



Lesson Plan: Plant Growth and Reproduction

Grade Level: 4

Subject: Life Science

Duration: 45–60

4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Learning Objectives

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

- **Identify** the male and female reproductive parts of a flower and their specific functions.
- **Describe** the processes of pollination, fertilization, and germination in a plant's life cycle.
- **Explain** how physical adaptations like colorful petals and nectar attract pollinators to assist



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Materials Needed: (all links are included in this PDF)

- Study Guide: Plant Growth and Reproduction (<https://newpathworksheets.com/api/guide/study-guide-science-grade-4-plant-growth-and-reproduction.pdf>)
- Worksheet: Plant Growth and Reproduction 0 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-0.pdf>)



- Worksheet: Plant Growth and Reproduction 1
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-1.pdf>)
- Vocabulary: Plant Growth and Reproduction 1
(<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-plant-growth-and-reproduction-1.pdf>)
- Vocabulary: Plant Growth and Reproduction 2
(<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-plant-growth-and-reproduction-2.pdf>)

Lesson Procedure

Step 1: Introduction (5 minutes)

- Ask students: "Why do you think flowers have such bright colors and sweet smells?"



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[growth-and-reproduction-1.pdf](https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-1.pdf)

- Review the life cycle of a flowering plant and walk through the stages from seed to mature plant.

Step 4: Independent Practice (15 minutes)

- Have students work independently to complete the matching activities in Vocabulary Set 2 to reinforce plant reproduction terms.
(<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-plant-growth-and-reproduction-2.pdf>)



- Assign Worksheet 0 for students to apply their knowledge of flower parts and the process of reproduction. (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-0.pdf>)

Step 5: Assessment (10 minutes)

- Have students complete Worksheet 1 independently as a final assessment of their understanding of the concepts. (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-1.pdf>)
- Review the answers as a class to ensure mastery of topics like pollination, germination, and fertilization.

💡 Differentiation Strategies



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📚 Complete List of Available Resources:

- Topic: Plant Growth and Reproduction (<https://newpathworksheets.com/science/grade-4/plant-growth-and-reproduction>)
- Study Guide: Plant Growth and Reproduction (<https://newpathworksheets.com/api/guide/study-guide-science-grade-4-plant-growth-and-reproduction.pdf>)



- Worksheet: Plant Growth and Reproduction 0
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-0.pdf>)
- Worksheet: Plant Growth and Reproduction 1
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-1.pdf>)
- Worksheet: Plant Growth and Reproduction 2
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-plant-growth-and-reproduction-2.pdf>)
- Vocabulary: Plant Growth and Reproduction 1
(<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-plant-growth-and-reproduction-1.pdf>)
- Vocabulary: Plant Growth and Reproduction 2
(<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-plant-growth-and-reproduction-2.pdf>)



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NEW PATH LEARNING

PLANT GROWTH AND REPRODUCTION

Process of Reproduction

Many plants produce seeds in order to **reproduce** or make new plants. Seeds are produced in the flower of a plant. Flowers have male and female organs that are used to create seeds to grow new plants. The **female organ** of a flower is called the **pistil**. The **pistil** of a flower produces egg cells needed for plant reproduction. The **male organ** of a flower is called the **stamen** which produces pollen.



Lesson Checkpoints



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and birds, the pollen gets transferred to other flowers.

This **movement of pollen** from one flower to another is called **pollination**.

Lesson Checkpoint:
What is one reason a plant has nectar?

Fertilization

- **Fertilization** is the process of **sperm cells** from pollen combining with eggs cells in the ovary of a flower.
- After **fertilization** occurs, a plant produces a seed or seeds which are often protected inside a fruit.

Seeds



- A seed coat **surrounds the seed** and protects it until it is ready to germinate.
- A **seed** contains a leaf, stem, root, and stored food.
- Seeds need the **proper condition** in order to grow, such as oxygen, water, and the proper temperature.
- **Seeds** grow into new plants. The process of a seed **beginning to grow** is called **germination**.



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stick to the fur of some **animals**. These seeds eventually fall off the animal and grow in the soil where they fall. Other seeds are scattered to new soil by the wind.

Some plants, such as mosses and ferns, do not produce seeds but are still able to reproduce. **Mosses and ferns** produce **spores** instead of seeds.

Lesson Checkpoint:

What do mosses and ferns produce instead of seeds?



Name _____ Class _____ Date _____

1 Many plants produce _____ in order to **reproduce** or make new plants.

- A seeds
- B leaves
- C stems
- D roots



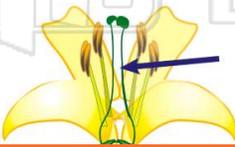
2 What part of the plant **produces seeds**?

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



3 What is the **female organ** of a flower?

- A pollen
- B roots
- C pistil
- D stamen

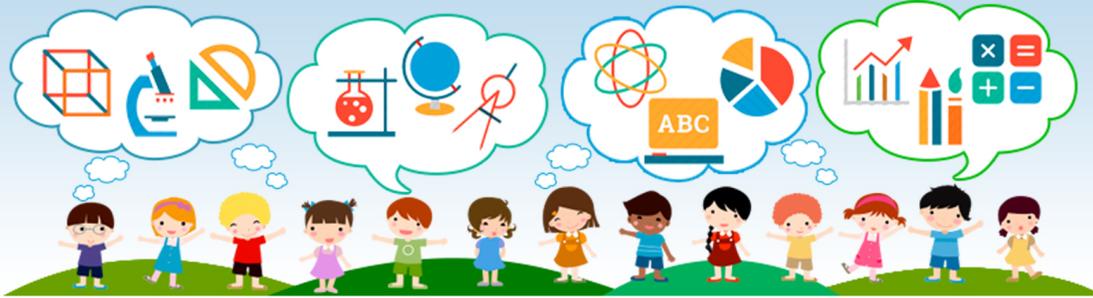


4 The **pistil** of a flower produces _____ needed for **plant reproduction**.

- A cones
- B petals
- C leaves



5



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9

Pollen needs to be **transferred** from one flower's stamen to _____ in order for plant **reproduction** to occur.

- A the stem
- B the pistil
- C the petal
- D the leaf



10

_____ is the **sweet liquid** produced by flowers to **attract** insects and birds.

- A Nectar
- B Pollen
- C Sap
- D Water

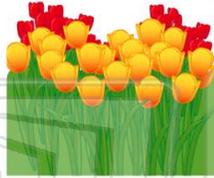




Name _____ Class _____ Date _____

1 Many plants produce _____ in order to **reproduce** or make new plants.

- A seeds
- B leaves
- C stems
- D roots



(A)

2 What part of the plant **produces seeds**?

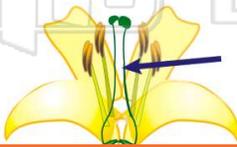
- A leaves
- B roots
- C stem
- D flower



(D)

3 What is the **female organ** of a flower?

- A pollen
- B roots
- C pistil
- D stamen



(C)

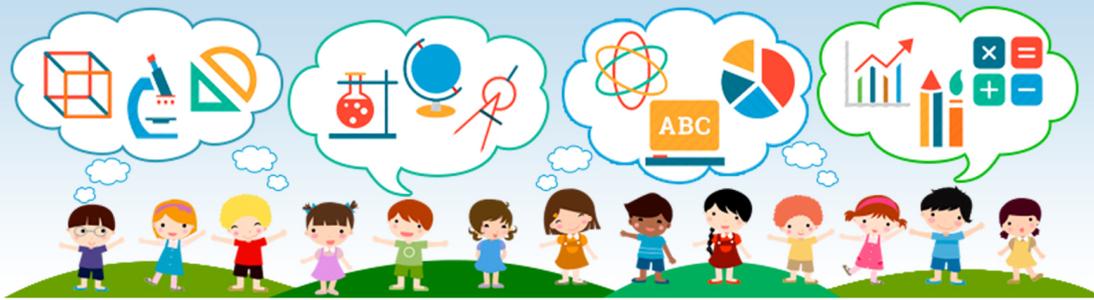
4 The **pistil** of a flower produces _____ needed for **plant reproduction**.

- A cones
- B petals
- C leaves
- D seeds



(D)

5



(B)

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(C)

9

Pollen needs to be **transferred** from one flower's stamen to _____ in order for plant **reproduction** to occur.

- A the stem
- B the pistil
- C the petal
- D the leaf



(B)

10

_____ is the **sweet liquid** produced by flowers to **attract** insects and birds.

- A Nectar
- B Pollen
- C Sap
- D Water



(A)



Name _____ Class _____ Date _____

1

A flower's nectar is located **deep inside the flower** so that when an insect or bird tries to get the nectar it also rubs up against the pollen on the flower as well.

True or false?

- A true
- B false



2

What frequently happens to the **pollen** that **rubs off** onto bees and birds?

- A It is eaten.
- B It harms the insects and birds.
- C It gets transferred to other flowers.
- D It makes food for the plant.



3

Bees, butterflies, and insects carry pollen from **flower to flower**. What is this **movement of pollen** from one flower to another called?

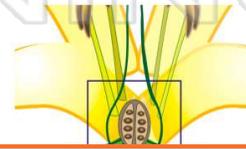
- A pollination



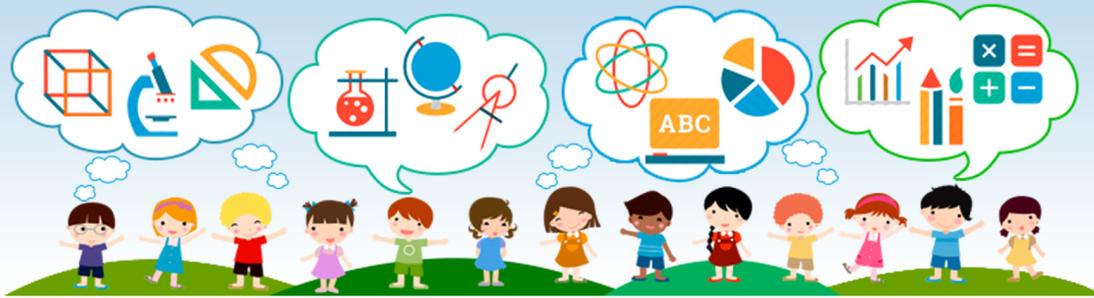
4

The _____ of a flower contains **egg cells**.

- A petals
- B stamen
- C ovary



5



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- C cell
- D fruit



- D water



9

What is the process of a seed **beginning to grow** called?

- A photosynthesis
- B respiration
- C germination
- D fertilization



10

All the **changes** a flowering plant goes through during its **lifetime** is called its _____.

- A death
- B life cycle
- C leaves
- D fertilization





Name _____ Class _____ Date _____

1 A flower's nectar is located **deep inside the flower** so that when an insect or bird tries to get the nectar it also rubs up against the pollen on the flower as well.

True or false?

- A true
- B false



A

2 What frequently happens to the **pollen** that **rubs off** onto bees and birds?

- A It is eaten.
- B It harms the insects and birds.
- C It gets transferred to other flowers.
- D It makes food for the plant.



C

3 Bees, butterflies, and insects carry pollen from **flower to flower**. What is this **movement of pollen** from one flower to another called?

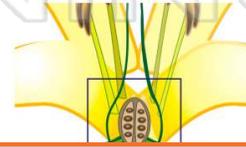
- A pollination



A

4 The _____ of a flower contains **egg cells**.

- A petals
- B stamen
- C ovary



C

5



A

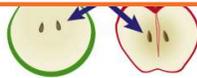
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A

- C cell
- D fruit



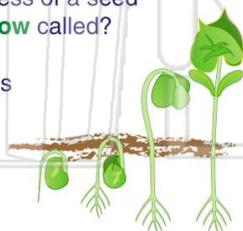
- D water



9

What is the process of a seed **beginning to grow** called?

- A photosynthesis
- B respiration
- C germination
- D fertilization



C

10

All the **changes** a flowering plant goes through during its **lifetime** is called its _____.

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- C leaves
- D fertilization



B

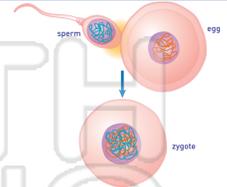


Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Nectar	Pistil	Seed coat	Pollen
Fertilization	Pollination	Germination	Ovary of flower

1. _____ - the joining of an egg and sperm to form a zygote that develops into a new organism; the process of sperm cells from pollen combining with eggs cells in the ovary of a flower



2. _____ - the process by which the plant embryo inside a seed grows and a seedling grows above soil; an early growth stage of an embryo



3. _____ insect



4. _____

5. _____
neede
stigma

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6. _____
anther

7. _____ - the movement of pollen from one flower to another



8. _____ - the outer part of a seed that surrounds and protects the seed until it is ready to germinate



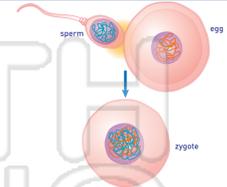


Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Nectar	Pistil	Seed coat	Pollen
Fertilization	Pollination	Germination	Ovary of flower

1. fertilization - the joining of an egg and sperm to form a zygote that develops into a new organism; the process of sperm cells from pollen combining with eggs cells in the ovary of a flower



2. germination - the process by which the plant embryo inside a seed grows and a seedling grows above soil; an early growth stage of an embryo



3. ne
anima

4. ova

5. pis
plant
ovary

6. pol
flower

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7. pollination - the movement of pollen from one flower to another



8. seed coat - the outer part of a seed that surrounds and protects the seed until it is ready to germinate





Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Seed coat

Nectar

Germination

Fertilization

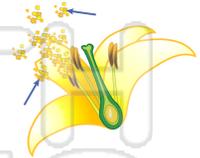
Pollen

Pollination

Sepal

Stamen

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



2. _____ - the movement of pollen from one flower to another



3. seed u

4. bud in

5. filame

6. develo

combining with eggs cells in the ovary of a flower

7. _____ - the process by which the plant embryo inside a seed grows and a seedling grows above soil; an early growth stage of an embryo



8. _____ - the sweet liquid produced by flowers to attract insects and animals



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Name _____ Class _____ Date _____

Match each of the following terms to its definition:

Seed coat

Nectar

Germination

Fertilization

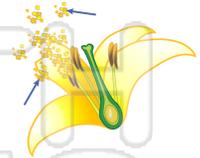
Pollen

Pollination

Sepal

Stamen

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



2. pollination - the movement of pollen from one flower to another



3. seed
until it

4. sep
order

5. sta
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6. fer
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combining with eggs cells in the ovary of a flower

7. germination - the process by which the plant embryo inside a seed grows and a seedling grows above soil; an early growth stage of an embryo

8. nectar - the sweet liquid produced by flowers to attract insects and animals



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