

a voice
for the natural
landscaping
movement



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Celebrating natives
plant and natural
landscapes
since 1979.

Wild About Beans!

Next Generation

**A fun experiment for kids. And if you're not a kid
it's OK – you can try it too.**



By Barbara Bray – Oakland (MI) Chapter

Seeds are little packages of life. They have everything they need to make a new plant – just add warmth, water, soil, and sunlight. In the following project, we are going to explore how a seed transforms itself into a new plant.



Materials Needed

5 pinto bean or green bean seeds
1 clear plastic cup
2 paper towels
Water

Step 1

Soak the beans for 24 hours in water. This will help them to start growing faster.

Step 2

Fold a paper towel in half or thirds to fit your plastic cup. Use it to line the inside of the cup in such a way that it doesn't stick out at the top. Crumple up another towel and place in in the center to hold the folded towel firmly in place against the sides.



Step 3

Moisten the towels evenly with water. Pour out any excess water that collects at the bottom of the cup. Towels should be moist, not dripping wet.

Step 4

Remove the seeds that were soaking overnight. Throw away any seeds that have broken apart. Place the remaining seeds between the paper towel lining and the inside of the cup.

Step 5

Place the cup in a sunny location. Check the cup every day, and add water as necessary to keep the paper towels moist. How long does it take for your beans to sprout?



Bean Sprout Science

Like all seeds, the beans used in this project contain three parts: a seed coat, an embryo, and food storage tissue. The seed coat, or outer hard covering, protects the baby plant (embryo) inside from freezing

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and drying out. In Step 1 we soaked the beans to soften the seed coat so that the bean could start absorbing water for growth.

The embryo started to grow, using stored energy. Small roots developed and a shoot rose up toward the sunlight. The bean was able to absorb water from its environment – in this case the moist paper towels in the cup.

The sprout continued to grow. Above the cotyledons (food storage structures which feed the embryo), the first true leaves emerged. Through the process of photosynthesis, the bean will begin to make its own “food.” Energy from the sun, and carbon dioxide from the air are absorbed through the leaves and combined with water



to make sugars and other carbohydrates. Now the plant can grow on its own!

Try out these ideas for even more fun:

Will beans germinate in milk? How about in your refrigerator? What happens if your paper towels are dripping wet?

Send your answers and ideas to:

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Additional Information:

Cynthia Overbeck. *How Seeds Travel*. Lerner Publications Company: Minneapolis. 1982