



Smithsonian

Powered by the Sun



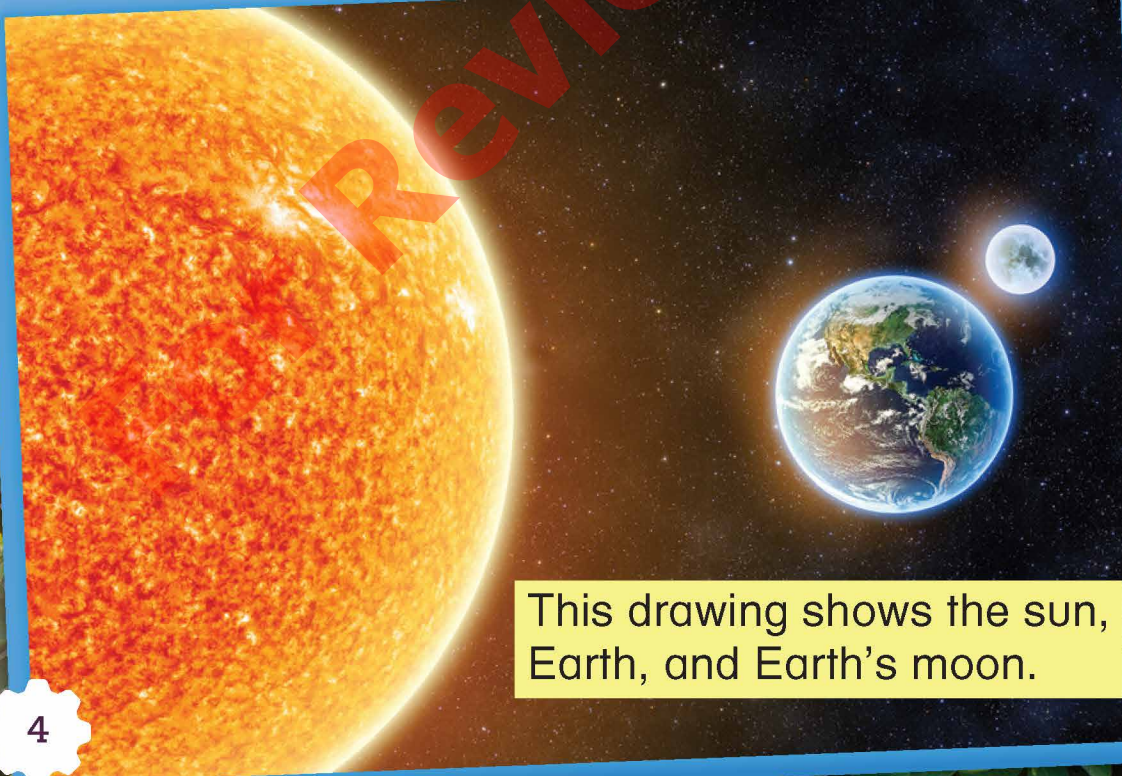
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Let the Sun Shine In

Life on Earth exists because of the sun. Living things get energy from it. We get heat and light. We cannot live without the sun.



This drawing shows the sun, Earth, and Earth's moon.



The sun also helps people form their best ideas. People study the sun. They test its energy. They watch how living things act in sunlight. Then, they use what they learn to create new things.



The Solar Wall shows how the sun's surface looks.

This scientist checks that these plants get enough sunlight.



Engineering & Arts

In the Bag

This backpack looks like a normal bag. But it has a **solar panel** in it. The panel gets power from the sun. The power can be used to charge a phone.



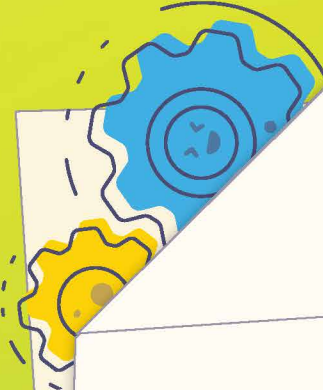
Innovations

Many things have come from studying the sun. People call these things *innovations*. They are new ways of doing things. They make life easier.



This boat is powered by the sun.





STEAM CHALLENGE

The Problem

Your art class is stuck with broken crayon pieces. Your job is to make new crayons by melting and mixing the old bits. You must use the sun to make it happen. What will you do?

The Goals

- Create a device that will use the sun to melt crayons together.
- Create an area in your device that can hold the crayons.
- Create your device with any supplies. A box, aluminum foil, and plastic wrap might be helpful.





Research and Brainstorm

What is the best way to melt crayons in the sun? How long does it take for crayons to melt?



Design and Build

Draw your plan. How will it work? What materials will you use? Build your device. Be careful not to burn yourself!



Test and Improve

Remove the paper from the crayons. Place the crayons in your device. Place your device outside. Do the crayons melt and blend? Can you make it better? Try again.



Reflect and Share

How many pieces melted? Do some colors melt faster than other colors? Do the new crayon blends work well?