

Science Experiments for Kids to Explore the Power of the Sun

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Sunday, March 8th marks the beginning of Daylight Savings Time in the US, and most locations around the country will move clocks forward by an hour to extend daytime into the early evening hours. Even if you're located in one of the few places that don't observe the time change, the days will continue to grow longer as we approach spring and summer. With more sunlight each day, there's no better time for kids to explore the role the sun has in our lives! Watch [this lovely video](#) to understand how sunlight reaches the Earth!



The sun is incredibly important to life on Earth; not only does it sustain a livable temperature, but it also fuels plant life, which maintains the oxygen-rich atmosphere necessary for our survival. Additionally, plants make up a large part of our diets, keeping us nourished and healthy. Without the sun, life on Earth would simply not be possible!

Learning about all the ways the sun supports life is an important part of the elementary science curriculum. It's also an exciting topic of hands-on experiments for kids. Let's perform some extraordinary science experiments that demonstrates the power of the sun!

Five Sunny Science Experiments for Kids

Experiment 1: Does it grow? Sunlight vs. Darkness Plant Growth Test

This experiment allows learners to study how sunlight affects plant growth by comparing how the same seedlings respond to varied amounts of sunlight.



Materials:

- 3 plastic cups or small potting containers
- Potting soil
- Fast growing seeds, such as radish or lima beans
- Water
- Masking tape and marker
- Notebook and pencil for recording data

What to do:

First, set up the experiment by adding potting soil and planting 2-3 seeds in each of the cups. Label the first cup “full sun”, the second “partial sun/shade”, and the third “no sun”. Water each cup evenly so they are moist but not soaked. Be sure that each pot contains the same amount of soil.

Next, place the first cup labeled “full sun” on a windowsill that gets plenty of sunlight for most of the day. Set it on a sill that faces the east in the morning and move it to a west-facing sill later in the day. For the second cup, find a sill that gets sunlight for only part of the day. For instance, place it on an east-facing sill, but don’t move it in the afternoon. Lastly, place the third cup in a place that doesn’t get any sun. Set it in a closet or a darkened room.

Water each of the cups on the same schedule so the only variable is sunlight. For the next two weeks, observe plant growth and record the results in a notebook. Did any of the seeds fail to sprout? Which cup grew the most? Do the seedlings look different from one other? Record the data to form conclusions about how the sun affected each of the seeds.

If you want to explore the role of sunlight in plant’s life in more detail, check out our [science lesson about Plants and Sunlight!](#)

[Click on the image below to open the lesson in Interactive Classroom!](#)

Subjects

Grade 1

SCIENCE

START CLASSROOM

Room time: 13:00 min

1st 3:00 min

2nd 3:00 min

3rd 3:00 min

4th 4:00 min

5th 0:00

Worksheet

Worksheet

Worksheet

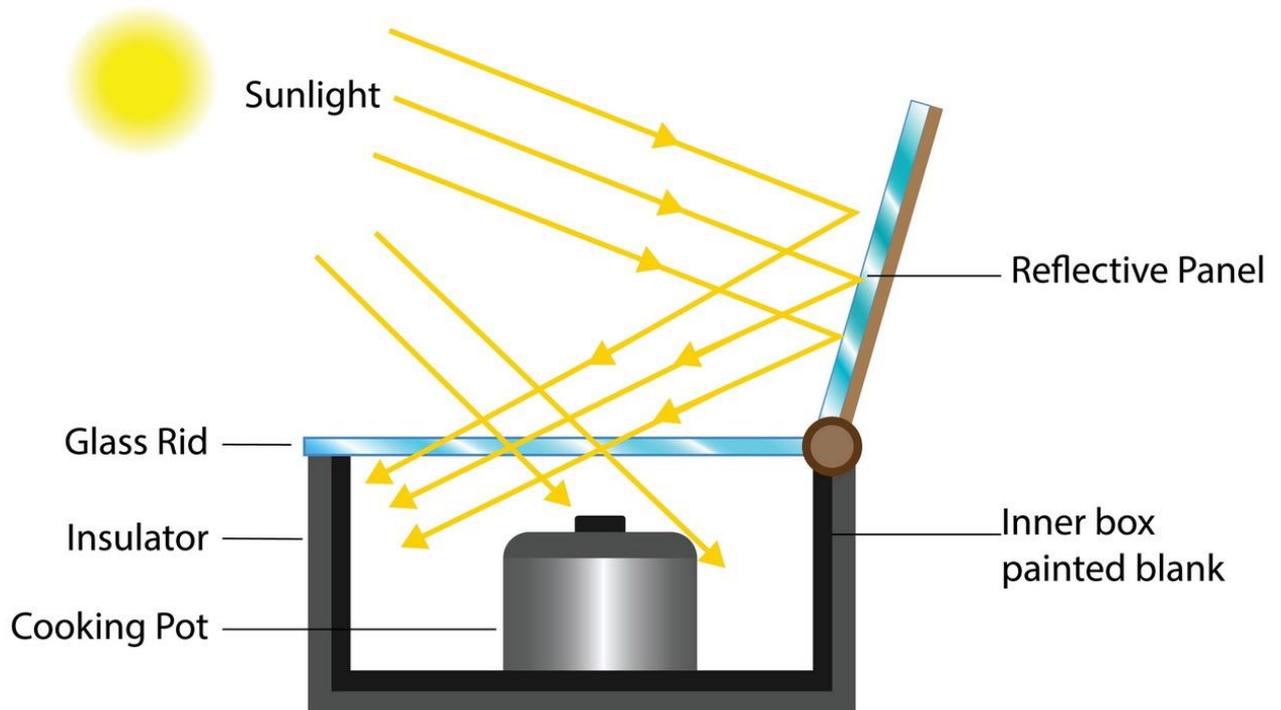
Quiz

Continue

KIDS

Experiment 2: Make Some S'mores with a DIY Solar Oven

We all know that the sun is hot, but did you know that you can use the sun's heat to cook a tasty snack? Create a solar oven to whip up some delicious s'mores!



Materials:

- A clean, empty pizza box
- Aluminum foil
- Plastic wrap
- Black construction paper
- Packing or duct tape
- A ruler, pencil, and scissors or crafting knife
- S'mores ingredients

What to do:

To get started, take the pizza box and close the lid. On the top, draw a large square, leaving only an inch around the edges. Using scissors or a crafting knife, cut along three sides of the square to make a flap. Bend the flap back and cover the underside with aluminum foil. Make sure that the foil is smooth and flat before taping it down.

Next, open the pizza box and line the bottom with a sheet of black construction paper. Then assemble your s'mores and place on top. Cover the opening tightly with plastic wrap to trap heat inside the box.



Finally, take the box outside and place it in direct sunlight. Prop the flap so sunlight hits the aluminum foil and reflects the light into the box. If needed, prop the flap using a ruler or pencil. Leave the box in full sunlight and check it after 30 minutes. When the marshmallow and chocolate look melted, remove your s'mores and enjoy!

Experiment 3: Build a Homemade Sun Dial

Before clocks, people used the sun to tell time. This experiment will show learners how the sun can still be used to check the time!

Materials:

- Paper plate
- Pencil with eraser
- A watch or phone clock
- A compass or a compass app on a smart phone
- Marker

What to do:

Just before noon, take your supplies and head outdoors to find a sunny spot. First, push the pencil, eraser side down, into the center of the paper plate and set the plate down in the grass. Label the top of the plate with the number 12 to indicate 12:00. If you are in the northern hemisphere, use the compass app on a phone to point the 12 toward true north. If you are in the southern hemisphere, point the “12” south.



Because the pencil is sticking up out of the plate vertically, the sun will cast a shadow of it onto the plate, and it will look a lot like the hand of a clock. Look at where the shadow is on the paper plate and imagine that it is a clock. When the hour strikes noon, the shadow will point towards 12. Leave the plate in the sun all afternoon. Each hour, go back outside to see where the shadow is located on the plate. Write the hour number on the plate and when the sun goes down, compare it to an analog clock!

Experiment 4: Make a Rainbow Using Water and a Mirror

Don't wait for a rainy day; this experiment shows how learners can make their own rainbows using water, a mirror, and the sun!



Materials:

- Shallow baking dish
- Water
- Small mirror
- Sunlight

What to do:

Move near a window where there are rays of sunlight shining in. Fill the container with water so the mirror can be submerged. In the water, angle the mirror towards the sunlight, and adjust the angle until you can see a rainbow on the wall or ceiling. Move your hand a little to make waves in the water to make the rainbow “dance”!

Learn more facts about the sun in Kids Academy's [science lesson](#)!

Click on any activity below to start learning.

1st

🕒 4:00 min



Our Sun

Video

2nd

🕒 3:00 min

Observing the Sun
Worksheet

Worksheet

3rd

🕒 3:00 min

Facts About the Sun
Worksheet

Worksheet

4th

🕒 3:00 min

Our Solar System:
Revolution Printable

Worksheet

As we approach spring, take full advantage of the increasing daylight hours to teach your little learner more about the sun's role in our lives. Try the experiments above and watch as kids are in awe of the ways we can harness its power to make things grow, tell time, and understand light.