

FIND THE HIDDEN BEAN BABIES

Did you know that there is magic inside a bean? Inside each and every one is a potential “bean baby” plant just waiting for the right conditions to start growing. Beans are seeds, and seeds grow plants. Let’s take a peek inside!

Gather up these supplies to get started:

- A handful of dried beans (any kind will work: black, lima, navy, pinto, red, white, etc.)
- Bowl
- Water
- Magnifying glass
- Paper
- Pencils, markers, or crayons

Set aside a few beans for later comparison. You can store them in a plastic bag or a container with a lid. Pour the remaining beans into your bowl and cover with water, then set the bowl aside and let the beans soak for 12-24 hours.

Take the beans out of the water and compare them to the dried beans you set aside and didn’t soak. Use your magnifying glass to look closely at them. How are the soaked and dried beans different? How are they still alike?

Carefully remove the softened coating of a soaked bean, then gently break the uncovered bean open in half lengthwise to see the hidden bean babies. Examine the shapes, colors, and different structures inside the bean using your magnifying glass. If you soaked different types of beans, compare what’s inside each type. Sketch what you see.

Most of what is inside the bean is the **cotyledon**, or seed leaf. Each bean is actually a seed, and every bean seed contains two cotyledons that separate when you split them in half. When a seed sprouts, those cotyledons will turn green and look like leaves (but they aren’t true leaves). These will supply energy to the developing bean baby during the early stages of its growth.

If you’d like for some of those bean babies to grow into bean plants, put a few of the soaked (but unpeeled) beans on a damp paper towel and place inside a sealed plastic bag, then tape the bag to a warm, sunny window. Keep an eye on the bags for the next day or two and watch for sprouting.

Once the beans sprout, open the bag and gently remove the paper towel with the bean babies. Compare the shapes and structures of the sprouts to those you saw inside the soaked beans that you peeled. What pops out first from the sprouting bean? Can you tell the difference between the cotyledon and the true leaves?

Plant the sprouted bean babies in a container filled with potting soil or in a sunny spot in your yard and watch it grow into a mature bean plant. If you're lucky and take good care of it, then that bean baby just might blossom and produce a few bean pods for you!

Examine the insides of other seeds that you find in your kitchen. Corn, wheat, peas, and nuts are all seeds. Do they look like beans inside? Corn and wheat don't split into halves like beans do. They are plants called **monocots** and have only one small cotyledon inside. Peas, beans, and nuts are all **dicots** and have two cotyledons.

Don't forget that those beans aren't just seeds – they're very tasty to eat once you cook them. You'll find a few recipes, and lots more information, in the links below.

ADDITIONAL RESOURCES:

<https://www.superhealthykids.com/recipes/4-meals-1-pot-beans/>

<https://food52.com/blog/15595-10-recipes-that-prove-dried-beans-are-worth-it>

<https://kidsgardening.org/lesson-plans-journey-to-the-center-of-a-seed/>

<https://littlebinsforlittlehands.com/easy-seed-experiments-kids/>