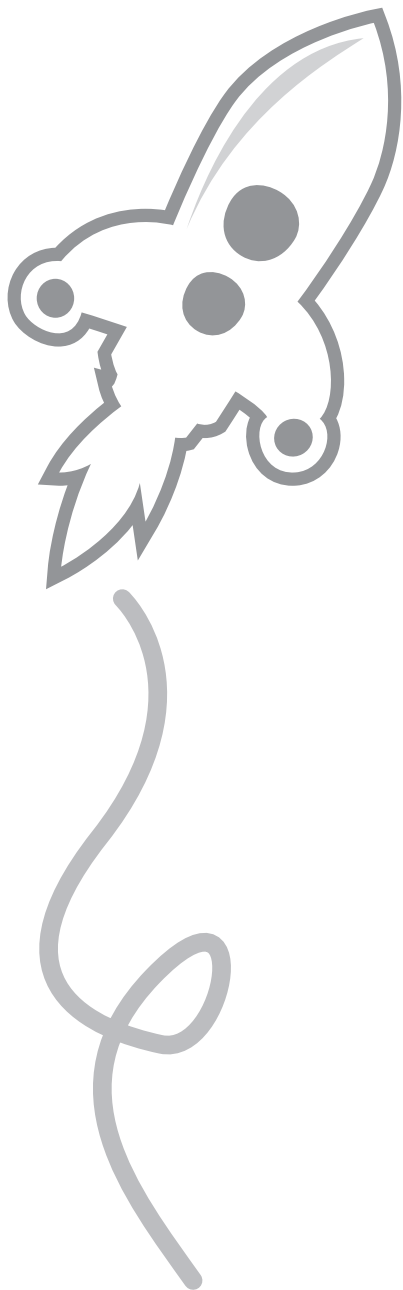




NOT JUST ANOTHER BORING PIZZA NIGHT!

Take the Science World approach to a family evening at home with Life on Earth ice cream sundaes, Rice Krispies Robots and a whole lot of high-rocketing learning. In this package, you'll find everything you need to know about creating a Rocket Science adventure for your family.

This package includes the following:

- » **Movie suggestion:** Wall-E
- » **Shopping List:** Everything you need to shop for your family science night!
- » **Recipes:** Life on Earth ice cream sundaes and Rice Krispies Robots
- » **Try this at Home Science Activities:** Stomp Rockets, Balloon Hovercraft, Mini Pop Rocket

SHOPPING LIST

Recipes

- » Ice cream
- » Cream-filled sandwich cookies
e.g. Oreo
- » Green popsicle sticks or straws
- » 1 cup white chocolate chips
- » Green food colouring
- » Re-sealable plastic bags
- » Wax paper
- » Butter or margarine
- » Miniature marshmallows
- » Vanilla extract
- » Kellogg's Rice Krispies or
other crisp rice cereal
- » A variety of candies (suggestions:
Smarties, liquorice, gumdrops,
chocolate chips, etc.)
- » Aluminum foil (optional)

Try This at Home Activities

- » 2 empty film canisters with tightly
snapping tops (e.g. Fuji film)
- » Effervescent antacid tablets (e.g.
Alka-Seltzer tablets)
- » Eye protection
- » 1 empty 2-Litre pop bottle
- » 1 metre flexible tubing (e.g. old
garden hose)
- » Duct tape
- » Scissors
- » Glue
- » 1 used CD
- » 1 large balloon

WHAT YOU NEED:

Makes 6 servings

- » Ice cream
- » Cream-filled sandwich cookies e.g. Oreo
- » 6 green popsicle sticks or straws
- » 240 ml (1 cup) of white chocolate chips
- » Green food colouring
- » 2 sandwich-size, re-sealable plastic bags
- » Wax paper

LIFE ON EARTH!

First, make chocolate leaves.

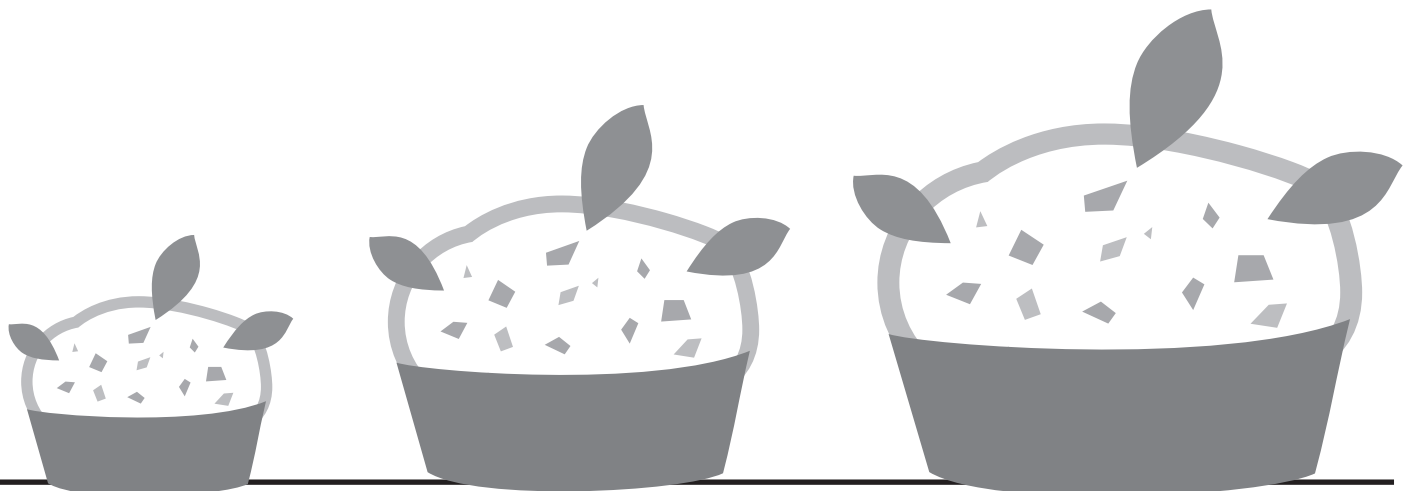
1. Set up a baking tray with a layer of wax paper on it and set aside.
2. Place white chocolate chips into the plastic bag. Leave the bag open. Microwave the chips for 10 seconds. Remove the bag and massage it to help blend any lumps. Be careful, the chocolate may be hot. Repeat this process until the wafers are completely melted.
3. Add a few drops of green food colouring to the melted wafers and blend it by massaging the bag. Be careful not to add too much food colouring, or the texture of the mixture may change. Remove all excess air from the bag and seal it. Push the mixture down to one corner and snip the very tip of one corner from the bag.
4. Place the leaf tracer (included in this package) beneath the wax paper. Using the bag like an icing bag, outline the leaf and then fill it in. Tap the sheet pan gently to flatten your leaf. Before it hardens, press the green popsicle stick or straw onto the leaf to make a stem. Add more chocolate on top of the stick to help it stay put. Place the leaves in the fridge to harden.

Now, make cookie and ice cream "soil".

1. Place cookies in a baggie. Use a rolling pin to crush them until they look like soil. Set aside.
2. Gather six cups or serving bowls. Scoop ice cream into each dish and flatten it down with a spoon.
3. Completely cover the ice cream with the Oreo crumbs, so it looks like soil. Store the bowls in the freezer until you're ready to serve them.

Finally, plant your life on Earth.

4. Once the chocolate leaves have hardened completely, peel them gently from the wax paper. Push their stems into the cookie crumbs and ice cream so it looks like plants coming out of the soil!



WHAT YOU NEED:

Makes approximately

18 squares

- » 45 ml (3tbsp) butter or margarine
- » 1 L (4 cups) of miniature marshmallows
- » 5 ml (1 tsp.) vanilla extract (*optional*)
- » 1.5 L (6 cups) of Rice Krispies or other crisp rice cereal
- » A variety of candies (e.g. Smarties, licorice, gum drops, chocolate chips, etc.)
- » Aluminum foil (*optional*)

Optional: Icing can help glue your robot together and attach its candy decorations. Use canned icing or melt chocolate chips. A plastic baggie with a corner snipped off makes a quick and easy icing bag.

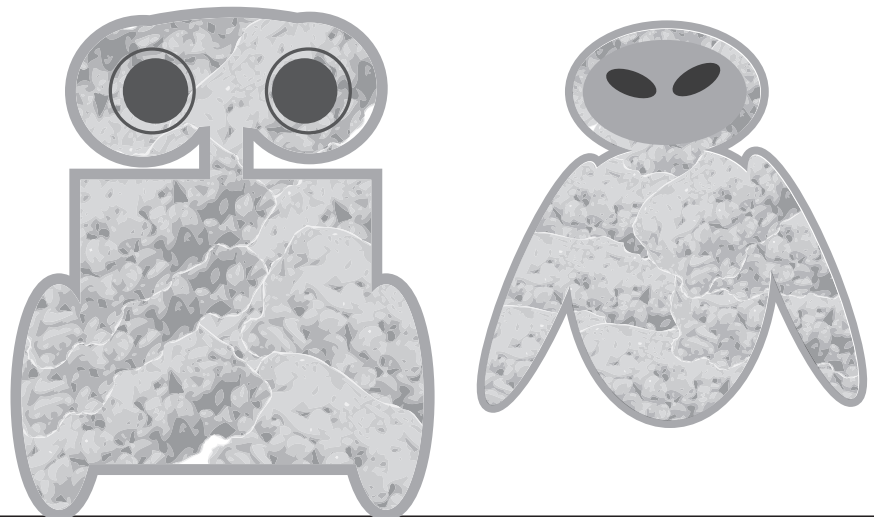
RICE KRISPIES ROBOTS

First, make the Rice Krispies squares!

1. Grease a rimmed cookie sheet.
2. Melt the butter or margarine over medium-low heat in a large saucepan.
3. Add marshmallows and stir until completely melted.
4. Remove from heat and stir in vanilla.
5. Pour in rice cereal and stir in until cereal is well coated with marshmallow mixture.
6. Using a spoon, pack the mixture into the cookie sheet and let it cool.

Now, create your robots!

1. Once the Rice Krispies mixture has cooled, have an adult cut it into a variety of shapes (rectangular strips, ovals, circles and triangles).
2. Build robots out of the shapes. You may want to use icing to glue your robots together.
3. Use candies to decorate them with hands, eyes, mouths, antennas, buttons — use your imagination! You could use aluminum foil to create metallic decorations on your robots. It may help to use icing to stick the decorations on.
4. Store your robots in the fridge until you're ready to eat them.
5. Enjoy! Careful—don't eat the aluminum foil.



Family Science Night: Rocket Science

TRY THIS AT HOME

WHAT YOU NEED:

- » rocket template
- » 1 2-Litre pop bottle
- » 1 metre of flexible hose (an old garden hose works well)
- » duct tape
- » scissors
- » glue

STOMP ROCKET

What to Do:

Build a rocket.

1. Cut out the rocket template.
2. Roll the rocket around the flexible tubing.
3. Glue the edge of the rocket to make the rocket body.
4. Slide the rocket body off the tubing.
5. Use duct tape to seal off one end of the rocket body and make a nose cone.
6. Cut out the fins and glue them to your rocket.
7. Your rocket is ready to soar!

Build a rocket launcher!

1. Remove the cap from the pop bottle.
2. Stick the hose into the opening of the bottle.
3. Use duct tape to attach the hose to the bottle opening. Make sure it is air tight.
4. Place your rocket on the end of the hose.
5. Stomp on the plastic bottle and watch your rocket soar!

What's Happening

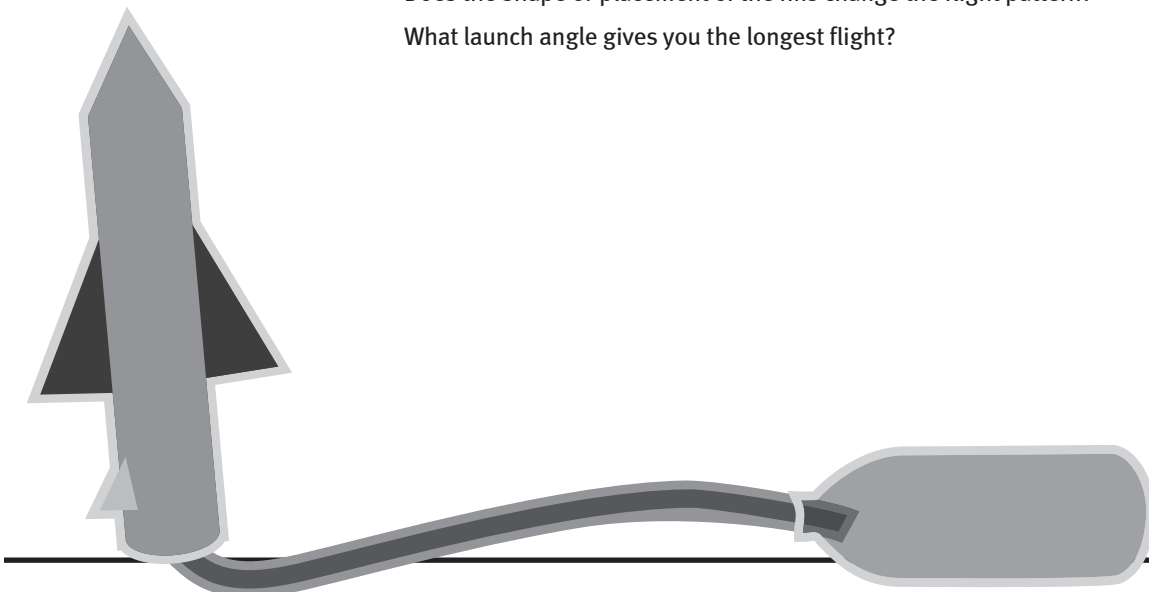
Air launches your rocket high into the air. When you stomp on the rocket launcher (bottle), air is pushed along the tubing all the way to the nose of your rocket. The force of the moving air is great enough to push your rocket off the end of your rocket launcher.

Now try this

What happens if you use heavier paper to construct your rocket?

Does the shape or placement of the fins change the flight pattern?

What launch angle gives you the longest flight?



WHAT YOU NEED:

- » 1 used CD
- » small hammer
- » 1 large balloon
- » duct tape
- » 1 used film canister
- » screwdriver
- » air pump

Hint: You can use a spool from thread or a lid from a sports drink in place of the film canister. You won't need to poke holes in these!

BALLOON HOVERCRAFT

What to Do:

1. Poke a small hole on the side and bottom of the film canister using the screwdriver and hammer.
2. Using duct tape, securely tape the canister to the labelled side of the CD.
3. Blow up a balloon and twist the end to keep the air in. Stretch the end over the film canister.
4. Place the hovercraft on a table and untwist the balloon.

What's Happening

When the air pushes out of the balloon, it goes through the film canister and out through the hole in the CD. The air lifts the entire CD off the surface of the table. The layer of air between the table and the CD greatly reduces the friction between the two surfaces so the CD hovercraft can glide easily.

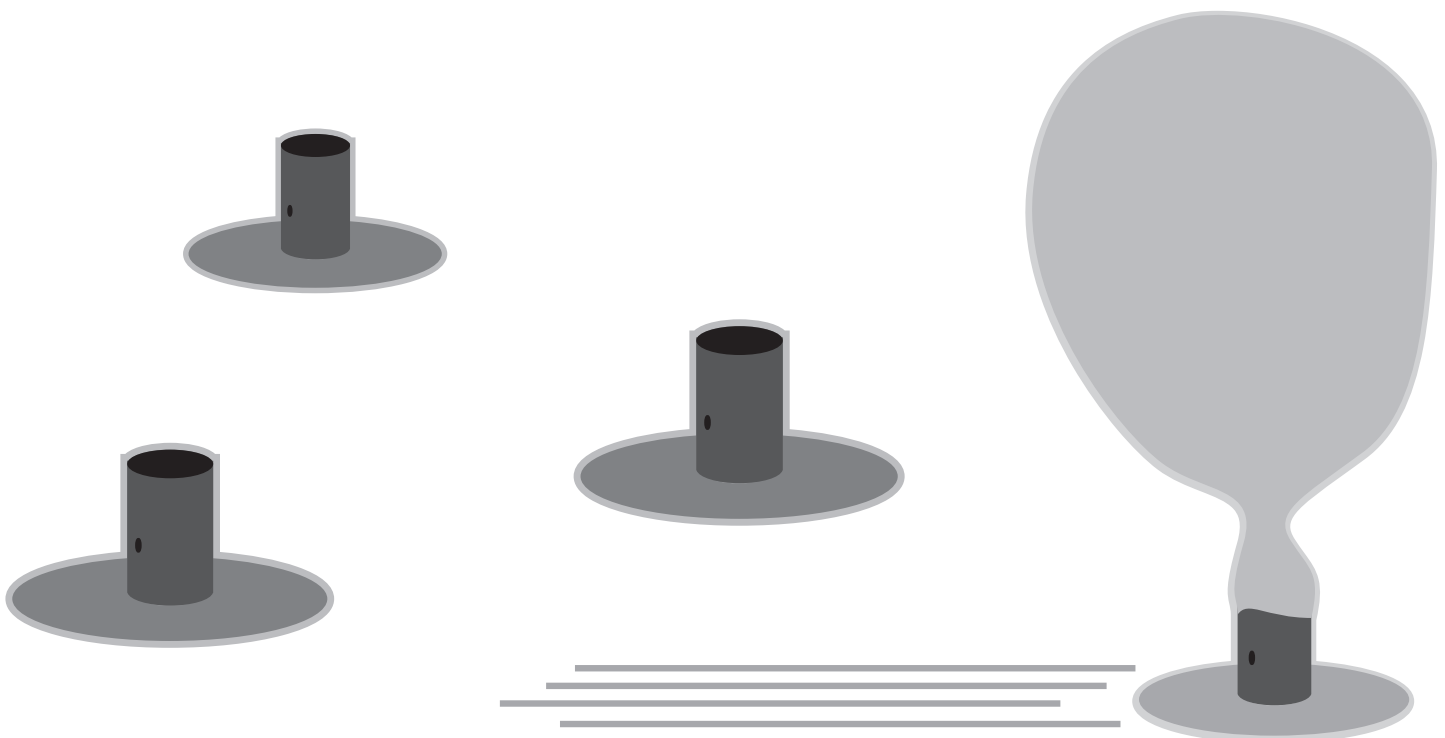
Air also flows out the hole on the side of the film canister. As the air pushes out of the hole, it pushes the hovercraft in the opposite direction.

Now try this

What happens if you poke another hole on the side of the canister?

What kind of surfaces does the hovercraft work best on?

How does your hovercraft change if you use different sizes or shapes of balloons?



WHAT YOU NEED:

- » empty film canister
- » effervescent antacid tablet (e.g. Alka-Seltzer)
- » eye protection
- » water

Hint: Make sure the lid of the film canister snaps on tightly. We get the best results using Fuji film canisters.

MINI POP ROCKET

What to Do:

1. For safety, go outside. This rocket will fly up very high and very quickly.
2. Don't forget to put on your eye protection!
3. Open the film canister, fill canister one-quarter full of water.
4. Get the film canister lid and half of an effervescent antacid tablet ready.

WARNING: the next steps must be done within 5 seconds!

5. Drop the half tablet into the canister
6. Snap on the lid tightly.
7. Place the rocket on a firm surface with the lid down.
8. STAND BACK! Watch it fly.

What's Happening

When the antacid mixes with water, a chemical reaction happens. The reaction makes carbon dioxide gas. The gas takes up a lot more space than the water and antacid did. It pushes against the lid of the canister until there is so much pressure that the lid pops off.

When the gas blows downwards out of the rocket, it pushes the rocket upwards.

Now try this

What happens if you change the amount of water into the canister?

What happens if you change the amount of antacid?

Make a rocket body from paper and tape it to the canister. Try different shapes and sizes or rockets to see how they fly?

