PLANT REPRODUCTION

There are MANY plants in the world. Some are plants that you know of and many you have never heard of before!

Simple Plants

Have you ever heard of a liverwort plant? Sounds like a plant that would be found in an enchanted forest. **Liverworts** are small plants that can be found in shady, moist areas. They are truly a very simple plant. They are not vascular and do not have true roots like most plants do; instead, they have **rhizoids** that anchor them to the ground.

Lesson Checkpoint:
What anchors liverworts to the ground?

There are even plants that can reproduce without seeds, such as ferns and mosses. Mosses and ferns do not produce flowers so they do not produce se roduces spores in c spores instead of

The Ferr

Below you will notice that a fern olves sperm and egg cells, from two parents.

By what letter do you see the spores coming away from the parent plant? If you said C – you are correct!! Those spores spread out to other areas, land in the soil, and develop into NEW fern plants.

The Life Cycle of Moss

First moss produces egg and sperm cells, then fertilization occurs, then a spore stalk is developed. The spore stalk grows from the parent plant; spores are inside of the stalk all closed up in a spore case for safe keeping. Spores are finally released into the air around the parent plant and a new moss plant grows from the released spores.

Spores vs. Seeds

	SEEDS	SPORES
produced by flowering plant?	yes	no
multi-cellular embryo?	yes	no
store food?	yes	yes

Lesson Checkpoint: How do ferns and moss reproduce if they do not produce seeds?

Types of

Now we kr d occurs with sperm roduction to occur. nd occurs **without** s

There are and runners are just two asexual methods possible.

Budding is when a bud grows on a plant and then breaks off and grows as its own plant. **Runners** are new plants that form on the end of a parent plant's long stem or leaf…notice the picture of the spider plant below:

Lesson Checkpoint:
What is the difference between sexual and asexual reproduction?

There are also plants that do not flower BUT still produce seeds….(ahhh, so many kinds of plants – isn't it fascinating!)

Gymnosperms are vascular plants that produce seeds, but do not produce flowers.
Coniferous trees, such as pine trees, are examples of gymnosperms.

Look at the seed of a pine tree below:

In what wa pful to the plant's life ew spot to grow, of c

Most coniferous trees have male and female cones. Male cones are the small cones on a coniferous tree; their job is to make pollen. The larger cones on a coniferous tree are the female cones; their job is to produce eggs. The wind carries pollen from the male cones to the female cones. The female cones are also known as seed cones, because that's where the seeds are kept.

Lesson Checkpoint: What are gymnosperms?

Flowers from Seeds

Now, as you most likely know, MANY plants produce flowers and develop fruit around their seeds….these plants are known as **angiosperms**.

Monocots vs. Dicots….what are these?

Monocots are plants that only have one cotyledon in its seed. What's a cotyledon, you ask? Let's refresh your memory…a **cotyledon** is a leaf of the embryo of a seed plant. Like a corn plant.

Monocots have two distinct characteristics:

1. Monocot leaves have parallel veins

2. Monocots usually have a fibrous root system.

What are

Dicots are nt.

Dicots hav

1. Dicot l

2. Dicots

So monocots and dicots are different in their types of roots and types of leaves.

Lesson Checkpoint:

What are two differences between a monocot and a dicot?