

Pollination Reading Comprehension

Name _____

Plants use the process of pollination to transfer their genetic information from one generation to the next, and to set in motion their process of reproduction.

Reproduction is important for all organisms—not just plants—because it keeps a species alive and preserves its genes for future descendants. Plants can either cross-pollinate, meaning that a flower is pollinated by another flower of the same species, or self-pollinate, meaning that a flower pollinates itself or is pollinated by a flower on the same plant.

While many animal species have separate male and female counterparts, a plant has both male and female parts to it. The female part is called the pistil, which makes nectar at its base; the male part includes thin stalks called stamen. Pollen is found on the anthers at the very tips of each stamen. Pollination occurs when pollen from the anther of one flower is transferred to the pistil of another flower. The pollen then travels down the pistil and fertilizes egg cells in the plant's ovaries, leading to the creation of seeds and fruits. These seeds and fruits are what contain the plant's genetic information and, when spread, can lead to growth of new plants.

The process of pollination requires the existence of pollinators that facilitate the movement of pollen from one flower to another. These pollinators can be biotic, meaning they are living or abiotic, meaning they are non-living. Some examples of abiotic pollinators include wind and water that carry pollen from place to place so it may by chance come into contact with another flower. Butterflies, bees, insects, and hummingbirds are examples of biotic pollinators that land on flowers, causing the pollen to rub onto their bodies or feeding parts, and transfer that pollen to other flowers as they fly from place to place.

Most plants have adaptations to increase the chances they are pollinated. Some are adapted to attracting bees with bright colors and sweet nectar. The bees may notice the vibrant colors of a flower and land on it; while they collect the nectar from the flower, pollen from the anthers may rub onto it, and therefore be transferred to another flower when the bee searches for another nectar source. Some flowers are adapted for pollination by a single source. For example, some flowers in tropical rainforests can only be pollinated by a specific species of hummingbird with specially-adapted bills that can fit inside the flower!

1. Pollination ensures...

- A. bees and hummingbirds have food.
- B. a plant reproduces.
- C. certain pollinators have specific adaptations.
- D. bees will be attracted to certain flowers.

2. A flower that is pollinated by another flower on the same plant is an example of _____.

- A. Abiotic pollination
- B. Cross-pollination
- C. Self-pollination
- D. Adaptive pollination

3. Which is NOT true?

- A. The pistil makes nectar
- B. Pollen is found on the anthers
- C. The anthers are located at the tips of the stamen
- D. The stamen is the female part

4. Which of the following correctly labels the main idea of each paragraph?

- A. 1 – Introduction; 2 – Anatomy; 3 – The Process of Pollination; 4 - Adaptations
- B. 1 – Introduction; 2 – The Process of Pollination; 3 – Anatomy; 4 - Adaptations
- C. 1 – Introduction; 2 – Adaptations; 3 – The Process of Pollination; 4 - Anatomy
- D. 1 – Introduction; 2 – Anatomy; 3 – Adaptations; 4 – The Process of Pollination

5. To which of the following questions would “wind and water” be the answer?

- A. What are examples of biotic pollinators?
- B. What are the most common examples of pollinators?
- C. What are examples of abiotic pollinators?
- D. What are adaptations that plants use to increase the chances they are pollinated?

6. Based on the final paragraph, which of the following would be the best definition for the word “adaptation?”

- A. An interesting way in which nature works
- B. Natural rules that govern survival
- C. Something that has an effect on a pollinator
- D. Something that increases the chances of survival or reproduction for a form of life

7. What question is answered in the final paragraph?

- A. In what habitats do most pollinators live?
- B. How does a bee pollinate a flower?
- C. What species of hummingbird has a specially adapted bill for specific flowers?
- D. Are hummingbirds or bees more effective as pollinators?