

Flower Journey

Trace how a flowering plant makes, moves, and starts a new seed.

SC.4.L.16.1 "Identify processes of sexual reproduction in flowering plants, including pollination, fertilization (seed production), seed dispersal, and germination."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Circle the first use of *pollination*, *fertilization*, *seed dispersal*, and *germination*. Number the circles 1 through 4 to show the reproduction sequence.

From Flower to Seedling

- ① On a sunny morning, a bee visits a purple coneflower for nectar. As it brushes against the flower's anthers, sticky pollen grains cling to its body. At the next coneflower, some pollen lands on the stigma, the top of the flower's female part. This transfer of pollen is called pollination. Pollination can also happen when wind moves pollen between flowers.
- ② If pollen from the same kind of flowering plant reaches the stigma, a pollen tube can grow down into the flower. A male cell from the pollen travels through the tube to an ovule. There, it joins an egg cell. This joining is fertilization. After fertilization, the ovule develops into a seed, while the surrounding ovary may grow into a fruit.
- ③ Seeds need to travel away from the parent plant so they have room, light, water, and nutrients. This movement is seed dispersal. A dry pod may burst and toss seeds, or a fruit may be eaten by an animal that carries seeds away. Later, a seed begins germination when it gets water, air, and a suitable temperature. A root grows down first, and a young shoot grows up.

2

ANSWER WITH EVIDENCE

Use the passage

1

What happens during pollination in the coneflower example?

2

During fertilization, which two cells join, and what does the ovule become afterward?

3

Name two ways the passage says seeds can be dispersed.

4

What three conditions begin germination, and what plant part grows first?

3

YOUR TURN

Your own words

Complete the table with the four processes in order and a sentence for each. Use a hummingbird, butterfly, or another pollen mover not named in the passage for your pollination example.

PROCESS	WHAT HAPPENS IN YOUR EXAMPLE

PART 1 • READ AND MARK

Circle the first use of *pollination*, *fertilization*, *seed dispersal*, and *germination*. Number the circles 1 through 4 to show the reproduction sequence. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What happens during pollination in the coneflower example?	A bee carries pollen to another coneflower, where some pollen lands on the stigma.
2	During fertilization, which two cells join, and what does the ovule become afterward?	A male cell from pollen joins an egg cell. The ovule develops into a seed.
3	Name two ways the passage says seeds can be dispersed.	A dry pod can burst and toss seeds, and an animal can eat fruit and carry seeds away.
4	What three conditions begin germination, and what plant part grows first?	A seed needs water, air, and a suitable temperature. The root grows first.

PART 3 • YOUR TURN (SAMPLE ANSWER)

PROCESS	WHAT HAPPENS IN YOUR EXAMPLE
Pollination	A hummingbird moves pollen from one flower to another flower's stigma.
Fertilization	A male cell from the pollen joins an egg cell in an ovule, and a seed begins to form.
Seed dispersal	A bird eats the fruit and deposits the seeds away from the parent plant.
Germination	The seed gets water, air, and warmth, so a root begins to grow down.

Accept equivalent descriptions that keep the processes in order: pollination, fertilization and seed formation, seed dispersal, then germination. For the open task, the pollen mover must differ from the bee and wind named in the passage.