



123
SESAME STREET

MECHA BUILDERS

ACTIVITY GUIDE



The Complete Series
on DVD April 9th!

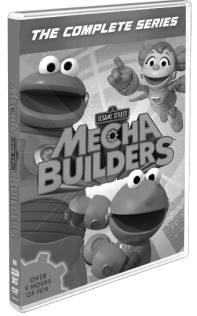
SHOUT!
STUDIOS

SHOUT!
KIDS

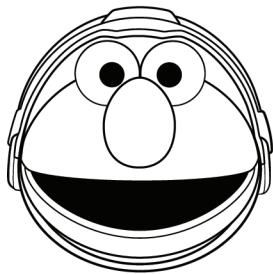
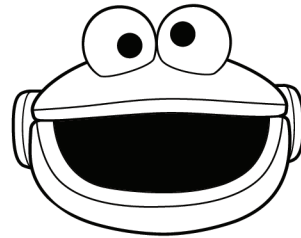
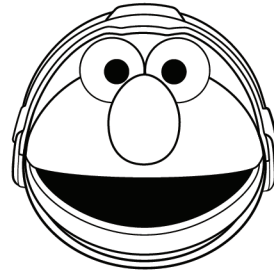
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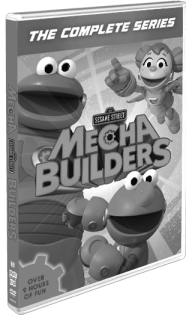


Draw lines to connect the matching faces of the Mecha Builders!



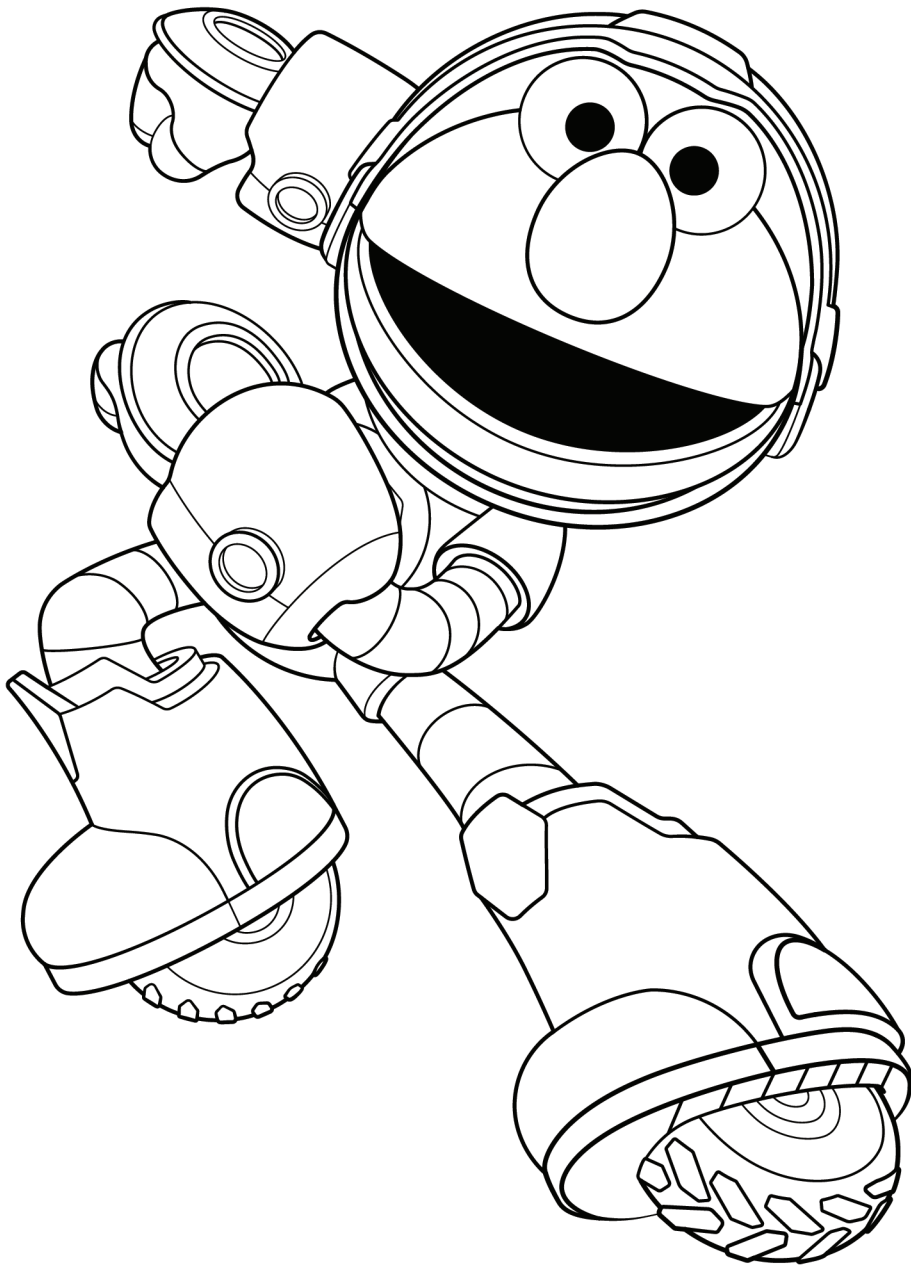
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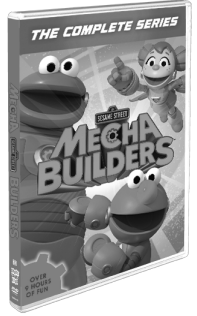
Color in Mecha Elmo!

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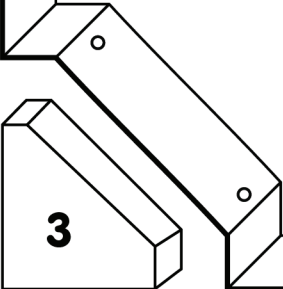
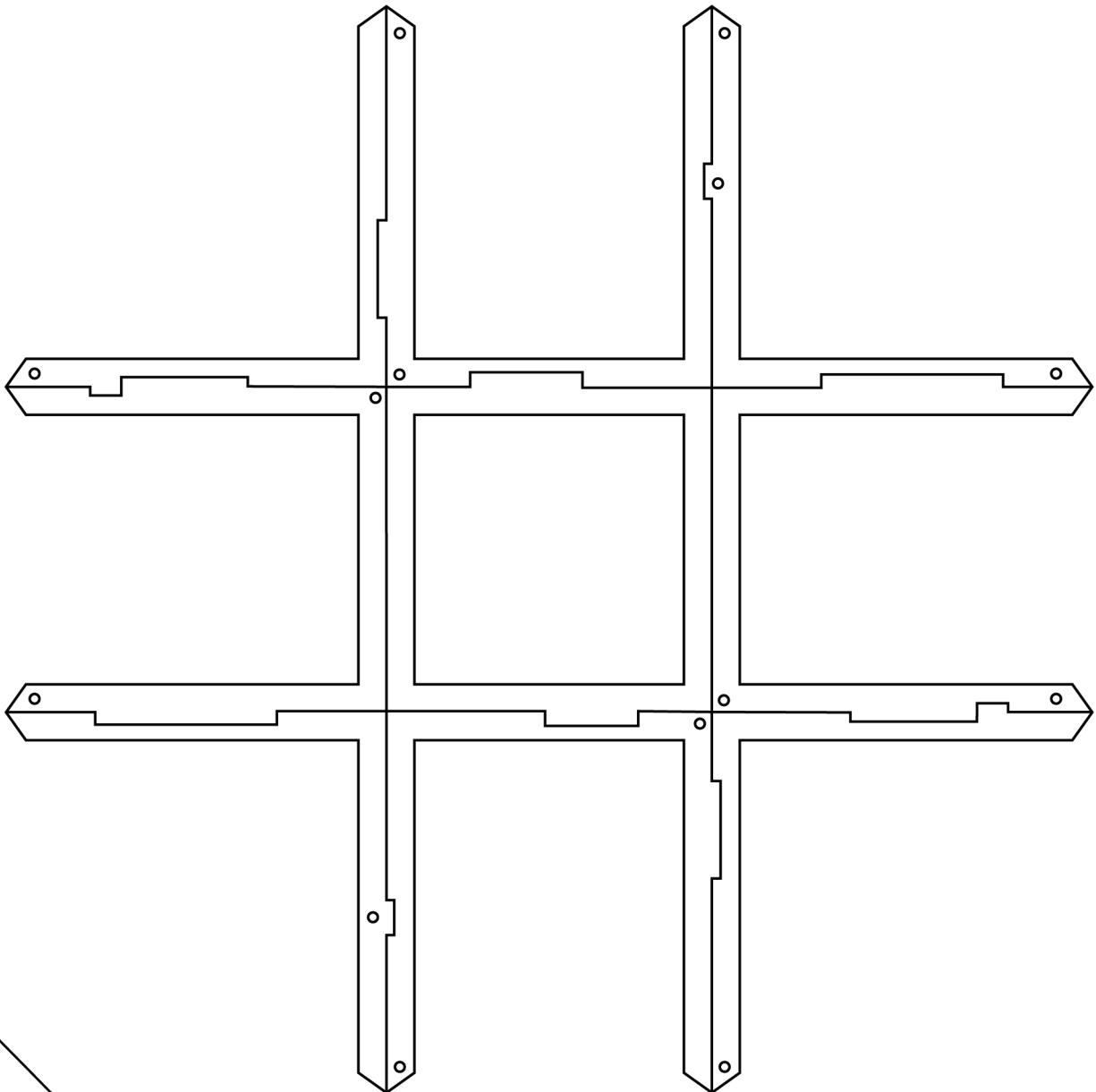


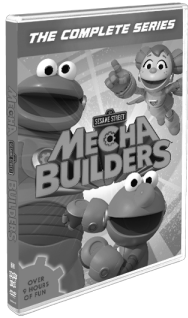


Find a friend and play tic-tac-toe!
Take turns making Xs and Os and try
to get three in a row.



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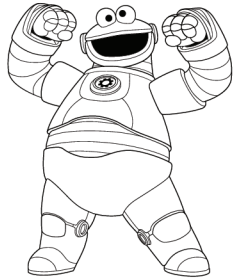




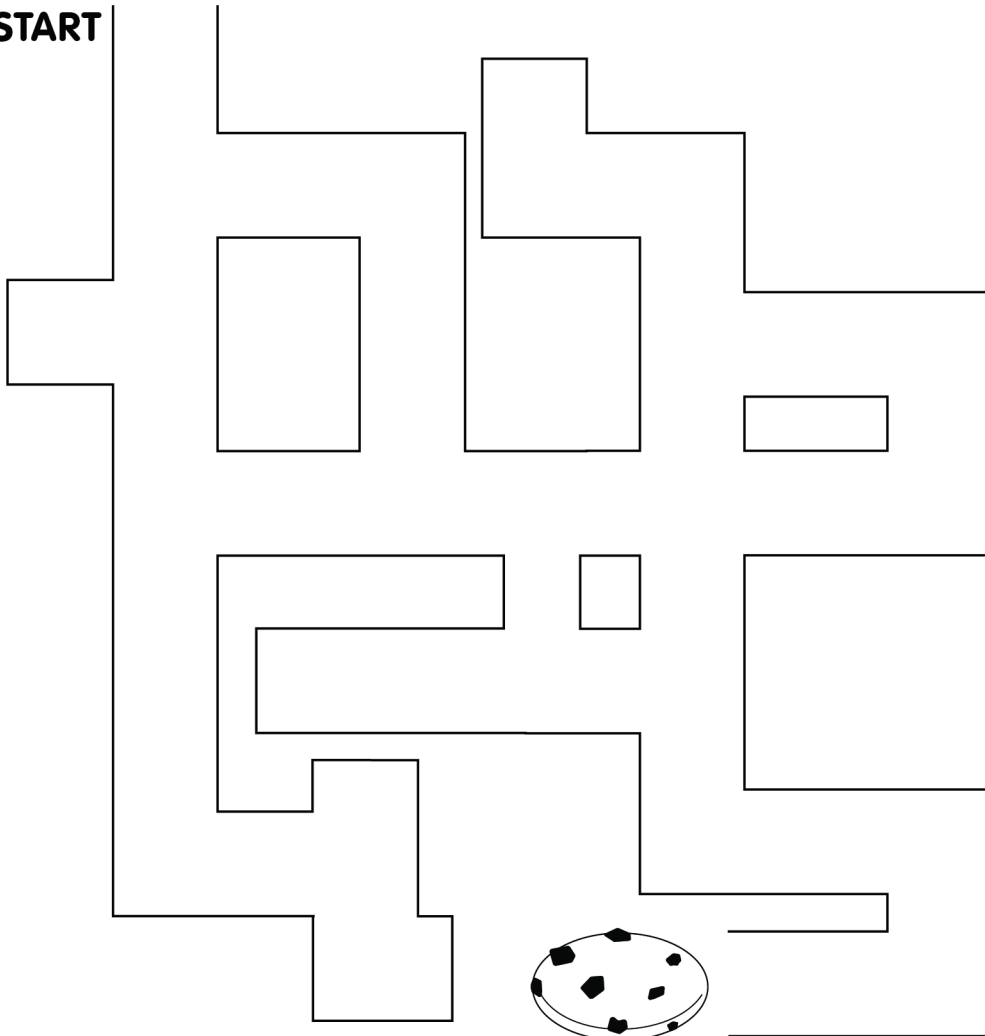
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It's snack time for Mecha Cookie!
Help him get to the cookie—his
favorite sometimes treat!



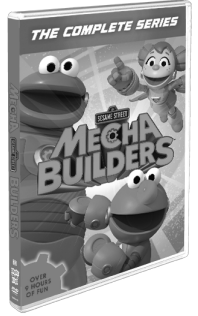
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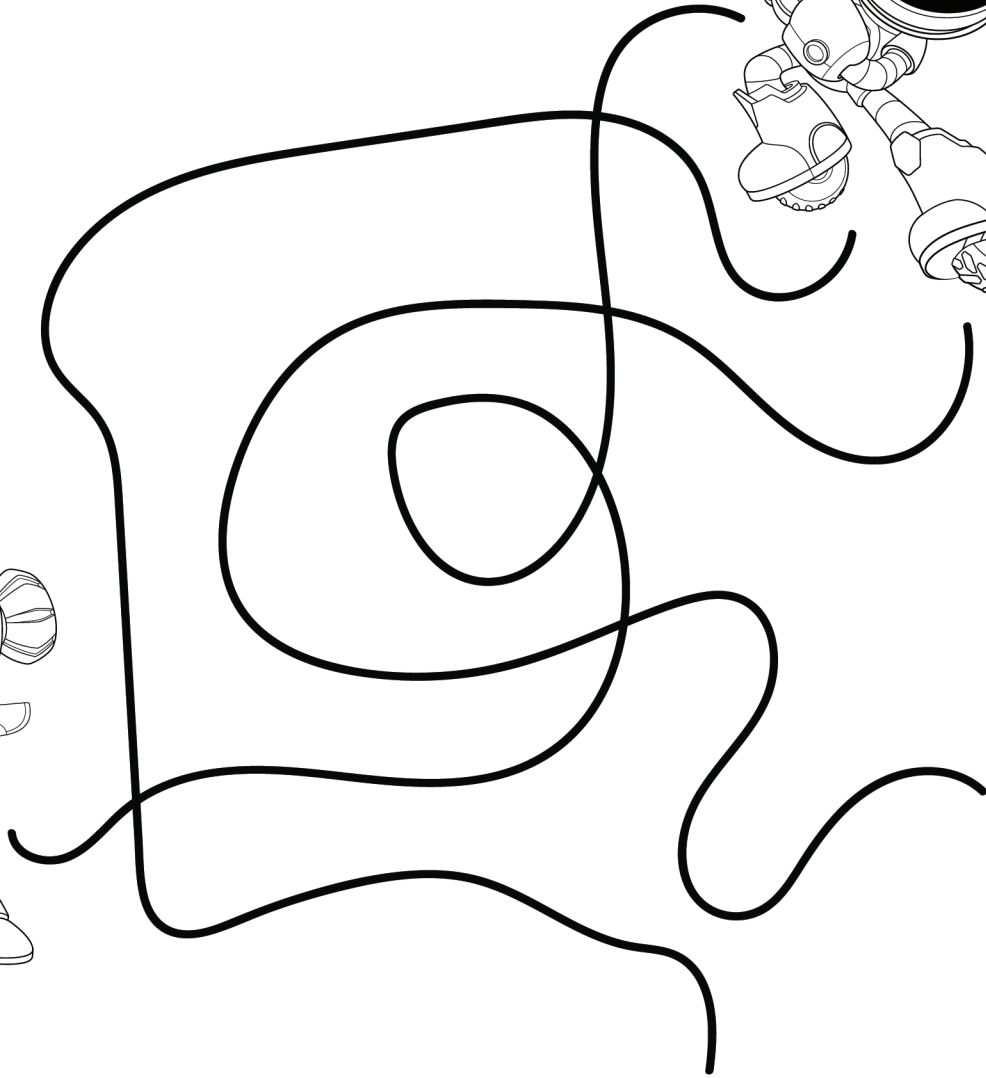
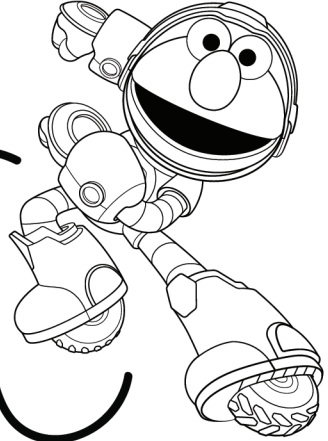
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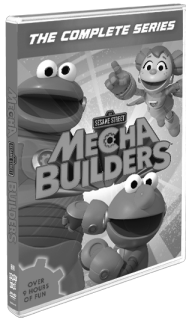


Help Mecha Elmo find
Mecha Abby!



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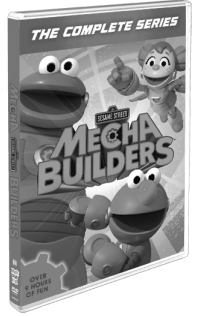
**Draw a Mecha you!
What special skills would you
have as a Mecha Builder?**

Mecha- _____ **!**

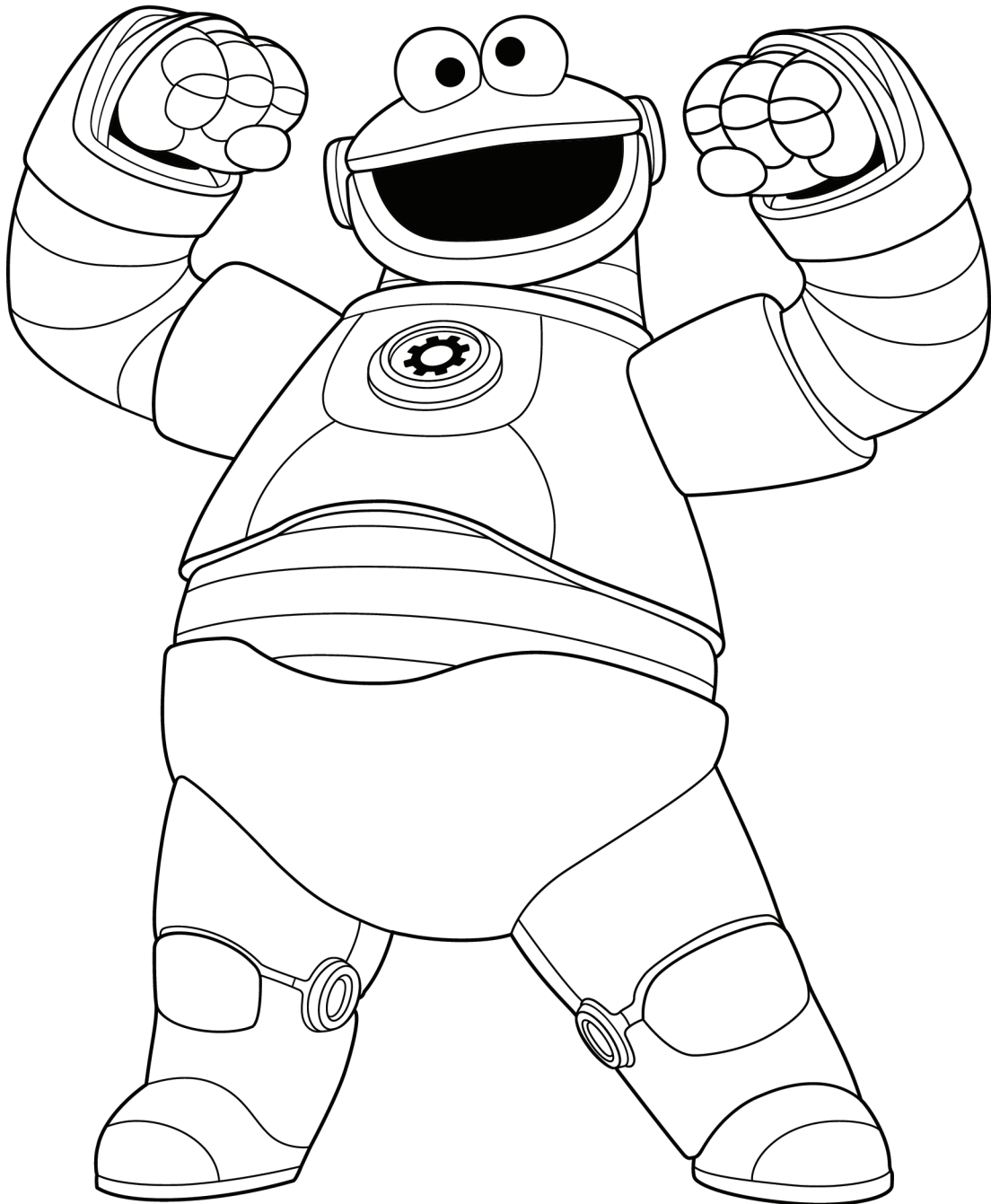
(your name)

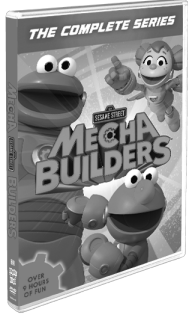


Color in Mecha Cookie!



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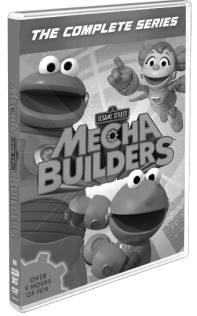
Find which photo of Mecha Abby is different and circle it!

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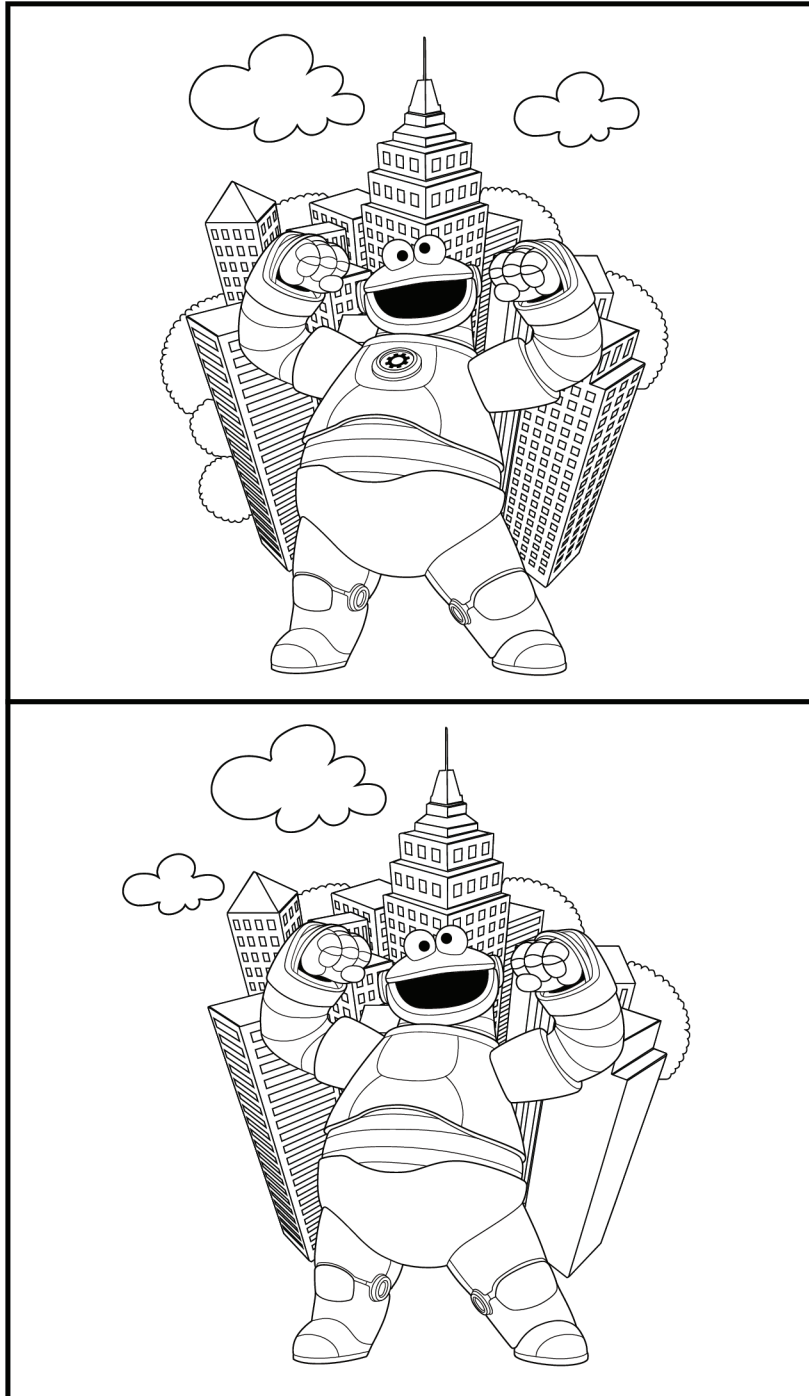


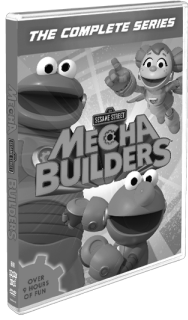
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MECHA BUILDERS

Spot four differences between these two pictures of Mecha Cookie and circle them.



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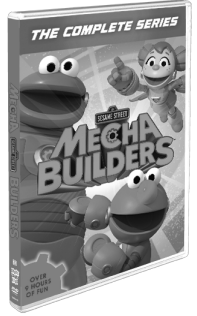
Color in Mecha Abby!

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**Draw a picture of
your favorite Mecha Builders tool!**



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Liquid, Solid, Gas



Ask a grown-up to help you with these science activities!

What You Need:

- Water
- A paper cup
- An ice cube tray
- A teakettle



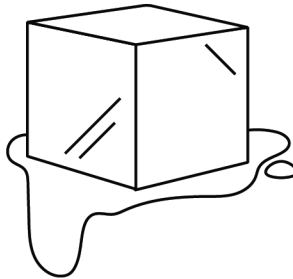
Caution! Hot water and steam

Did you know that water is not just a liquid? It comes in different forms depending on how hot or cold the air is around it. It's easy to change water into its different forms. Try it yourself!

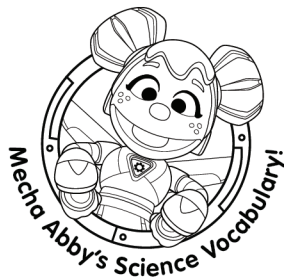
What to do:

1. Fill the paper cup with water and pour it into an ice cube tray.
2. Place the tray in a freezer for a few hours.
3. Take the tray out, and observe what happened to the water. What do you notice? How does it feel? Is it cold or hot? Is it wet or dry? Is it soft or hard? The **liquid** water has turned into **solid** ice cubes.
4. Next, put the ice cube tray on a counter and wait a few hours. What happened to the water? Is the water still hard? Did the ice melt back into a liquid?
5. Carefully pour the water back into your cup.
6. Last, pour the water from the cup into a teakettle and make sure a grown-up heats it up for you.
7. Watch from a distance as it boils. The cloudy mist that comes out of the spout is steam, which is **gas**.

Let's Observe!



Water freezes at 32 degrees Fahrenheit and boils at 212 degrees Fahrenheit. Wow! 32 degrees is super cold. 212 degrees is super hot! Lorem ipsum



Liquid

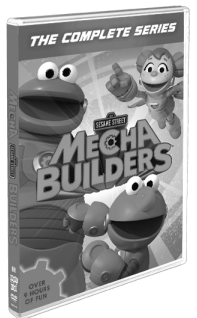
Something that flows smoothly and takes the shape of any container, like water.

Solid

Matter that has a definite shape and always takes up the same amount of space.

Gas

Matter that has no definite size or shape; it is air-like and expands freely to fill any space available, no matter how much of it there is.



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Float or Sink?



Ask a grown-up to help you with these science activities!

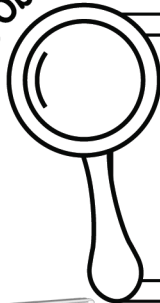
What You Need:

- Some safe objects from around the house like a metal spoon, a building block, a ball of rubber bands, a bar of soap, an eraser, a toy ball or boat, or a piece of fruit
- A large bowl (or the kitchen/bathroom sink) filled with water
- A notebook
- A crayon

What to do:

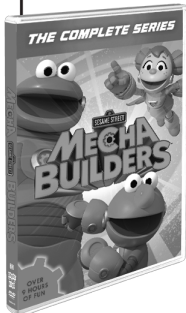
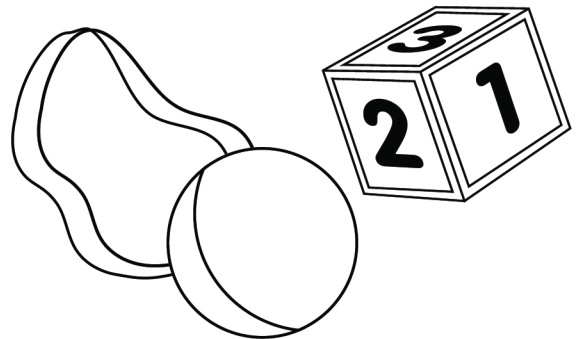
1. Collect the objects and draw a picture of each one in your notebook.
2. Form a **hypothesis** about which ones will sink or float and give your reasons why.
3. Fill a large bowl or sink with water and experiment by placing each object, one at a time, into the water. Which objects floated? Which ones sank? Was your hypothesis correct? Were you surprised when something you thought would float, sank?
4. Look at your notebook and circle all the objects that floated. Count how many floated.

Let's Observe!

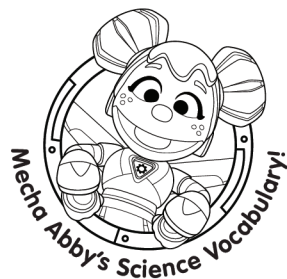


Time to unleash the power of investigation! Look at your journal and pick out one thing that sank and one that floated. What do you predict will happen if you used a rubber band to put them together? Do they still float? Do they still sink?

Try it and let's observe what happens!



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Predict

To use a little bit
of information to
guess what will
happen next.

Hypothesis

An idea about
what could
happen and why.

Ice Melting Race



Ask a grown-up to help you with these science activities!

What You Need:

- White construction paper
- Black construction paper
- Ice cubes
- A notebook

What ice cube do you think will melt faster? The ice cube on black paper, or the ice cube on white paper? Which do you predict will be the winner? Now you try!

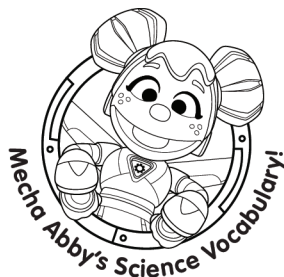
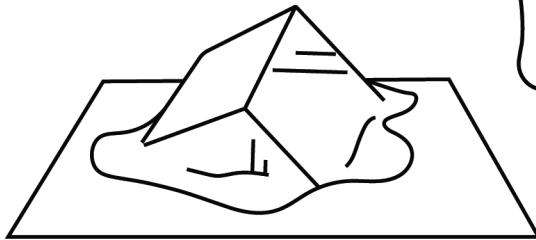
What to do:

1. Wait for a sunny day and lay one sheet of white construction paper and one sheet of black construction paper on a dry, flat surface outside.
2. Put one ice cube on each piece of paper. Ready, set, go!
3. Observe which ice cube melts faster in the sun. You can even use a timer to find out how long it takes for each to melt. Which one melts faster? **Compare** the two cubes. What do they look like?
4. Ask a grown-up to help you write the results down in your notebook so you can look them over when you're done and draw a **conclusion**.

Let's Observe!



Unleash your super powers of observation! Do dark colored clothes keep you warmer? Yes! Black or dark colored clothes absorb heat so they are warmer, especially when worn in the sun.



Reflect

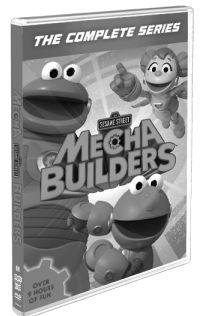
To bounce off of.

Compare

To figure out if two or more things are the same or different.

Conclusion

To summarize your findings after doing an investigation.



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Which One's Colder?



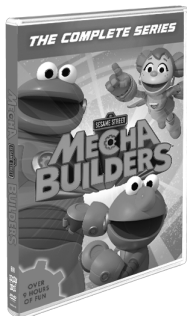
Ask a grown-up to help you with these science activities!

What You Need:

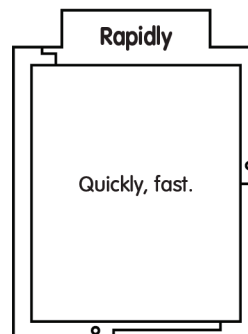
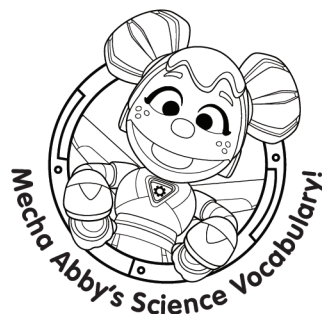
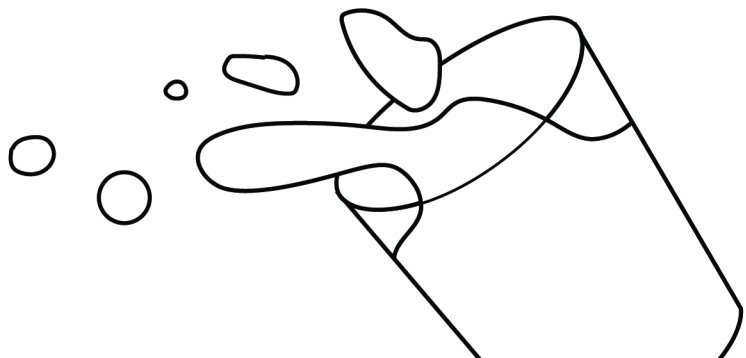
- Water
- Two paper or plastic cups (with lids to prevent spills, if you have them)
- A timer or clock
- A notebook

What to do:

1. Fill one cup with water and leave the other one empty.
2. Place both cups in the freezer, and set the timer for ten minutes.
3. When ten minutes have passed, take the cups out of the freezer and, with your eyes closed, feel the cups.
4. Which one is colder? The one full of water, or the one with only air inside?
5. Ask a grown-up to help you write down what you learned in your notebook.



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A Sticky Situation



Ask a grown-up to help you with these science activities!

What You Need:

- A sharp pencil
- A styrofoam cup
- Water

Would you ever guess that water is **sticky**? It isn't exactly sticky the way honey is, but water does stick to itself! In science, when something sticks to itself it is called **cohesion**. What might happen if two streams of water run very close together? Let's investigate!

What to do:

1. Ask a grown-up to use the pencil to poke two little holes in the bottom of the Styrofoam cup (the holes should be very close together so that they almost touch).
2. Hold the cup over a sink.
3. Pour the water into the cup.
4. As the water comes out of each hole, quickly pinch the two streams together to form one stream.
5. If it doesn't work the first time, don't give up! It can take a few tries to get it right.
6. What do you notice?



Let's Observe!



The next time you are in a foamy, soapy bubble bath, try unleashing your powers of observation and notice how the bubbles stick to each other. That's **cohesion**. Reflect on that!

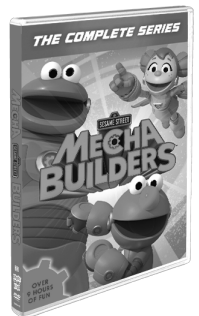


Sticky

When somethin hangs on to something else without clips or other help.

Cohesion

When something sticks to itself.



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Blowing Bubbles



Ask a grown-up to help you with these science activities!

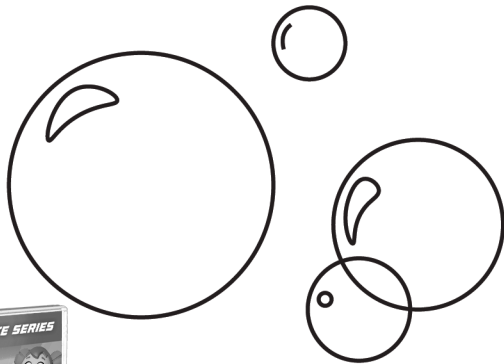
What You Need:

- ½ cup of dishwashing liquid
- 2 cups of water
- 2 teaspoons of sugar
- A dab of food coloring (if you want)
- A bubble wand (store bought or made with pipe cleaners)
- A shallow pan

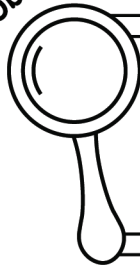
It's Bubble Fest on Sesame Street! So join along and mix up a batch of bubble formula yourself!

What to do:

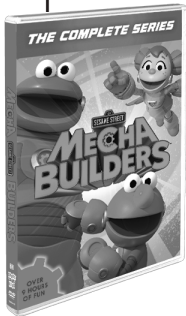
1. Measure all of your **ingredients** (dishwashing liquid, water, sugar, and food coloring) for your **formula**. Pour them into a shallow pan, and mix well.
2. Dip your bubble wand in the mixture, and blow through it gently.
3. Count how many bubbles you can make!



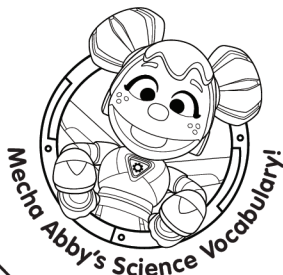
Let's Observe!



Engineer new designs! Make bubble wands in different shapes—round, square, rectangular—using pipe cleaners. What happens when you make bubbles with these wands? Are they bigger? Smaller? Round? Square?



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Ingredient

One of the things that makes up a recipe or formula.

Formula

Instructions that tell you how much of each ingredient should be mixed together to make something else.

Engineer

To design or build something for a certain purpose or to solve a problem.

Pepper Magic



Ask a grown-up to help you with these science activities!

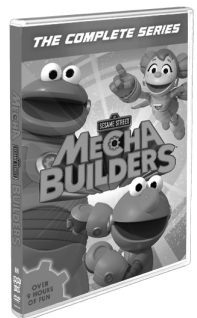
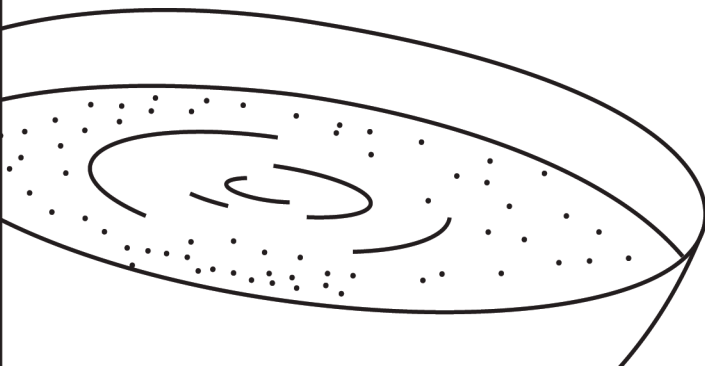
What You Need:

- A bowl
- Water
- Dishwashing liquid
- A teaspoon of black pepper

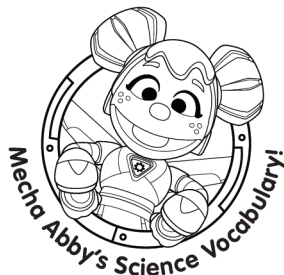
Remember in "Sticky Situation", we learned that water sticks to itself? Well, water is most sticky at the top, or **surface**, where it **contacts** the air. Scientists call this **surface tension**. Water is so good at sticking to itself at the surface that it forms a kind of skin. Look at a glass of water from the side and observe closely. What do you see? It looks like there is a clear skin on top!

What to do:

1. Fill a bowl with water.
2. Rub dishwashing liquid onto your finger (secretly, before you do the trick).
3. Sprinkle black pepper into the middle of the water.
4. Dip your soapy finger into the center of the peppery water.
5. Watch the pepper move away from your finger.



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Surface

The top layer
of something.

Contact

To touch.

Surface Tension

When water at the
surface sticks to
itself and forms a
kind of skin.



Rainbow in a Jar



Ask a grown-up to help you with these science activities!

What You Need:

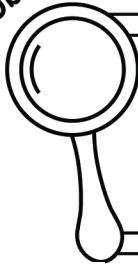
- A glass or jar with water
- A windowsill
- A sunny day
- White paper
- Crayons

After it rains, sunlight shines through little drops of water that stay **suspended** in the air. The drops act like a **prism**, which breaks up light into many beautiful colors.

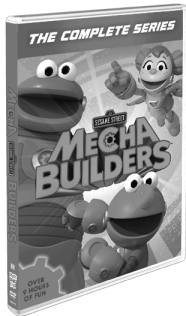
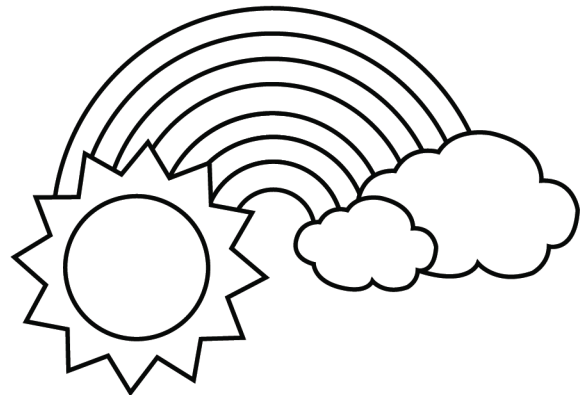
What to do:

1. Fill the jar with water and set it on the windowsill in bright sunlight.
2. Place a sheet of white paper on the floor in front of the window. What happened? Did a rainbow form on the paper?
3. What colors do you see? Think of the name "Roy G. Biv" to help you remember the colors in a rainbow: red, orange, yellow, green, blue, indigo, violet.
4. Use your crayons to trace and color in the rainbow.

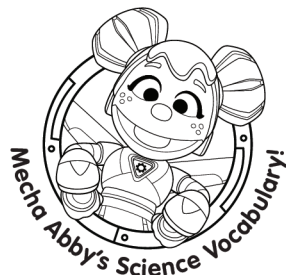
Let's Observe!



Behold! When light passes through water, it breaks up into a rainbow made up of seven different colors: red, orange, yellow, green, blue, indigo, and violet. It is hard to imagine, but did you know there are even more colors in a rainbow, but they are invisible!



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Suspend

To hang.

Prism

Something clear, often with slanted sides, that breaks light up into many colors.

Super Sand



Ask a grown-up to help you with these science activities!

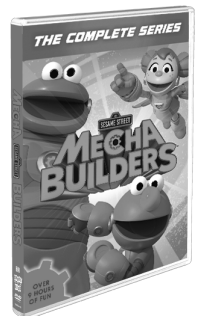
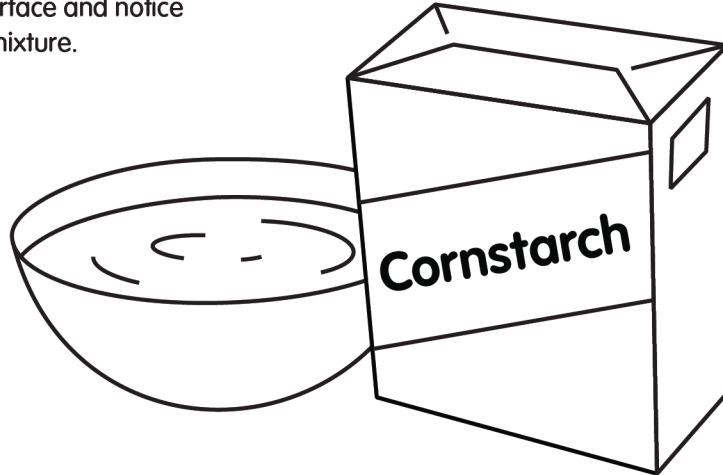
What You Need:

- A mixing bowl
- ¼ cup of cornstarch
- 1 cup of water

Quicksand is a very special kind of sand found near beaches, lakes, rivers, and swamps. It is made of sand mixed with water. The **viscosity** of quicksand depends on how much **pressure** or weight you put on it. If you were to fall into quicksand it would be very hard to get out. Why? Quicksand acts like a liquid when you move around in it slowly, and like a solid when you move around in it quickly. Amazing!

What to do:

1. Pour the cornstarch and water into the bowl and mix with your hands until it feels as thick as honey and looks like heavy cream.
2. Gently lay your hand on the surface and notice how your hand sinks into the mixture.
3. Now try to move your hand through it quickly. Feel how difficult it is to move. This is how real quicksand feels!



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Viscosity

The state of being thick, sticky, and like a fluid.

Pressure

Continuous force on or against something.



Breathing Trees



Ask a grown-up to help you with these science activities!

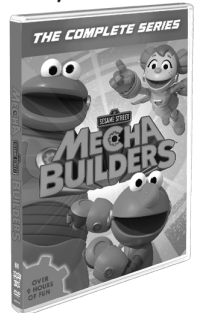
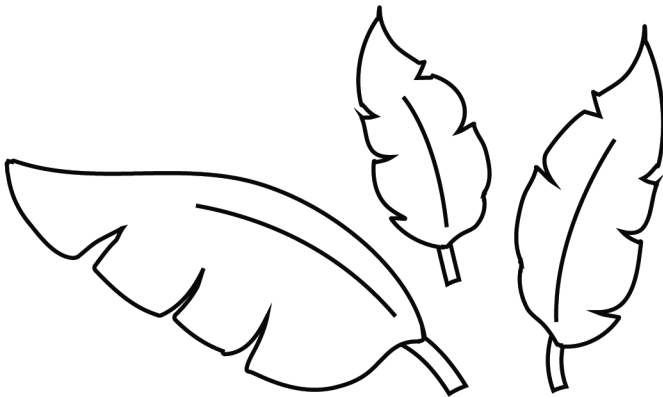
What You Need:

- A small plastic sandwich bag
- A rubber band
- A low hanging plant or tree
- A notebook

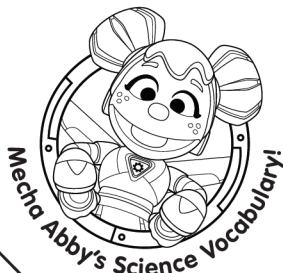
Did you ever stand close to a mirror and breath on it? Try it now and then unleash your power of observation! What do you see? The mirror **fogs** up with teeny, tiny water **droplets** from our breath. Did you know trees and plants breathe, too? They don't have lungs like people do, but they also let off tiny drops of water.

What to do:

1. Cover a **clump** of leaves with the plastic bag. (Ask a grown-up to help you.)
2. Wrap a rubber band around the bag and leaves, but not so tight that you break the leaves or stems.
3. Leave the bag on the leaves overnight.
4. Observe what you see. What does it look like? Look at the "fog" under a magnifying glass. What does it look like?
5. Write three words (or ask a grown-up to write them) in your Science Journal or notebook to describe what you see. Is it wet? Is it misty?



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Droplets

Tiny drops of water.

Fog

A mist made of tiny droplets of water.

Clump

A lump of similar things or material.

Free Fall



Ask a grown-up to help you with these science activities!

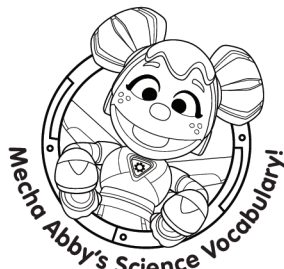
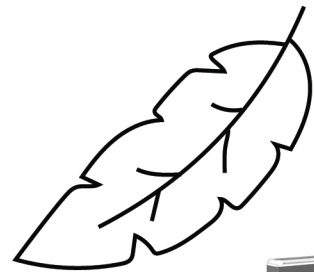
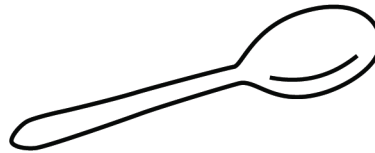
What You Need:

- 6 household items—some light, some heavy: A book, a Ping-Pong ball, a toy car, a pencil, a toy block, a feather, tissue paper, etc.
- A friend and/or a full-length mirror
- A notebook
- Crayons

Some superheroes **defy gravity!** Gravity is a force that pulls everything toward the center of the earth. But shape will affect the speed at which something falls. If an object catches air it will not drop as fast. That is why feathers and paper float to the ground. Collect a few objects and try it yourself. Use the power of observation to find out what happens!

What to do:

1. Put your 6 items in pairs, (i.e. a toy car and a book; a Ping-Pong ball and a block), side by side on a table.
2. Stand in front of a full-length mirror or ask a friend to watch as you drop two objects at the same time.
3. Observe what happened. Did the objects drop at the same **rate**? Did one drop faster or slower than the other? Was there something about the shape of the object that made a difference?
4. Mix up your objects and drop different pairs. Did anything different happen? Now try dropping the objects from a higher or lower point and see what happens.
5. Draw pictures of your objects and put check marks next to the things that fell quickly, and stars next to the ones that fell slowly.



Defy

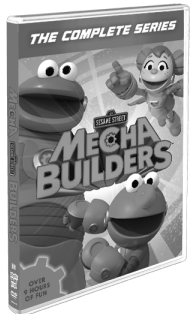
To go against rules, seem impossible

Gravity

An invisible force that pulls things toward the ground.

Rate

Speed



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For The Birds



Ask a grown-up to help you with these science activities!

What You Need:

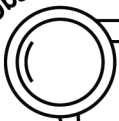
- Long pieces of string
- Pinecones and corncobs
- A spoon
- Peanut butter and birdseed
- A notebook
- Crayons

The study of birds is called **ornithology**. Scientists who study birds are called **ornithologists**. They examine birds' bodies, color, feathers, habits, songs, and how we fly. Winter is a great time to invite my feathered friends to visit your backyard or windowsill because it is when food is scarce.

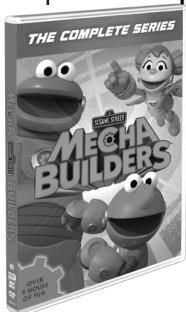
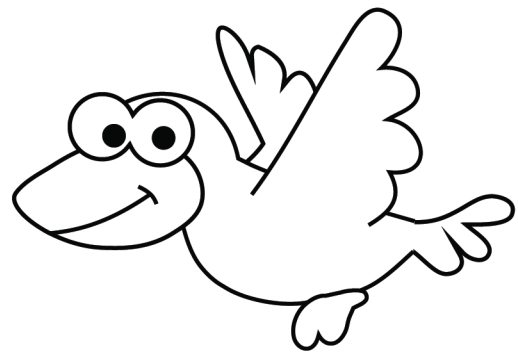
What to do:

1. Tie the long strings to the pinecones and corncobs.
2. Using the spoon, spread peanut butter all over the pinecones and corncobs; roll them in birdseed.
3. Hang the pinecones and corncobs from nearby trees.
4. Draw pictures of the birds that come to the birdfeeders in your notebook.
5. Count the birds you see. How many did you see? What do you observe? Are some bigger than others? What colors are they?

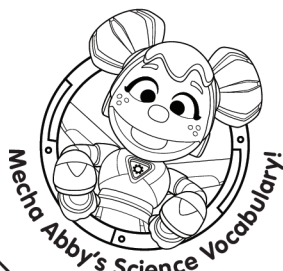
Let's Observe!



Did you know some birds cannot fly? That is right! Penguins, ostriches, and kiwis are just some of the birds that cannot take off!



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Ornithology

The study of birds.

Ornithologist

A person who studies birds.

Scarce

Few, rare.

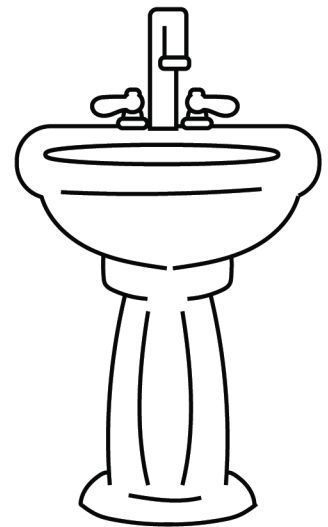
Amazing Water Maze



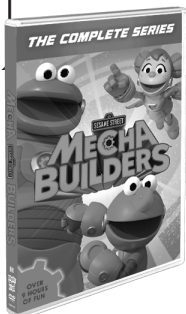
Ask a grown-up to help you with these science activities!

Water travels a very long way before it enters your home. It forms in rain clouds then falls from the sky into reservoirs. Reservoirs are man-made lakes where water is collected for use by people in nearby cities and towns. From there, water flows through pipes and through a faucet and into your sink, tub, or shower.

Use your finger or a crayon to trace the water from the rain cloud to the sink!



FINISH



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