DIY SOLAR OVEN
Harness the sun's energy to heat a tasty snack!

Materials
- Pizza box (delivery)
- Black construction paper
- Pen or Pencil
- Tape
- Box cutter or scissors
- Aluminum Foil
- Plastic Wrap
- Newspaper
- Small cake or pie pan
- Ruler or stick
- Snack to heat (S'mores, nachos, etc.)

Procedure
- Place the construction paper in the middle of the lid of your pizza box and trace it.
- Ask an adult to cut along two long edges and one of the short edges of the rectangle you just traced to create a flap. Remember to leave one short edge uncut!
- Fold the flap up and cover the side that faces the inside of the pizza box with aluminum foil. Use tape to secure the aluminum foil in place.
- Open the pizza box and tape your construction paper to the bottom of the box.
- Roll or bunch the newspaper and place it around the inside edges of the box, where it isn’t covered by the black paper. Use the tape to secure it in place.
- Tape a piece of plastic wrap to the inside of the lid (not the flap) so that it covers the hole made by the flap. Pull it taut! Close the lid, lift the flap, and tape another piece of plastic wrap on the top side of the hole. You should end up with a piece of plastic wrap on both sides of the hole. Tape around all the edges of each piece to create a seal.
- On a sunny day, assemble your snack and place it in your baking pan. Carry your snack and box outside, place your snack inside the box, and close the lid. Prop the flap open with a ruler, and position it so that the foil is facing the sun and reflecting the sunlight onto your treat.
- Wait about 30-60 minutes for your snack to cook! It may take longer depending on how sunny the day is. Be patient!

Results
You used solar energy to heat a tasty treat!

Why?
The aluminum foil reflects the sunlight (energy) down into the box, where it was absorbed by the black construction paper. The layers of plastic wrap (with air trapped in between) and newspaper helps trap the heat inside by creating a layer between the hot inside and cooler outside of the box. Our reflecting, absorbing, and insulating materials work together to trap the heat from the sun inside the box, working like a tiny greenhouse to heat the food!