, if a plant gets too much water, it can die.



In the beginning...

Most plants begin as a seed. A seed is a tiny plant, an embryo, in a little package.



A seed has a seed coat which protects the seed for harmful things,



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet



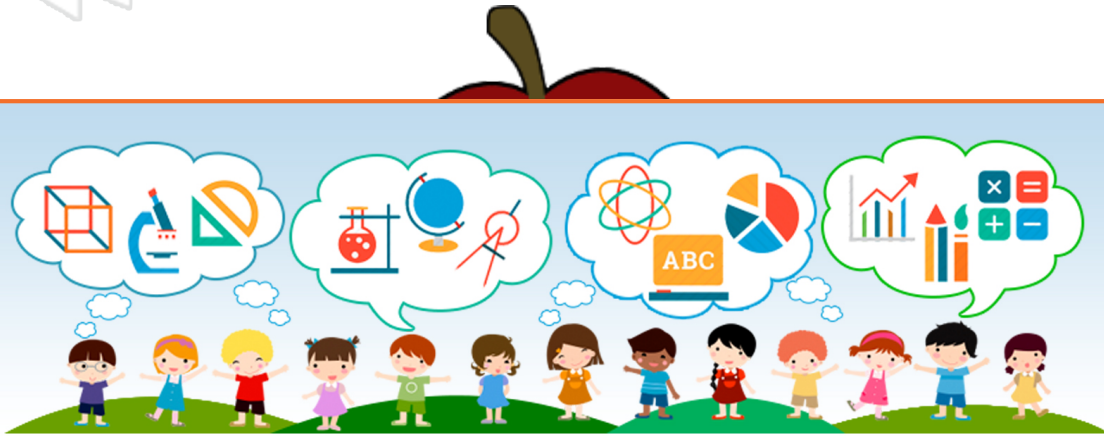
Lesson Checkpoint:
What is a cotyledon?

The seeds of a plant contain everything it needs to form the leaves, the stem, and the roots of a plant. Seeds also contain a food supply which is used to help the new plant grow and develop.

A seed stays inactive and doesn't start growing until the conditions surrounding it are just right for it to start growing. Seeds get to other places by the wind, water, animals, and even people.

Seeds are also found in the **pod** of a plant. A pod is a fruit that when ripe is dry and opens to release its seeds. Some pods contain few seeds while others contain many seeds.

Seeds can be found in the fruit of a plant or tree too.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet



A **seedling** is a young plant that is in its early stages of growth.



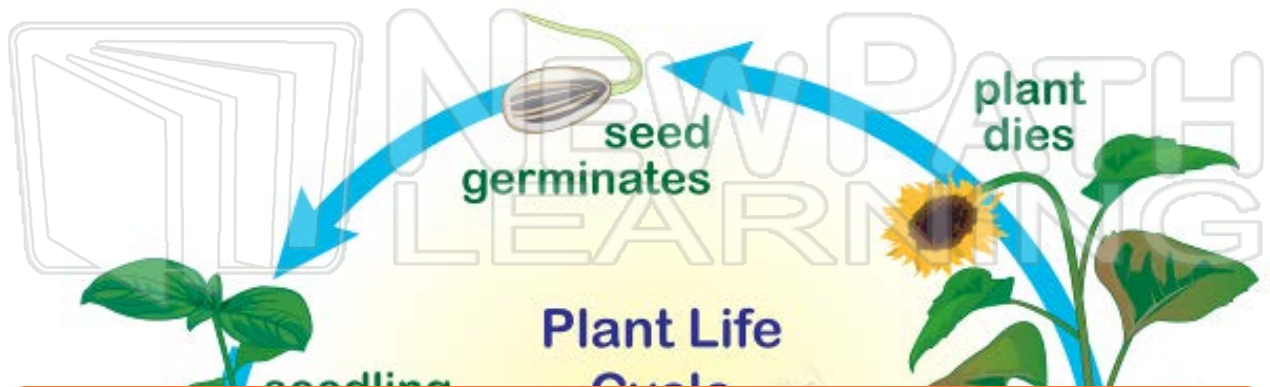
PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet



Plants Have Different Life Cycles

A flowering plant's life cycle describes how long a plant takes to grow, flower, set seed, and die.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

Annual plants grow, flower, produce seeds, and die **all in the same year** whereas a perennial plant lives for three or more years.



Seedless Plants

Plants that do not have flowers, such as ferns for example, do not make seeds. They produce spores instead.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet



A **bulb** is a special underground stem that is a plant in a small package that contains its own food supply needed for growth.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet



Lesson Checkpoint:
What are 4 ways plants develop without seeds?



Name _____ Class _____ Date _____

What a Plant Needs to Grow

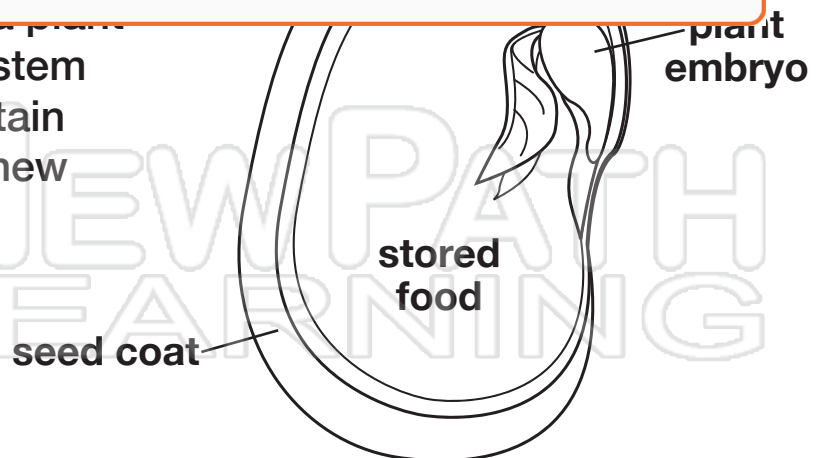
Plants need many **essential things** in order to grow: **water**, **air**, **nutrients**, **sunlight** and **warm temperatures**. Plants need their **space** too!



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

Seeds contain everything a plant needs to form leaves, the stem and roots. Seeds also contain a **food supply** to help the new plant grow and develop.





Name _____ Class _____ Date _____

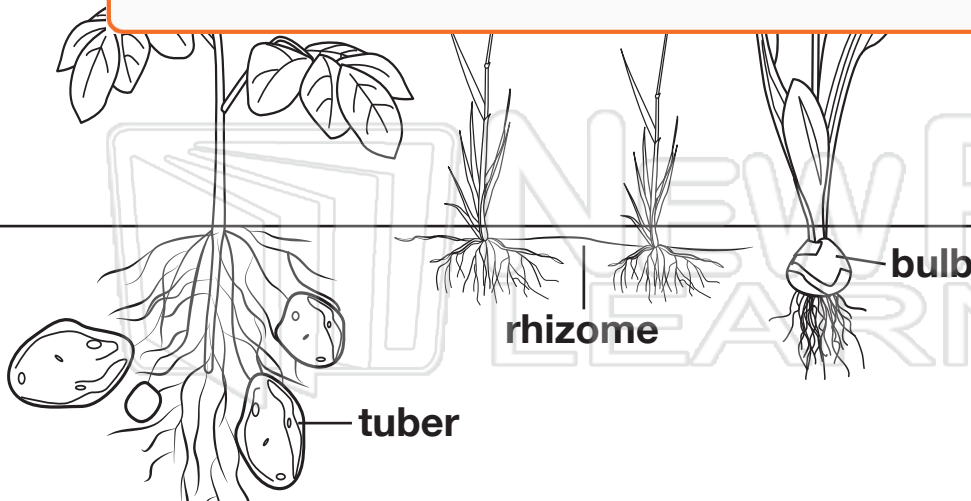
Plant Life Cycle

A **flowering plant's life cycle** describes how long a plant takes to grow, flower, set seed and die.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet





How Do Plants Grow?

Sci
C

Name _____ Class _____ Date _____

Label the **plant life cycle**. Number the steps.





How Do Plants Grow?

Sci
C

Name _____ Class _____ Date _____

Circle things plants need to grow.



PREVIEW

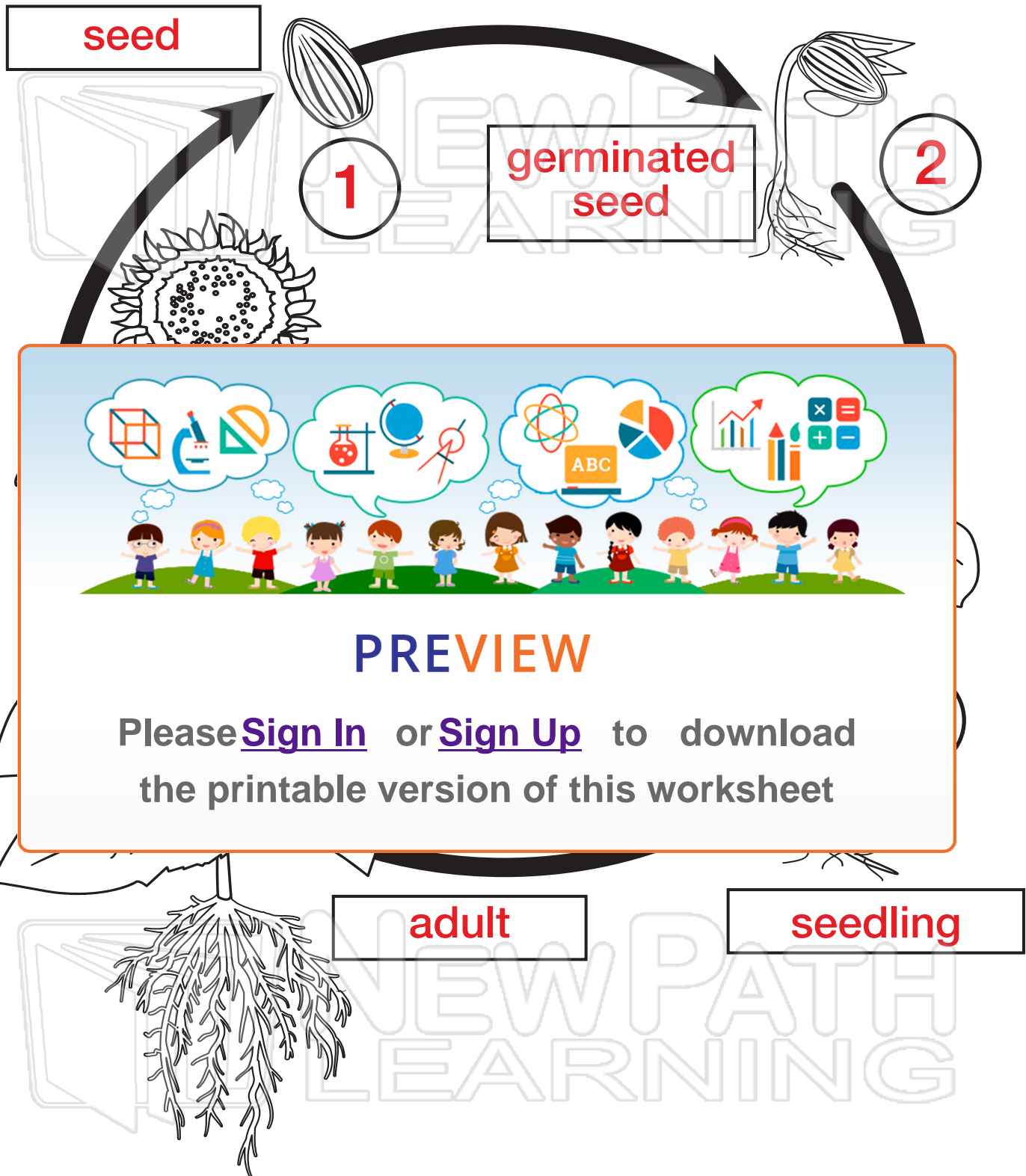
Please [Sign In](#) or [Sign Up](#) to download
the printable version of this worksheet





Answer Key

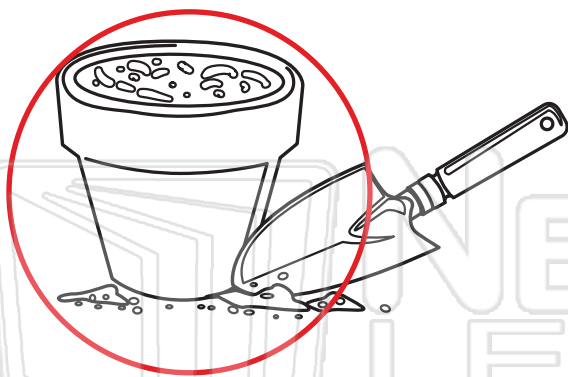
Label the **plant life cycle**. Number the steps.





Answer Key

Circle things plants need to grow.



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet





How do Plants Grow?

Sci
C

Name _____ Class _____ Date _____

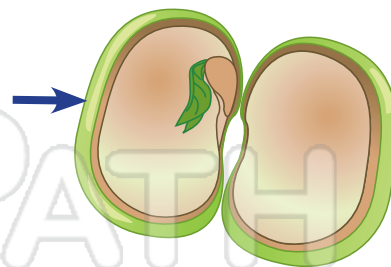
- 1 What do plants need in order to **grow**?
Name at least **3 things** plants need to grow.



- 2 If a plant gets **too much** of something it needs to grow, such as water, it can **die**.
Circle the correct answer.



- 6 What **part of the seed** is the arrow pointing to in the diagram?



- 7 The _____
protects the young plant inside the seed from the conditions of the environment until it is ready to grow.



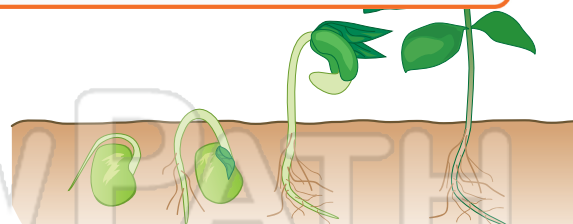
PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

- 5 Seeds contain _____ which helps the new plant begin to grow. It is **stored** in the **cotyledon**.



- 10 What is the name for the process of a plant as it **grows, flowers, sets seed, and dies**?





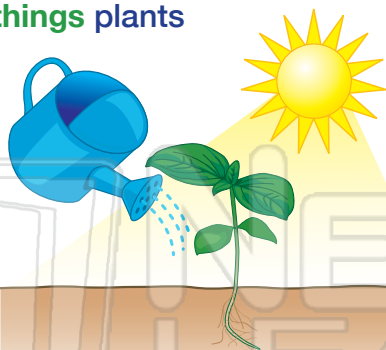
How do Plants Grow? - Answer Key

Sci
C

Name _____ Class _____ Date _____

- 1 What do plants need in order to **grow**?
Name at least **3 things** plants need to grow.

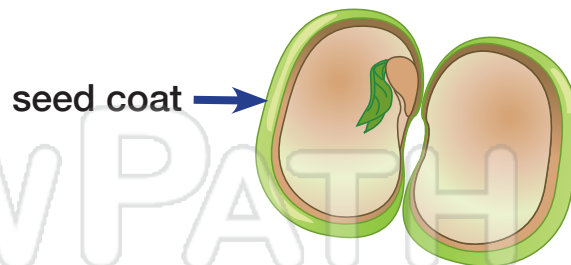
water,
sunshine,
nutrients,
soil, air



- 2 If a plant gets **too much** of something it needs to grow, such as water, it can **die**.
Circle the correct answer.



- 6 What **part of the seed** is the arrow pointing to in the diagram?



- 7 The _____ seed coat
protects the young plant inside the seed from the conditions of the environment until it is ready to grow.



PREVIEW

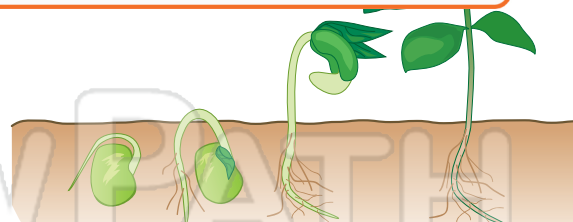
Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

- 5 Seeds contain _____ food _____ which helps the new plant begin to grow. It is **stored** in the **cotyledon**.



- 10 What is the name for the process of a plant as it **grows, flowers, sets seed, and dies**?

life cycle





Name _____ Class _____ Date _____

1

What do plants need in order to **grow**?

- A** just water and sunlight
- B** just water and air
- C** only nutrients, sunlight, and air
- D** water, air, nutrients, warm temperature, sunlight, and space

**2**

If a plant grows **too close** to other plants, it may not get enough water, nutrients, or room for its roots to grow and spread, because it will have to share what is available with nearby plants.

- A** true
- B** false

**3**

If a plant gets **too much** of something it needs to grow, such as water, it can die.

- A** true
- B** false

**4**

Many plants **begin** as a _____.

- A** seed
- B** leaf
- C** stem

**5**

PREVIEW

7

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

- C** thin or thick seed coats
- D** several seed coats

D the cotyledon

9

A _____ is made up of three parts: the seed coat, cotyledon, and embryo.

- A** flower
- B** seed
- C** root
- D** stem

**10**

What part of the plant is the **arrow** pointing to in the diagram?

- A** flower
- B** stem
- C** cotyledon
- D** seed coat





Name _____ Class _____ Date _____

1 What do plants need in order to **grow**?

- A just water and sunlight
- B just water and air
- C only nutrients, sunlight, and air
- D water, air, nutrients, warm temperature, sunlight, and space



D

2

If a plant grows **too close** to other plants, it may not get enough water, nutrients, or room for its roots to grow and spread, because it will have to share what is available with nearby plants.

- A true
- B false



A

3 If a plant gets **too much** of something it needs to grow, such as water, it can die.

- A true
- B false



A

4

Many plants **begin** as a _____.

- A seed
- B leaf
- C stem



A

5



C

PREVIEW

7

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

B

- C thin or thick seed coats
- D several seed coats

D the cotyledon

9

A _____ is made up of three parts: the seed coat, cotyledon, and embryo.

- A flower
- B seed
- C root
- D stem



B

10

What part of the plant is the **arrow** pointing to in the diagram?

- A flower
- B stem
- C cotyledon
- D seed coat



C



Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Bulb

Germination

Seedling

Cotyledon

Pod

Rhizome

Annual plant

Perennial plant

1. _____ - a young plant that is in its early stages of growth; a young plant



2. _____ - a plant that grows, flowers, produces seeds and dies all in the same year



3. _____ food



4. _____ spec

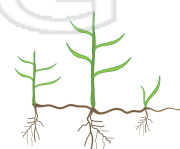
5. _____ seed
an e

6. _____ lives

7. _____ - a fruit that ripens, dries out and opens to release its seeds



8. _____ - a flat, usually underground stem that roots grow out of, which new flowers grow from





Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Bulb

Germination

Seedling

Cotyledon

Pod

Rhizome

Annual plant

Perennial plant

1. seedling - a young plant that is in its early stages of growth; a young plant



2. annual plant - a plant that grows, flowers, produces seeds and dies all in the same year



3. bulb
need



4. cotyledon
form



5. germination
embryo



6. perennial
lives



7. pod - a fruit that ripens, dries out and opens to release its seeds



8. rhizome - a flat, usually underground stem that roots grow out of, which new flowers grow from



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download
the printable version of this worksheet



Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Perennial plant

Seedling

Tuber

Seed coat

Pod

Annual plant

Rhizome

Spore

1. _____ - a plant that grows, flowers, produces seeds, and lives for three or more years

2. _____ - a fruit that ripens, dries out and opens to release its seeds

3. _____ out of

4. _____ protect

5. _____ in or

6. _____ that

7. _____ - a young plant that is in its early stages of growth; a young plant

8. _____ - a plant that grows, flowers, produces seeds and dies all in the same year



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet





Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Perennial plant

Seedling

Tuber

Seed coat

Pod

Annual plant

Rhizome

Spore

1. perennial plant - a plant that grows, flowers, produces seeds, and lives for three or more years

2. pod - a fruit that ripens, dries out and opens to release its seeds

3. rh
which

4. se
seed

5. sp
deve

6. tu
that

7. seedling - a young plant that is in its early stages of growth; a young plant

8. annual plant - a plant that grows, flowers, produces seeds and dies all in the same year



PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

