

How to Make Your ZOOMerang

You can print out your ZOOMerang and make it into a little booklet.

Here's how:

- Print all the ZOOMerang pages.
- Cut out each page along the dotted lines.
- Tape pages 1–6 together from end to end so that you have a long row.
- Tape pages A–F together to make a second long row.
- Lay one row face down on a table and put some glue on the back of the pages.
- Place the second row on top of the first row. The printed part of the second row should face you.
- Smooth out the glue with your hand.
- Let it dry and then fold your ZOOMerang where the pages join together.



What You Need

- scissors
- tape
- glue

Voilà!

Dear ZOOM,
Can you build a bridge
using only straws and
paper clips that spans
30 centimeters and
can support a sneaker
filled with marbles?
Dani S. of North
Potomac, MD



Zoe and Lynese started by putting one straw inside another to make one long straw. They made lots of these long straws and divided them into two bunches. Each bunch was held together with paper clips in the middle and at both ends. Lynese and Zoe laid the bunches between two tables to form a bridge.

They put marbles in the sneaker and tried to balance it on the bridge, but the bridge couldn't support the weight. They added more straws to make the bridge longer, so that more of it would be on the table. They also added more paper clips to keep the ends of the straws together and weigh them down. Then the bridge was able to hold a sneaker filled with 12 marbles.

What kind of Wacky Straw Bridge can you build? Can it hold even more weight? Send a drawing or videotape of your bridge to ZOOM, Box 350, Boston, MA 02134. Tell us how much weight it supported and what made it strong.

Wacky Straw Bridge



Human Knot

Get your friends to stand in a circle and hold hands with anyone except the people next to them, creating a human knot. Then untangle yourselves without releasing your hands.

sent in by Just H. of Jacksonville, AR

The Slug's Thanksgiving Song



For leaves and greens and nice damp places,
For flowers and roots and deep dark spaces.
For sticky slime that helps me go, even though
I am quite slow.
For hardened skin that helps me hide,
From birds and beasts and things outside.
For all this I am thankful.

sent in by Leanna B. of Belmont, MA

Cafe

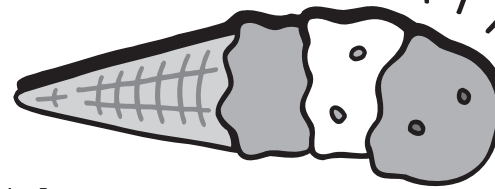


What You Need

- | large 2-pound, 7-ounce coffee can with a plastic lid
- | small 1-pound coffee can with a plastic lid
- | cup milk
- | cup whipping cream
- | 1/2 teaspoon vanilla
- | 1/2 cup sugar
- ice
- salt

Homemade Ice Cream

Forget that store-bought stuff. Here's the scoop on how you can make it yourself!



Put the empty coffee cans in the freezer overnight. The next day, **mix** the milk, cream, vanilla, and sugar together in the small coffee can.

Put the lid on and place it inside the large coffee can.

Pack ice into the large can around the small can. **Sprinkle** the ice with salt to keep everything really cold.

Put the lid on the large can and start rolling it. You may want to get a friend to help you **roll** it back and forth.

thanks to the Clark Atlanta University Saturday Academy in Atlanta, GA

It **takes** 30–40 minutes to make the ice cream, so be patient. Think of how **yummy** it will taste. **Replace** the ice when it starts to melt and open the small can every once in a while to **scrape** the mixture from the sides. When it looks like ice cream, it's ready.

What can you add to your homemade ice cream to make other tasty flavors?

Experiment and find out. And if you have a CafeZOOM recipe, send it to ZOOM, Box 350, Boston, MA

02134 or www.pbs.org/zoom.

ROCK NO ROLL

Joanna D. from New York, NY challenged ZOOM to build a structure using only **straws, paper, and tape** that would rock back and forth without rolling away when you blow on it through a straw. And it can't be attached to a table.

Keiko and Zoe tried a bunch of things. They rolled the paper into a cylinder and taped straws underneath, but the straws weighed the paper down and it didn't rock back and forth. They also tried making a cylinder out of just straws. In the end, they got it! **Here's a hint:** think of how a rocking chair works.

Send your designs to ZOOM and tell us how they worked. What other materials can you use to rock but not roll? If you have a ZOOMsci challenge for us, send it to ZOOM, Box 350, Boston, MA 02134 or www.pbs.org/zoom.

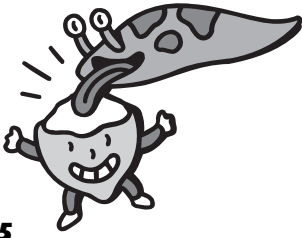



Toothpick Game

Can you figure out how to lay down 15 toothpicks, take away 6, and still have ten left?

sent in by Jared S.
of Washington, DC

My Name is:



5



Zoerang™



The Arthur
Vining Davis
Foundations



P I N G P O N G

What You Need

a wire hanger • a pair of nylon hose • aluminum foil

To make a paddle, **bend** a wire hanger into a diamond shape. **Cut** one leg from a pair of nylons and stretch it over the hanger.

Tie it at the bottom in a knot. **Cover** the handle with foil. **Make** your ball by crumpling some foil. Make another paddle and you're ready to **play** with a friend.

sent in by Emily W. of Medfield, MA

ga

Ready, Set,



A

Zoom
mes



BALL IN CUP

What You Need

aluminum foil • 1 paper cup • pencil • scissors • string

Use your pencil to **poke** a small hole through the bottom of the paper cup. **Put** a piece of 46-centimeter-long string through the hole and **tie** a knot inside the cup, to keep it from falling out. **Make** a ball by crumpling the aluminum foil around the end of the string. The ball should be able to fit inside the cup. Then try to **flip** the ball into the cup. You can also make the game harder or easier by changing the length of the string.
sent in by Luke of Cambridge Springs, PA

Make!

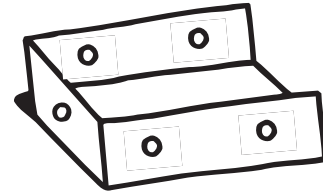
What great games have you and your friends made? Send them to ZOOM at Box 350, Boston, MA 02134 or www.pbs.org/zoom.

B

You may not be old enough to drive a car, but that doesn't mean you can't make a car. This one uses a balloon for an engine. How do you think it works?

What You Need

1 empty 1/2-gallon juice or milk carton
scissors
2-4 straws
4 same-size empty thread spools
4 straight pins
balloons

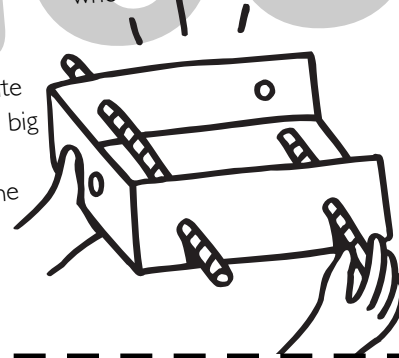


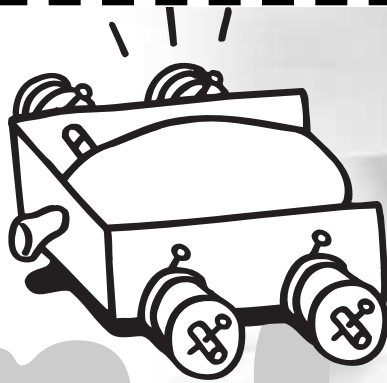
The Body

Wash out your **carton** and cut off the top. Then cut it in half the long way. One of the carton halves will be the body of your **car**. Cut a hole in the middle of the bottom of the carton (this is where the neck of the **balloon** will go later). Cut two holes on each of the long sides of the carton. The holes need to be exactly opposite each other. The holes should be big enough for the **straws** to fit through and close enough to the bottom for the **spools** (your wheels) to touch the ground.

The Wheels

Put **straws** through the two holes opposite one another. You may need to make a longer straw by putting one straw inside another. Attach an empty **spool** to each of the four **straw** ends. Put straight **pins** through the straws on both sides of each **spool**. These will keep the **wheels** in place when the car is moving.





The Engine

Put the **balloon** through its hole, with the balloon inside the **car** and the opening to the balloon outside the car. Blow up your balloon (don't tie the end), let it go, and **vrrrooom**—you're off!

Your engine works because the air in the balloon rushes out of the mouth of the balloon (**the exhaust hole**). That air creates so much force that it makes the car move. The size of the exhaust hole is just one of the factors that affect how far your balloon car will travel.

Think of a question you want answered like, **what would happen** if you changed the shape and size of the milk carton? Predict what you think will happen and try it out. Then tell ZOOM about your auto engineering.

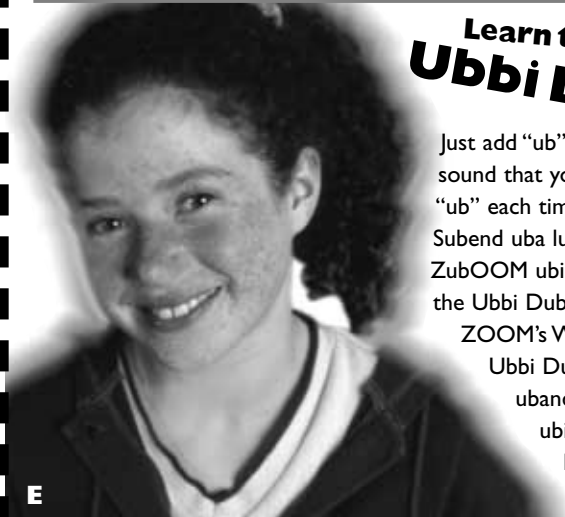
sent in by the kids from
the Weston School in
Weston, MA

Make
and test your very
own Balloon Car online
at www.pbs.org/zoom.
Which one goes farther,
the computer one or the
homemade one?

The Web

Metafile: <http://www.pbs.org/wgbh/zoom/>

Check out **www.pbs.org/zoom** to find more CafeZOOMs, ZOOMscis, ZOOMdos, and lots more. Oh, and if you don't have access to the Web at home, you should be able to find it at your school, public library, or the community centers in your neighborhood.



Learn to Speak Ubbi Dubbi™

Just add "ub" before every vowel sound that you hear. Accent the "ub" each time it comes up. Subend uba lubettuber tubo ZubOOM ubin Ubbi Dubbi. Use the Ubbi Dubbi translator on ZOOM's Web site to turn Ubbi Dubbi into English, uband Ubenglubish ubintubo Ubbi Dubbi.

E



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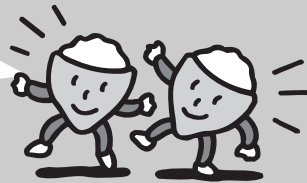
All submissions become the property of ZOOM and will be eligible for inclusion in all ZOOMmedia. This means that we can share your ideas with other ZOOMers on TV, the Web, in print materials, and in other media. So, send it to ZOOM. Thanks!

Illustrations: Stephen Schudlich
Photos: Mark Ostow



#106 99 05.045

This lemon slush
can be served in
real lemons.



Lemon Slush

What You Need: blender • ice cubes • knife •
3 large lemons • 1 1/2 tablespoons sugar

Ask an adult for help or permission before using the knife or blender. **Cut** the lemons in half and **squeeze** out 2 tablespoons of lemon juice. **Scoop** the pulp out of the lemons. **Slice** a bit off of the bottoms of the lemon halves, so they will stand. **Blend** the sugar and lemon juice for 10 seconds. **Add** about 8 ice cubes. **Blend** until smooth. **Spoon** the slush into the lemon halves. Mmmmm—great for a hot summer day. If you have any favorite summer foods, send the recipes to ZOOM at www.pbs.org/zoom.

sent in by Patricia T.
of Chicago, IL

Cafe



ZOOM Needs You



What's the coolest
game you and your
friends ever made up?
Tell us how to play it!



Be the next Bill
Shakespeare. Send ZOOM
your short original plays.



Celebrate a do-gooder.
Tell us about a kid you
know who has done
something great. Be sure
to send a picture or video.

Send your ideas to:
ZOOM
Box 350
Boston, MA 02134
www.pbs.org/zoom