Plant Reproduction



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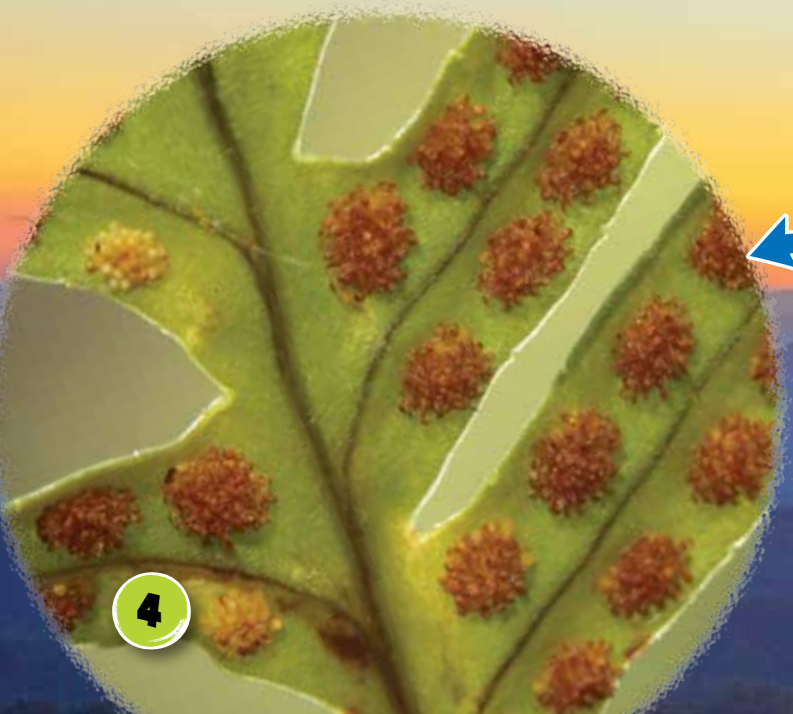
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Growing a New Generation

Every living thing, from a snail to a gorilla, is born and grows. And all living things eventually grow old and die. Some live for only a few days, like mayflies. Others live hundreds of years, like oak trees. Before they die, living things must reproduce or their species will die out. Just like any living thing, plants must also reproduce to survive.

There are over 400,000 kinds of plants in the world! But they all reproduce in two main ways. Some plants use seeds. Other plants reproduce using **spores**. Spores are plant cells that can make new plants. There are advantages and disadvantages to both types of reproduction. But there's no doubt that all living things benefit from having plants around. When it comes to life on Earth, the more plants, the better!

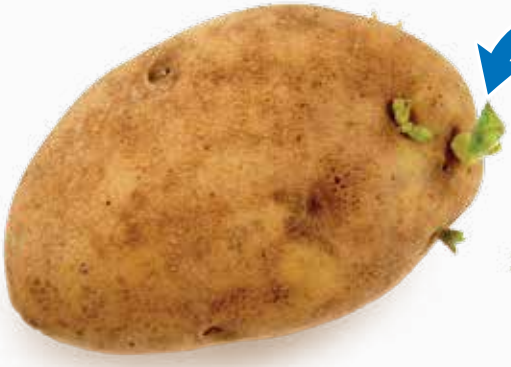


magnified spores under a fern leaf

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More and More!

Seeds and spores are the most common ways for plants to reproduce. But there are other ways as well.



Budding
Sprouts of the original plant can be cut and then replanted to **clone** a new plant.



Fragmentation
Small parts of the plant or stem break off into the soil and grow into a new plant.



Propagation
Plants may produce horizontal stems that work their way into the ground, form roots, and grow a new plant.

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Sowing Seeds

Many plants use seeds to produce their next generation. They may look plain, but seeds are amazing. A single seed holds all the instructions a plant needs to grow and survive. They may produce delicious apple trees or towering redwood trees. And it all fits in the palm of your hand!

Seeds are fertilized eggs. They contain a food supply and an **embryo**. Inside the embryo are the first leaves and roots of the new plant. A thick shell called a *seed coat* protects both the food and embryo. Sometimes, seeds wait a long time before growing. The conditions must be just right. Seeds might wait for warmer temperatures, or they might wait for more moisture. In the meantime, the food supply feeds the leaves and roots.



Coconut palms produce only a few large coconut seeds.

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Trumpet trees can produce 900,000 seeds!



angel's trumpet seeds

Seeds, Seeds, Seeds

Different plants make different kinds of seeds. Some produce just a few seeds. Others create hundreds of thousands of seeds. They want to increase their chances of reproducing.

peas

vanilla seeds

pomegranate seeds

acorns

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Think Like a Scientist

Which plants have the most seeds? Experiment and find out!

What to Get

- 3 to 5 different fruits
- knife
- marker
- paper
- paper cups

