

## Cloverbud Investigators: STEM for Every Season



# St. Patty's Growing Pup



March

### Background:

All living things have basic needs: shelter, water, light, food or energy, and air. Besides animals, what else is an example of a living thing? (Plants!) Today we are going to learn more about plants.

Have you ever wondered why we need plants? What do they give us? How do they grow? Plants are living things and need special care just like animals and humans. Plants need: shelter, light, water and food to survive. They need shelter or a suitable environment to grow properly. For example, if you take an indoor plant (houseplant) outside in the winter it will die because it's too cold, the houseplant needs the shelter of the indoors to live. Plants also need light from the sun to grow, without light they can't make their food. Plants use a process called photosynthesis to make their own food. Water is also needed to keep the plant alive. When the plant has sunlight, water and a gas called carbon dioxide (which is found in the air), it can make food, and this process is called photosynthesis.

So how does photosynthesis work? It all starts with the roots of the plant in the moist soil. The roots take water from the soil and travels up the stem to the leaves. The leaves of the plant absorb carbon dioxide from the air. Then the water and carbon dioxide mix within the plant with the help of energy from the sunlight. This mixture turns into sugar called glucose, which is the food for plants. This glucose is what gives the plant the energy to grow.

Now that we know how plants grow, we can learn why we humans need them and what they give us. Plants need animals, just like animals need plants. Animals breathe out carbon dioxide and breathe in oxygen. Plants need the carbon dioxide we breathe out to grow and in return the plants release oxygen into the air that we need to breathe.

In this investigation, we are going to use the things that we learned about plants to care for our very own puppy plant while we celebrate St. Patrick's Day!



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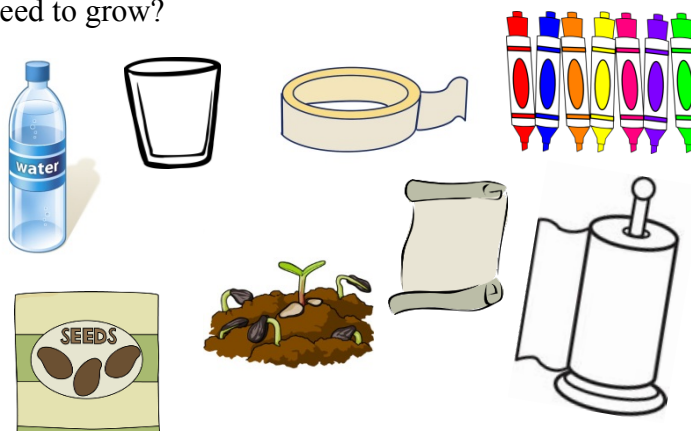
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**March's Mystery:** What do living things need to grow?

### ***Supplies:***

- ♣ Soil
- ♣ Clear Plastic Cup
- ♣ Rye Grass Seeds
- ♣ Water
- ♣ Paper Towels
- ♣ Crayons or Markers
- ♣ Puppy Coloring Sheet
- ♣ Tape



**Science Behind St. Patty's Growing Pup:** Although this puppy is just made of paper, when we are all done he will grow, hair that is! His hair is really going to be rye grass seed. Using the science we have learned about plants, how can we help your puppy grow its hair? Remember what plants needs to survive? (shelter, sunlight, water, and air, so they can make food using photosynthesis). You as little investigators, will need to put all the pieces together to grow your puppy's hair. The rye grass will need to find a safe place to live where it can receive lots of sunlight. Also, don't forget to water your puppy when the soil becomes a little dry. If taken care of correctly, it won't be long and you will be able to give your puppy a "haircut."

### **What to Do:**

**Step 1:** Color your paper puppy, then cut your puppy out and set it off to the side.

**Step 2:** Fill your cup up with dirt to the top line.

**Step 3:** With help, sprinkle rye grass seed on top.

**Step 4:** Tape your puppy onto the cup (Optional-laminate pup before taping on cup.)

**Step 5:** Using a small measuring cup, water rye grass.

**Step 6:** Take home your St. Patrick's Day puppy and place it in a sunny spot, like a window sill.

### **Go Over Findings:**

What do living things need to grow? (Answers are: food, water, sunlight, shelter).

How do plants eat? (Photosynthesis, making their own food)

What do plants give us? Do plants give us anything in return? (They give us oxygen, shade, food, medicines, and much more.)

Can you think of a career that involves growing plants?



**Investigate, Create, & Take: Investigators can take with them:**

- ✓ Pup in a cup

**Sources:**

Easy Science for Kids, “Photosynthesis: How Plants Make Food and Energy”,  
<http://easyscienceforkids.com/all-about-photosynthesis/>

**Additional Links:**

Coloring Pages & Worksheets, Animal Jr., Dog Color Sheet: <http://www.animaljr.com/st-patricks-day-printables-lucky-animal-coloring-pages/st-patricks-coloring-3/>

Make Me Genius, “Needs of Living Things Animation Kindergarten Preschoolers Kids”,  
<https://www.youtube.com/watch?v=7oYTnFNvqO0>

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