

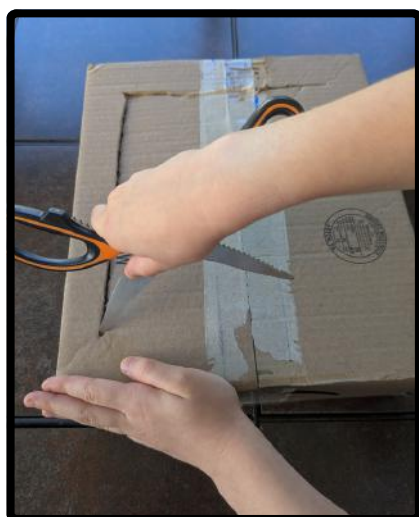


Solar S'more Oven

Your family can create a solar s'more oven to enjoy a tasty treat with a couple of materials and some sunshine in the sky! This STEM (Science, Technology, Engineering, and Mathematics) activity is fun for the whole family. While building your oven, you can discuss the elements needed for solar energy, make observations in your community, and get creative and crafty!

Materials:

- Shallow cardboard box (clean)
- Several sheets of black construction paper
- Stick, wooden dowel rod, or ruler
- Scissors
- Aluminum foil
- Tape
- Plastic wrap
- Optional items: pencil, marker, newspaper
- Marshmallows
- Chocolate
- Graham crackers



Step 1: Making the door

- Cut a flap into the top of the box that mimics the opening with 3 sides cut and the back acting as a hinge. Leave about a 1-inch edging for the lid of the box to still close while the flap lifts.
- Cut a piece of aluminum foil the size of the flap and tape it to the underside.
- Pro tip! Keep the foil as wrinkle-free as possible to help direct the sun's energy!



Step 2: Making the oven

- Tape the sheets of black construction paper to the inside of the box. The paper should line the entire bottom of the box to absorb the energy from the sun and help to heat the oven.
- Place the marshmallows into the oven! It is almost time to cook!
- Pro tip! Roll newspapers into tubes and place them inside the box around the sides to help insulate the oven.



Step 3: Making the oven door

- Cut a piece of plastic wrap a little larger than the flap opening. Tape one piece of plastic wrap tightly to the underside of the lid, covering the flap opening.



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Step 4: Using your oven

- Place your oven in a sunny location during midday, usually 11:00 am to 2:00 pm, when the sun is the strongest!
- Use your ruler, stick or dowel rod to help prop open the flap for the aluminum foil on the lid to catch the sun!

Extensions to discuss and do while you create your solar oven:

- What do you think is the purpose of the aluminum foil?
- What do you think is the purpose of the black paper at the bottom of the solar oven?
- Does anyone have solar panels in your community? How do you think they are helping power their home and energy supply?
- Make a prediction: How long do you think it will take for your marshmallow to melt?

Reach Cyber Charter School values each student's creativity, ability, and passion for learning. Our integrated STEM and Career Readiness curriculum allows students to explore their interests and prepare for the future. These experiences start in elementary school with STEM courses and career readiness kits. Visit Reach Cyber Charter School's information session to learn more about our programming! Dates, times, and registration can be found at <https://reachcyber.org/reach-resources/information-sessions>. We cannot wait to see your students reach their potential!



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