**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3.3
Learning Target:**

Review:

Plant species evolved from \_\_\_\_\_\_\_\_\_like ancestors.

Mosses are nonvascular plants that reproduce with \_\_\_\_\_\_\_\_\_\_\_\_.

Ferns are \_\_\_\_\_\_\_\_\_\_\_\_ that reproduce with spores.

**Seeds are an important adaptation.**

**Spores are one adaptation that make it possible for plants to reproduce on land. Seeds are another. A seed is a young \_\_\_\_\_\_\_\_\_\_\_\_ that is enclosed in a protective coating. Within the coating are enough \_\_\_\_\_\_\_\_\_\_ to enable the plant to grow. Seeds and spores can both withstand harsh conditions. Seeds have several survival advantages that spores don’t. Seeds have \_\_\_\_\_\_\_\_\_\_\_that are the immature form of an organism that has the potential to grow and develop. The seed \_\_\_\_\_\_\_\_\_ protects the plant embryo until conditions are right for it to grow.**

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**Germination is the beginning of growth of a new plant from a spore or a seed. When a seed germinates it takes in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from its surroundings. As the embryo begins to grow, it uses the stored nutrients in the seed for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

Use the terms below to fill in the Venn diagram on seed and spores.

* Have protective coating
* Do not contain supply of nutrients
* Contain parent plants’ genetic material
* Have multicellular embryo inside
* Made up of a single cell
* Can survive dry, harsh conditions
* Contain supply of nutrients



SPORE

SEED

Group Members\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Germination Lab

List 5 ways in which plants are used.

1.
2.
3.
4.
5.
6. Label the parts of the seed below.



1. Define the word germination:

Procedure:

The purpose of this lesson is to help you understand the importance of sunlight, water, warmth, and soil for the proper germination of seeds.

Your teacher will provide you with 1 lima bean seeds. You will need to research and devise the ideal environment for your lima bean to grow in.

This experiment will continue for three weeks. You will make daily observations and determine what the best conditions are for germination and lima bean growth.