# What is Plant Reproduction?

Worksheet

Plant reproduction occurs in two main ways: sexual reproduction (via flowers, pollination, and seeds) and asexual reproduction (via runners, bulbs, fragmentation). Sexual reproduction combines two parents' genetics; asexual reproduction produces genetically identical offspring.

## Questions

1. What is the male reproductive organ in a flower?

A) Pistil
B) Stamen
C) Sepal
D) Ovary

2. What happens during pollination?

A) Pollen travels to another flower's stigma
B) The seed germinates
C) The ovule ripens
D) The root grows

3. Are offspring from asexual reproduction genetically identical to the parent?

A) No, they have genetic variation
B) Yes, they are clones
C) Only 50% identical
D) They vary by season

4. Which is an example of asexual reproduction in plants?

A) Flower pollination
B) Strawberry runners
C) Seed germination
D) Wind-carried pollen

5. A flowering cherry tree produces seeds after cross-pollination with another cherry tree nearby. How does this help genetic diversity?

6. A strawberry plant produces runners (stolons) that root and form new plants. Are these genetically identical to the parent?

7. An orchid flower is pollinated by a specific bee species. If that bee population declines, how could the orchid survive?

8. Define: What are the two types of plant reproduction?

9. Define: What is pollination?

10. Define: What is the difference between sexual and asexual reproduction in plants?

# Answer Key

1. B) Stamen - The stamen produces pollen and is the male part; the pistil is female.

2. A) Pollen travels to another flower's stigma - Pollination is the transfer of pollen to the female stigma, enabling fertilization.

3. B) Yes, they are clones - Asexual reproduction produces genetically identical clones of the parent.

4. B) Strawberry runners - Runners (stolons) are vegetative propagation - a form of asexual reproduction.

5. Sexual reproduction combines genetic material from two different parents. This creates offspring with varied traits, increasing population adaptability. Genetic diversity helps plants survive changing environments and disease.

6. Yes - runners form asexual reproduction (vegetative propagation). New plants are clones of the parent with identical genes. This is fast and efficient, but offers no genetic variation.

7. Orchids that rely solely on one pollinator are at risk. Some orchids have adapted to reproduce asexually (pseudobulbs) as backup. Hybrid orchids can also be hand-pollinated by humans in cultivation.

8. Sexual reproduction (flowers, pollination, seeds) and asexual reproduction (runners, bulbs, fragmentation).

9. The transfer of pollen from the stamen (male) to the stigma (female) of a flower.

10. Sexual: two parents, genetic variation, slower. Asexual: one parent, clones, faster.