

Hands-On Activity to Do on Earth: Keep a Seed Journal

Materials:

- o Clear plastic jar (like a peanut butter jar) from the recycling bin
- o 2–4 paper towels
- o 1 piece of dark paper to create a light shield for the clear jar
- o Tape to make the light shield from the dark paper
- o Water
- o 2–4 seeds

Possible Seeds to Use:

- Flower seeds from dried seed heads
- Leafy green seeds from a gardening seed packet
- Seeds from the spice cabinet at home, such as mustard, coriander, and caraway seeds
- Grass seeds
- Dried beans and lentils

Materials for Your Seed Journal

- o Pencil
- o Colored pencils, crayons, or colored markers
- o Paper or notebook to make seed journal
- o Ruler or measuring tape
- o Calendar, for reference

Directions:

1. Get a clean, clear jar (you can also use a clear cup).
2. Moisten paper towels with water. Put the wet paper towels in the jar, with the towels pressing up against the sides of the container.

- Put 2–4 seeds in the jar, one at a time. Put the seeds between the wet paper towels and the plastic, so they are getting moisture, but you can see them through the side of the jar.

Place the seeds about $\frac{1}{2}$ way down the jar.

Space the seeds so they are on opposite sides of the jar from one another.

If there are not enough paper towels to keep your seeds stuck to the side of the jar, you can either add more wet paper towels, or find something to take up space in the center of the jar. It's important to have the seeds held in place against the side of the jar by the wet paper towels.

- Make the light shield for the outside of the jar. Seeds sprout best in the warm, dark, and moist jar. Use a piece of dark construction paper, newspaper, etc., and curve it around the jar. Tape it to itself, so it makes a loose removable ring. You will be lifting the cover off daily to see inside.
- Put your jar in a safe space near a window that gets sun. Be sure to keep it away from pets, babies, and edges where it can fall.
- Check on your seed every day. Take the light shield off and look at what's happening.
- Check the moisture level. Make sure that the paper towels are moist, but that the seeds are not fully submerged in water.
- Write and draw about what you see each day in your seed journal.
- Put the date when your plant has sprouted its first leaves. Be sure to draw your plant on this day.
- When your plant has sprouted its first leaves, you don't need to use the light shield anymore. You can set that aside to reuse it to grow more seeds or repurpose it for another project.
- When one of your plants has sprouted 3–4 more leaves after that, these are called true leaves. Now, it's time to transfer your plant to soil. Be very gentle. If you're planting in an outdoor garden, dig a hole deep enough to cover it to the base of true leaves. Gently cover the base with soil. Then water it well. Check on your plant in 24 hours, and give it more water.



12. You can plant your sprouted seed in a container instead of planting outdoors. Make sure your container has holes in the bottom to drain water. Dig a hole in the soil deep enough to cover the plant to just below the true leaves. Gently cover the base with soil, then give a generous amount of water. Check on your plant in 24 hours.
13. Water your plant when the top of the soil is dry when you touch. Plants are sensitive. They need just the right amount of water—not too much and not too little.

Make Your Seed Journal

- Use a notebook that you have already or gather some pieces of paper. Put them together to be your seed journal.
- Be sure to write the date and time whenever you add something to your journal. Write down the location of your plant. Is it near the window? Is it getting a lot of sun? Is it outdoors? What is the temperature?
- Observe your seeds and plants every day.
- Write or draw about your seeds at least two times each week. You can do more, that's great!
- Observe your seeds. Write about what you see. Draw your seeds and describe how they've changed.
- Measure your seeds. Measure roots, measure shoots, measure leaves. Write down all of this information. This is data! You may choose to measure in centimeters or in inches. Whichever you choose, just stick to it. Be sure to label your measurements so that you will know what you mean when you look at your journal a month from now.
- Plan to observe your plants and keep the journal for 6–8 weeks.
- Congratulations! You've grown plants, AND you've done the kind of work that scientists do!
- If you get the chance to meet Heather Hava, you can tell her how you kept a seed journal. She'll be so excited!