The Life Cycle of a Plant

An Early Learning Science Activity Pack
Hands-On Science Activities –
-Sunflower Seed Planting in a Green House:
**Materials:**
- Sunflower Seeds
- Soil
- Water
- 2 Clear plastic cups
- Tape
- Scissor or utility knife

**Fill one cup about half full of dirt. On the top of the other cup poke three holes with a scissor or knife.**

**Plant a few sunflower seeds in the soil. Have your child make a small hole by wiggling their finger in the dirt. Then, have them place one seed in each hole. Try placing a seed by the edge of the cup so you can see the roots growing.**

**Water the seeds until the soil is moist.**

**Place the cup that has holes in it on top of the cup that has soil in it. Place small pieces of tape on the joint of the cups to hold your green house together. You do not need to use much tape, as you will need to water your seeds regularly and will need to open the green house.**

**Place your green house in a sunny spot in your house. But not too sunny, or your little sprout will burn up!**

**As your plants are growing, looks at the roots and the sprouts and watch how they change day after day. Make sure to keep the soil moist, and not drenched!**

**Once your sunflower is established, you can transfer it outside to a garden, or into a bigger pot.**

Happy Growing!
Hands-On Science Activities – 
-Bean Seed Dissection-

**Materials:**
- Bean Seeds
- Cup of water
- Magnifying glass (optional)
- Plastic or butter knife

**Soak a few beans (2-3 per child) in water for about 24 hours. I choose to use a big seed, like a lima bean, so it would be easier to see the insides. Rinse the beans and put fresh water in after 12 hours.

**After you have soaked the seed, have your child rub off the seed coat. It should come off fairly easily.

**Once the seed coat is off, use a knife to help break the seed open.

**Examine the inside of the seed with a magnifying glass or with the eyes. Try to locate the embryo, and see if any radicle (root) has started to grow.

Here is a little information about the parts of the bean:
Beans, like all seeds, contain three specific parts. The seed coat protects the seed and is the “shell” of the bean. The embryo is the tiny little piece of bean that breaks apart from the rest. This is what grows into the first sprout after planting. The cotyledon is the material that the seed uses to grow until it pulls nutrients from the sun, water, and soil after taking root and sprouting leaves. Without any one of these parts of the seed, a seed won’t grow.
Math Skills Activities –
-Plant Cycle Sequencing Cards – Have your child put the cards in the correct order. Have them explain as best they can the parts of the plant cycle. Help them as necessary. You may only use some cards if your child is young. For example – seed, sprout, plant with flower, dying plant that drops seeds. Try to get them to see the “cycle” by explaining it just keeps going over and over again. As plants die and drop seeds, new plants grow, and then they die and drop seeds… etc.

-Counting Seeds – You will need a good number of seeds and the activity page. Have your child count and place the correct number of seeds in each box.
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Language and Listening Science Activities –
-These are some of the books I recommend reading with this activity pack:
  Miss Maple’s Seeds by Eliza Wheeler
  As an Oak Tree Grows by G. Brian Karas
  The Tiny Seed by Eric Carle
  From Seed to Plant by Gail Gibbons
Of course, there are many, many wonderful books about seeds growing. Check out your local library for some great reads about seeds and plant life cycles. Be sure to grab fiction and non-fiction titles.

-These are a few great video clips that discuss the growing of seeds and the Plant Life Cycle:
  Seed Germination
  The Plant Life Cycle
  How Does a Seed Become a Plant?

-In this packet, I have included two levels of plant cycle charts. One has the basic stages in the plant cycle, and the other has a few extra, more specific stages in the plant cycle. Pick the one that best fits your learner. Go through the plant cycle with your child and discuss and describe what is happening at each stage. Refer to the definition cards if needed.

-Read through the definition cards with your child to help them better understand the plant cycle.
The Life Cycle of a Sunflower
The Life Cycle of a Sunflower

Start
Seeds

Dying plant that is dropping seeds

Seedling

Full grown plant

Sprout

Plant with a budding flower

Seeds

Start
The Life Cycle of a Sunflower

Start...
The Life Cycle of a Sunflower

Start

Seeds

Radicle

Seedling

Sprout

Young plant

Plant with a budding flower

Full grown plant

Dying plant that is dropping seeds

Dying plant that is dropping seeds
# The Life Cycle of a Sunflower

<table>
<thead>
<tr>
<th>Seeds</th>
<th>Radicle</th>
<th>Seedling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprout</td>
<td>Young Plant</td>
<td>Budding Flower</td>
</tr>
<tr>
<td>Full Grown Plant</td>
<td>Dying Plant</td>
<td>Sunflower</td>
</tr>
</tbody>
</table>
Seed Counting Activity

1  2  3  4

5  6  7

8  9  10
| **Seed:** The small, dry part of a plant that grows into a new plant when given light and water. |
| **Radicle:** The first part of the root to come out of the seed. It grows down into the soil. |
| **Seedling:** The first, small shoot of green that comes out of the ground, into the light. It still has the seed shell attached. |
| **Sprout:** Leaves start to form on the plant and the seed shell has fallen off. |
| **Young Plant:** Many leaves have grown on the plant, and it has grown tall, strong, and sturdy. |
| **Budding Flower:** A flower bud has formed on the plant. The plant roots are stretching down deep to find enough food and water for the flower to open and grow. |
| **Full Grown Plant:** The plant has grown big and the flower is fully opened. The plant is no longer growing once it becomes fully grown. |
| **Dying Plant:** The plant begins to wilt and dry out. Once the plant has dried out, the seeds will drop and the cycle will start all over again. |
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