**Unit 4: Reproductive Success**

**Guided Notes: Reproduction in Flowering Plants**

**Big Idea:** Flowers are the reproductive structures of certain plants, and each part of a flower has a specific function in the process of \_\_\_\_\_\_\_\_\_\_\_\_.

**Key Concepts:**

* \_\_\_\_\_\_\_\_\_\_\_\_ – part of the stamen where pollen is made
* \_\_\_\_\_\_\_\_\_\_\_\_ – a stalk, found in the stamen, that supports the anther
* \_\_\_\_\_\_\_\_\_\_\_\_ – the male part of a flower
* \_\_\_\_\_\_\_\_\_\_\_\_ – the female part of a flower
* \_\_\_\_\_\_\_\_\_\_\_\_ – sticky top part of the pistil that captures pollen
* \_\_\_\_\_\_\_\_\_\_\_\_ – slender stalk that connects the stigma and ovary
* \_\_\_\_\_\_\_\_\_\_\_\_ – swollen base of the stigma that contains the female sex cells

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**Real World Examples:**

1. Imagine a flower with colorful petals and a sweet smell. The \_\_\_\_\_\_\_\_\_\_\_\_ attract bees, which help move pollen from one flower to another.
2. Think of a flower growing in a garden. The wind blows and carries pollen from the \_\_\_\_\_\_\_\_\_\_\_\_ of one flower to the \_\_\_\_\_\_\_\_\_\_\_\_ of another, allowing fertilization to occur.

**Guided Notes: Non-Flowering Plants Reproduction**

**Big Idea:** Non-flowering plants reproduce using different structures and processes compared to flowering plants, involving \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.

**Key Concepts:**

* \_\_\_\_\_\_\_\_\_\_\_\_ – sex cell, like egg or sperm
* \_\_\_\_\_\_\_\_\_\_\_\_ – single cell that can produce a plant without fusing with another cell
* \_\_\_\_\_\_\_\_\_\_\_\_ – generation of the plant that produces spores
* \_\_\_\_\_\_\_\_\_\_\_\_ – generation of the plant that produces gametes
* \_\_\_\_\_\_\_\_\_\_\_\_ – group of non-flowering plants that produce seeds; also called conifers

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**Real World Examples:**

1. Imagine a moss growing in a damp forest. The green moss you see is in the \_\_\_\_\_\_\_\_\_\_\_\_ stage, producing gametes for reproduction.
2. Think of a pine tree in a park. The tree produces \_\_\_\_\_\_\_\_\_\_\_\_ that contain \_\_\_\_\_\_\_\_\_\_\_\_, which can grow into new trees without the need for flowers.

**Guided Notes: Successful Plant Reproduction**

**Big Idea:** Certain plant structures and interactions with pollinators increase the likelihood of successful \_\_\_\_\_\_\_\_\_\_\_\_.

**Key Concepts:**

* \_\_\_\_\_\_\_\_\_\_\_\_ – part of reproduction where a sperm cell and an egg cell come together
* \_\_\_\_\_\_\_\_\_\_\_\_ – the movement of pollen from where it is made to where fertilization can occur
* \_\_\_\_\_\_\_\_\_\_\_\_ – an animal that carries pollen during pollination
* \_\_\_\_\_\_\_\_\_\_\_\_ – changes in two organisms over a long period of time that help both living things survive and reproduce

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**Real World Examples:**

1. Bees help flowers make seeds by moving \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from one flower to another. The bee is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because it carries the pollen.
2. Some flowers and insects have changed together over time to help each other survive. This is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It helps flowers with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by joining pollen and egg cells.

**Guided Notes: Animal Behaviors**

**Big Idea:** Animal behaviors, such as courtship and territorial behaviors, play a crucial role in ensuring successful \_\_\_\_\_\_\_\_\_\_\_\_.

**Key Concepts:**

* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ – behavior used to attract a mate
* \_\_\_\_\_\_\_\_\_\_\_\_ – animal of the same kind but of the opposite sex
* \_\_\_\_\_\_\_\_\_\_\_\_ – the production of offspring
* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ – behavior used to protect an area in which an animal lives
* \_\_\_\_\_\_\_\_\_\_ reduces the energy required for survival

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**Real World Examples:**

1. Imagine a \_\_\_\_\_\_\_\_\_\_\_\_ showing off its colorful feathers and dancing to attract a mate. This is an example of \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.
2. Think of a \_\_\_\_\_\_\_\_\_\_\_\_ marking its territory with scent to warn other animals to stay away. This is an example of \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.

**Guided Notes: Analyzing Factors**

**Big Idea:** The main idea of this lesson is understanding how animal behaviors, and the availability of resources affect the probability that animals will successfully \_\_\_\_\_\_\_\_\_.

**Key Concepts:**

* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ - The number of offspring that are born and survive to reproduce.
* \_\_\_\_\_\_\_\_\_\_\_\_ - The way an animal interacts with other animals and with the nonliving things in its environment.
* \_\_\_\_\_\_\_\_\_\_\_\_ - A conclusion based on evidence and reasoning.
* \_\_\_\_\_\_\_\_\_\_\_\_ - An animal of the same kind but opposite sex that is needed for reproduction.
* All animals need \_\_\_\_\_\_\_\_\_\_\_\_ such as food and shelter to survive and reproduce.
* Scientists look for \_\_\_\_\_\_\_\_\_, or patterns of change, in data to understand reproductive success.
* Adding more animals to an environment can create too much \_\_\_\_\_\_\_\_\_\_\_\_ for resources, affecting reproductive success.

**Real World Examples:**

1. In a freshwater lake, tiny animals like rotifers and water fleas compete for resources. When water fleas are added to the environment, the number of rotifers \_\_\_\_\_\_\_\_\_ because of increased competition.
2. On the plains of Africa, lions and zebras have a predator-prey relationship. When the zebra population increases, there is more \_\_\_\_\_\_\_\_\_ for the lions, supporting more offspring. However, if there are too many lions, they overhunt the zebras, causing the zebra population to \_\_\_\_\_\_\_\_\_ and then the lion population to also decrease.