

Week 5: Engineering

July 22-28

Meet the people who design bridges, cars, and video games and learn how to think like an engineer.

Use the sheet below to mark off this week's activities as you complete them. See if you can get a BINGO!



Scan the QR code or visit www.michiganlearning.org/engineering to see the playlist of videos for this week.

Build a bridge with outdoor materials	 Do 60 mins. of activity	 Read for 20 minutes	Balance on one foot	Watch Read, Write, ROAR!
 Read for 20 minutes	 Watch Math Might's	Try the hexagon challenge	build with household materials	 Do 60 mins. of activity
 Do 60 mins. of activity	Watch Meet the Helpers	 HAVE FUN! (Free Space)	Design a robot to do a job	 Read for 20 minutes
Watch Read, Write, ROAR!	 Ride a bike	 Watch Math Might's	Watch InPACT at Home	Draw a family member's car
Watch InPACT at Home	 Read for 20 minutes	Go for a walk and find animals	 60 mins. of activity	Watch ArchiTreks

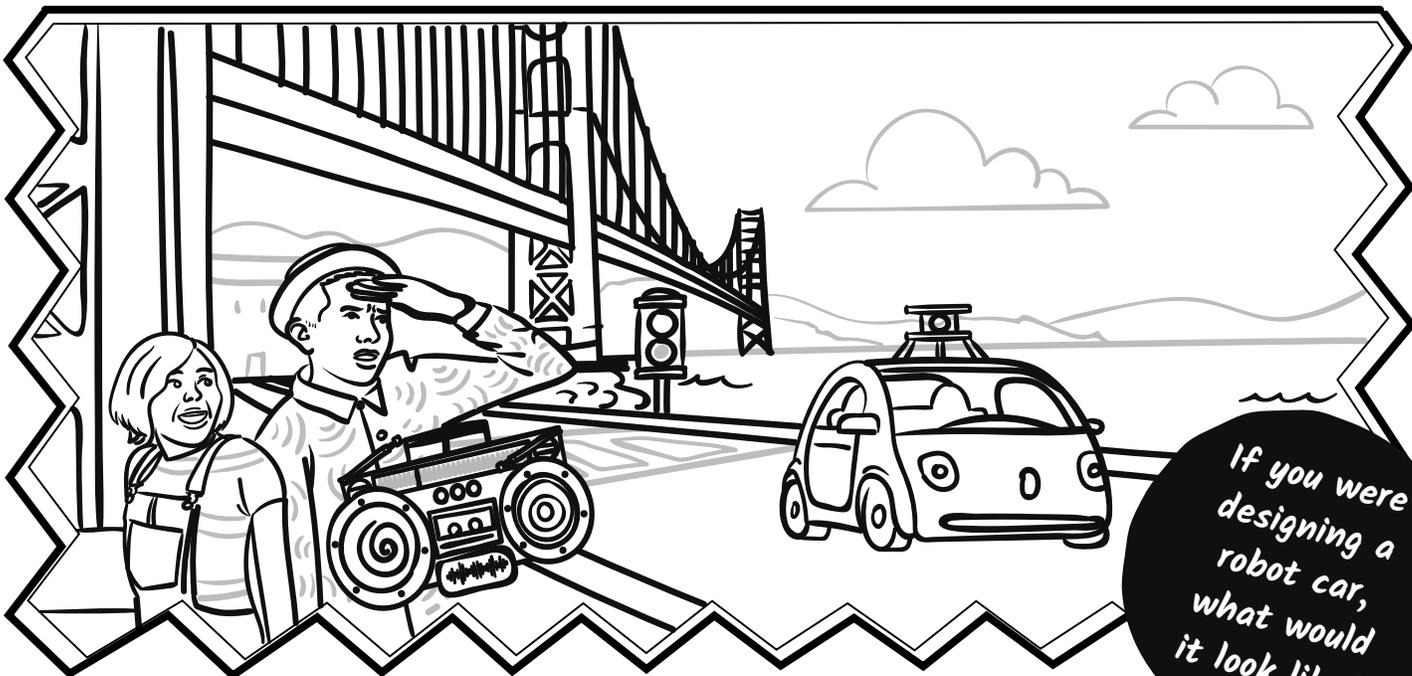


Episode 5, Christina, Andrés, and BoomBox meet a Robotics Engineer



Spot the Difference

Spot the differences! Can you find and circle the 6 things that are different in the pictures?



If you were designing a robot car, what would it look like?

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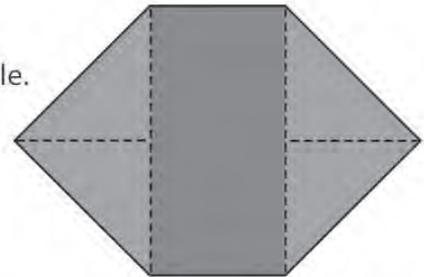


The Hexagon Challenge

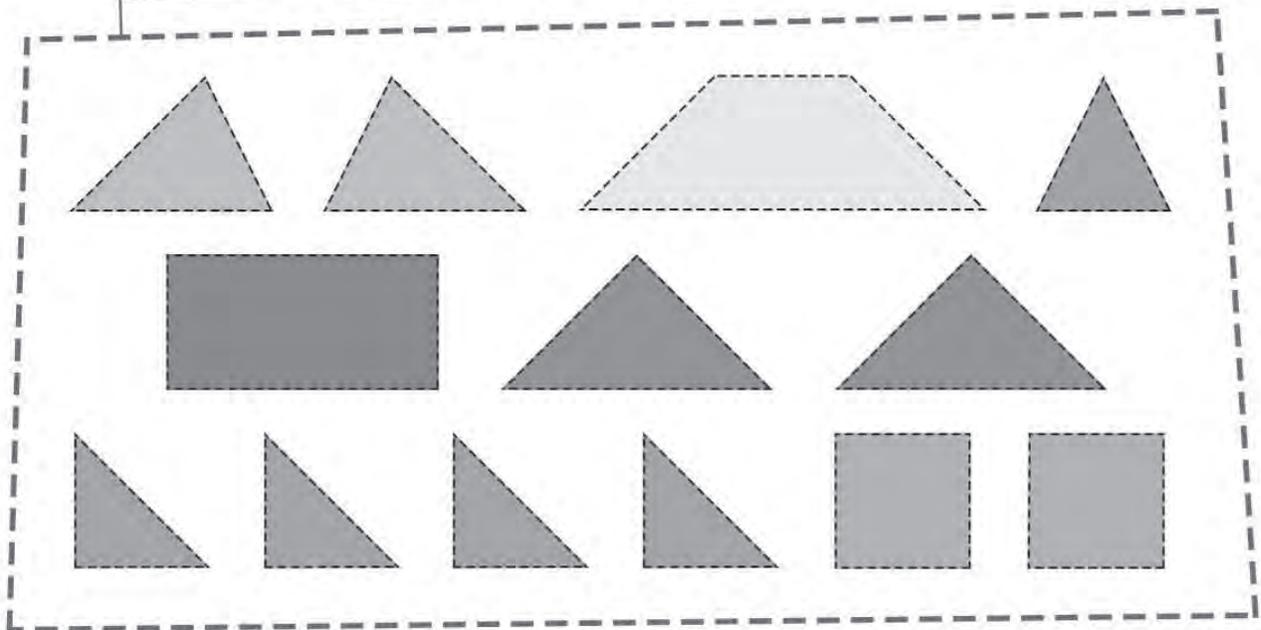
Use your Odd Squad agent skills to solve The Hexagon Challenge. Print out the two pages.

1. Cut out all the shapes from the Shape Box.
2. On the next page, mix and match your shapes to make a hexagon.
3. Record how you did it by drawing the lines of each shape you used like in the example at the top.
4. Reuse your shapes again and again to make more hexagon patterns. Try to find **8 different** ways to make a hexagon.

Here's a hexagon made with 4 triangles and a rectangle.



Shape Box



For more printables, go to pbskidsforparents.org

Funded by:

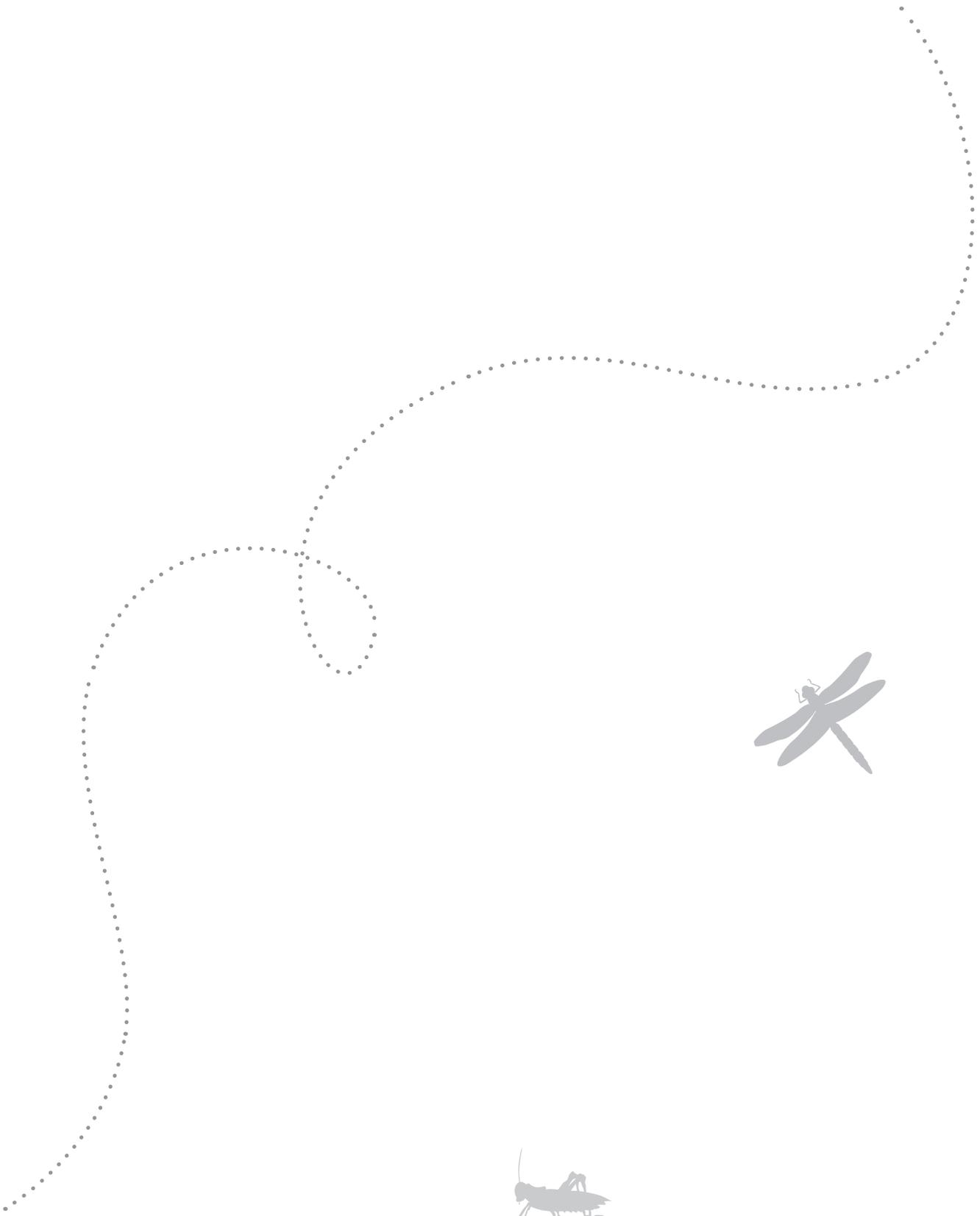


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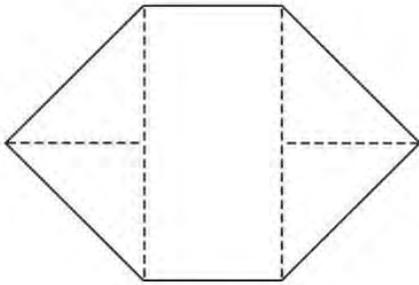


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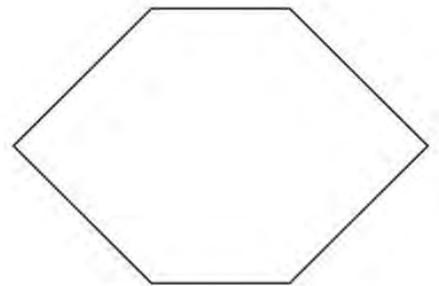
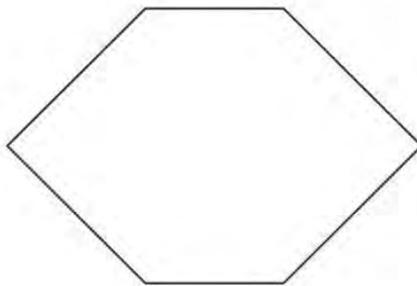
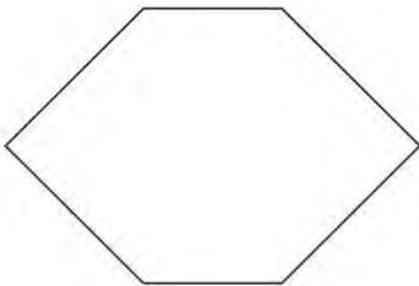
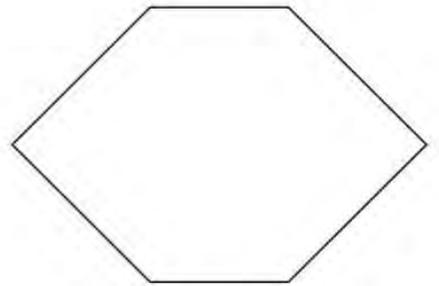
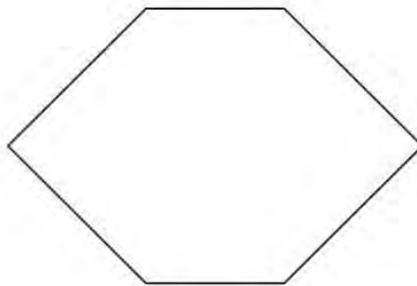
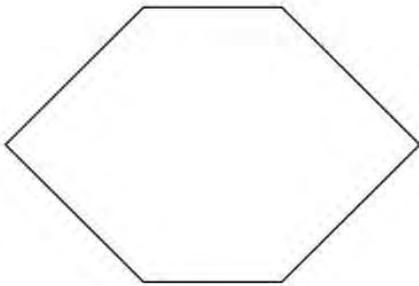
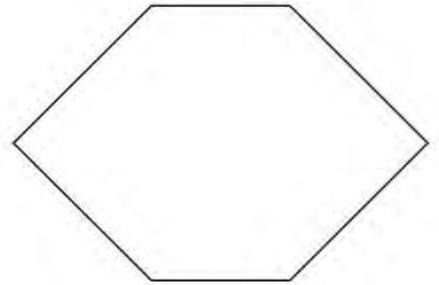
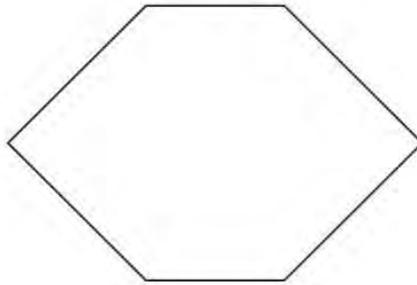




The Hexagon Challenge



Example



When you are finished with the challenge, check out some possible solutions at www.fredrogers.org/odd-squad-hexagon-solution/

For more printables, go to pbskidsforparents.org



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ACTIVITY GUIDE

Episode 210: Traveling Through Space

Scan below to watch lesson



High Frequency Words

High frequency words are words that show up a lot when we are reading and writing.

Or When What

Label It

Start at the bottom of the ladder. Say the word. Follow the instructions to change each word. Write the new word in the space provided.



Change the **nd** to a **mp**

Add a **t** after the **s**

Change the **h** to a **s**

Add an **n** before the **d**

Words to Know

We build a **word ladder** by starting with a word and using what we know about letters and sounds to make a new word by changing one or two letters at a time. We start at the bottom and build up, just like when you climb up a ladder.

Read It

Read the poem out loud. Underline the high frequency words.

The Noise by Amy Posey

Clang! Clap! Bump!
What is it?
Stomp! Ding! Thump!
Is it the cat or the dog?
Yes! That is when I saw the cat
jump on the lamp!
What a bang!

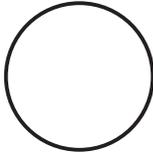
Draw a picture to go along with the poem above.

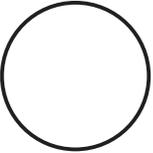


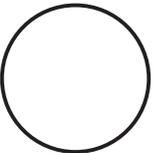
My Morning Routine

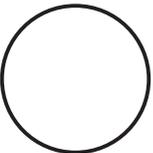


Lyla and her family have a lot to do in the morning — and so do you! Draw or write what you do in your morning routine. You can use the list at the bottom of the page for help. Write numbers in the circles to help you remember the order you do each part of the routine.









Cut out the badges. Glue them to the circles in your checklist when you've finished each part of your routine. You can do it!



- Wash your face
- Comb your hair
- Brush your teeth
- Get dressed
- Make your bed
- Eat a healthy breakfast
- Say "Good morning!" to someone

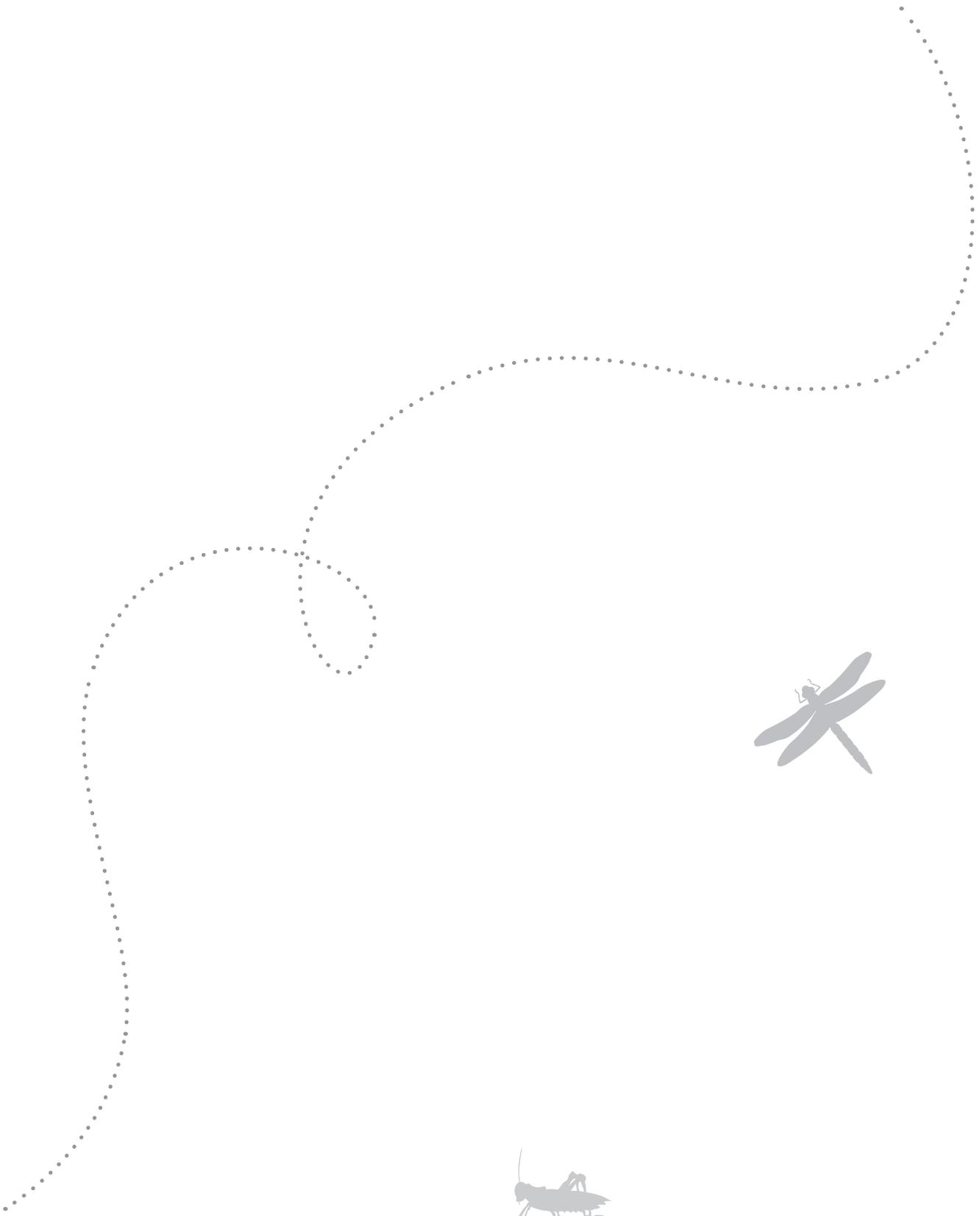


Find more games and activities at pbskids.org/lyla

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ACTIVITY GUIDE

Episode 210: Repurposing Plastic and -ough- Words
Book: *Plastic Eco Activities* by Louise Nelson

Scan below to watch lesson



Phonics Skills

Spelling Pattern **o-u-g-h**

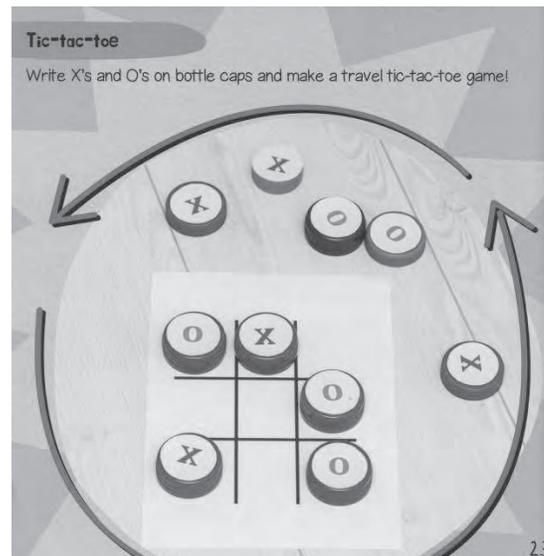
When a word contains the spelling pattern **o-u-g-h**, those letters put together can represent seven different sounds. The chart on the right has words with four of the most common sounds.

Read the word on the left side of the chart. Listen to the ending sound. Read the word on the right side of the chart using the same ending sound from the first column for the o-u-g-h spelling pattern in the word.

<u>Matching sounds</u>	<u>Words with o-u-g-h</u>
no	although dough though
you	through
off	cough trough
stuff	enough rough tough

Reuse It

The book, *Plastic Eco Activities*, by Louise Nelson, shows us a couple of ideas for making games out of recycled materials.





ACTIVITY GUIDE

Episode 210: Closed and Open Syllables

Book: *Coyote's Soundbite: A Poem for our Planet* by John Agard

Scan below to watch lesson



Read It

A few years ago, lead was found in Flint's drinking water. Many kids got sick because they had been drinking the water for a long time. Some kids had skin issues and even changes to their brains, making it hard for them to learn. Furthermore, it's happening in Benton Harbor and many cities in Michigan right now!

Michigan needs to check its water to make sure kids are not being hurt from their drinking water. One child in one family is too many!

Foundational Skills

An **open syllable** is a special kind of syllable. Open syllables have one WRITTEN vowel that is NOT followed by one or more consonants. Open syllables USUALLY have vowels that make their long vowel sound.

Rules for Dividing Syllables

Every syllable has one vowel or vowel team.

- Place a dot under each vowel
- Underline any vowel teams,
- Divide between two consonants

Try It

Go through and underline each sentence in the text above according to the color code below:

Green = topic sentence

Yellow = important information (story telling parts)

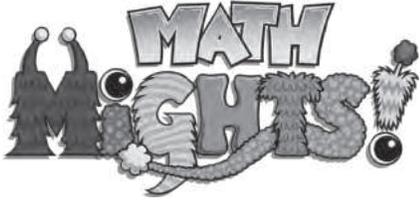
Blue = details (thoughts; feelings; description sentences)

Think About It

Look at this word. Each syllable is written in a different color. Which syllable in this word is not "closed in" by a consonant or consonants at the end?

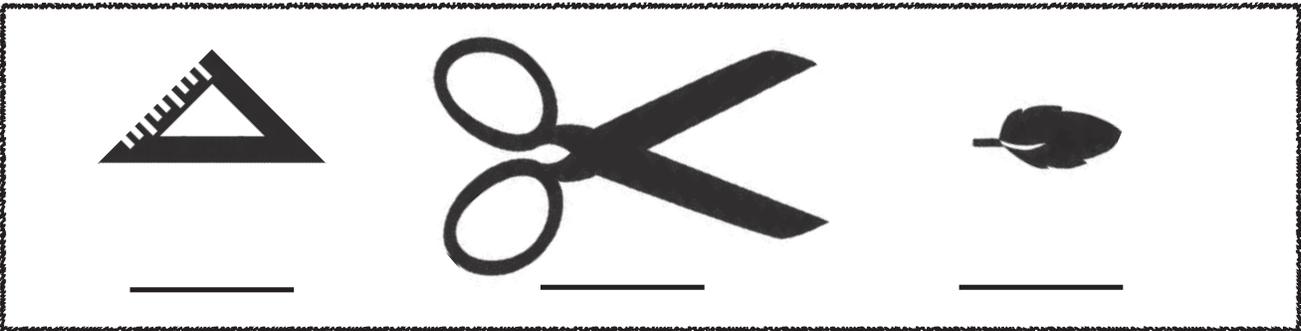
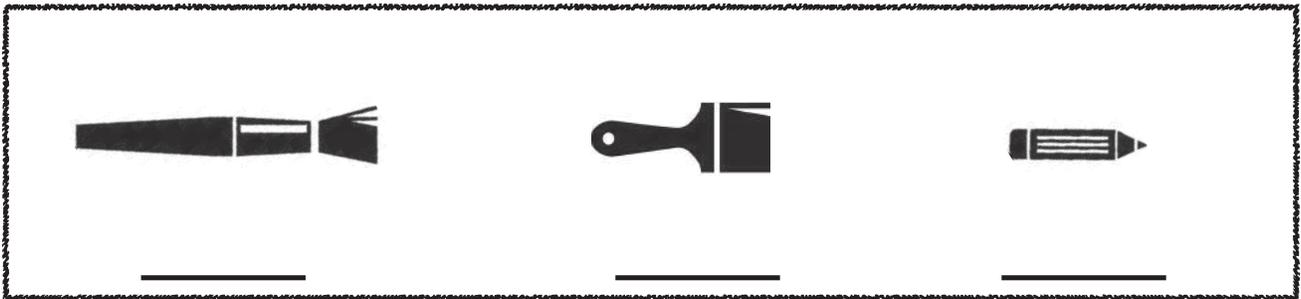
newspaper

The second syllable ends with the vowel Aa. It is an open syllable.

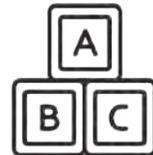
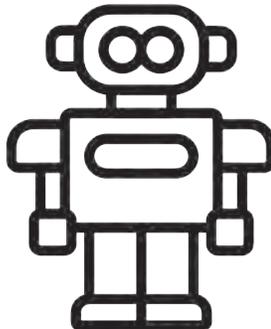
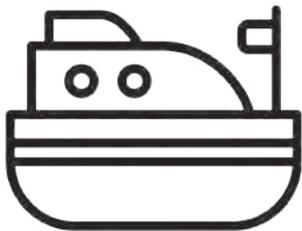


Compare The Length

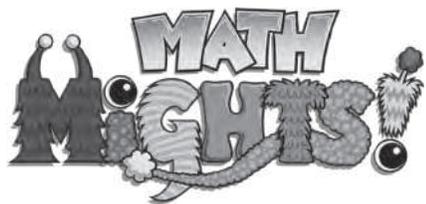
Directions: Put the objects in order from shortest to longest. Label the shortest object 1, label the middle object 2, and label the longest object 3.



Directions: Compare the 3 objects below. Fill in the blanks to complete the sentence.



The _____ is taller than the _____ and _____.



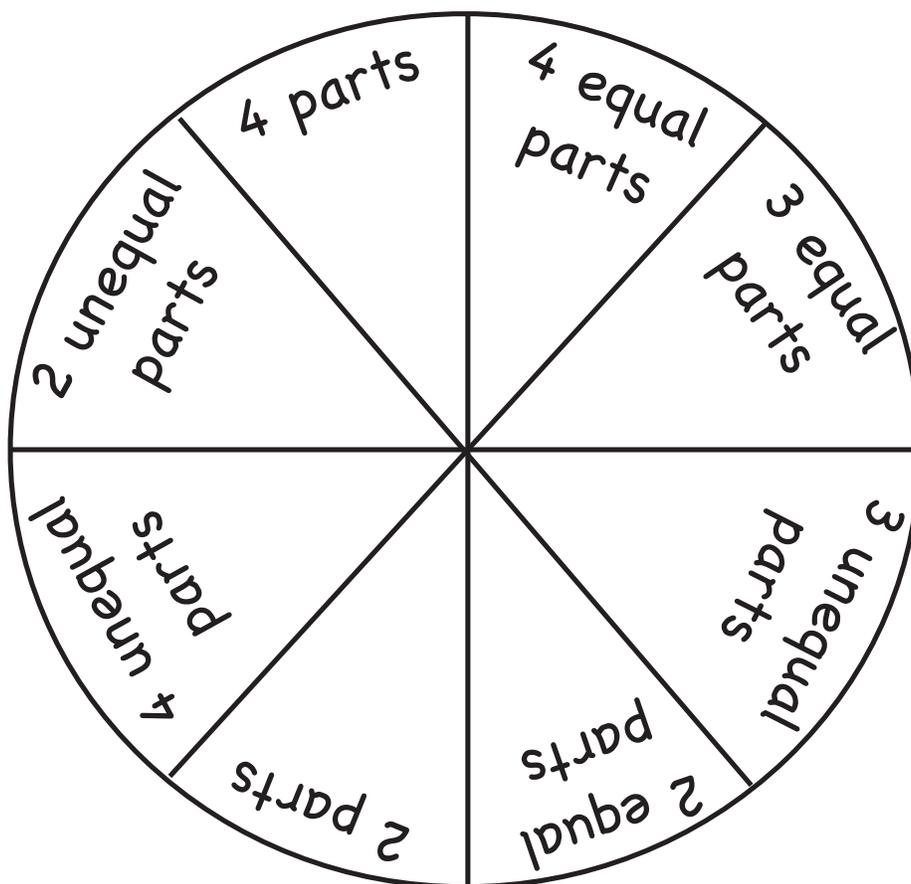
Split the Shape

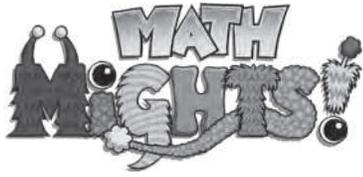
Materials:

1. spinner (you will need a pencil and paperclip to create the spinner)
2. recording sheet
3. 2 players

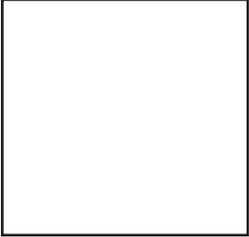
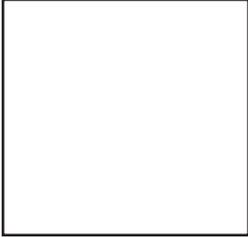
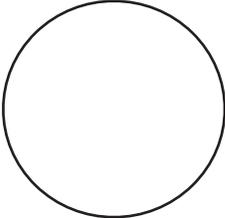
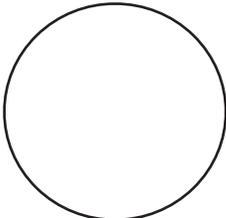
Directions:

1. Player 1 spins and splits their shape.
2. Compare the shapes.
3. If you made equal parts, name the parts using halves, thirds, or fourths on the recording sheet.
4. Player 2 repeats steps 1-3. Continue taking turns until the recording sheet is filled in.





Recording Sheet

Player 1	Player 2
 _____	 _____
 _____	 _____
 _____	 _____
 _____	 _____



Equivalent Fraction Roll



Materials: 6 dice

Directions:

1. Player 1 rolls 2 die and makes a fraction with the 2 amounts shown on the dice. If you roll any fives, they count as a wild card and can be any number you'd like.
2. Player 2 rolls 6 dice and tries to create a fraction that is equivalent to Player 1's fraction. (remember fives are wild)
3. If you cannot, re-roll as many number dice as you'd like. You can re-roll twice.
4. If you can make equivalent fractions, record your statement and show or explain how you know the fractions are equivalent.
5. You get 1 point for each pair of equivalent fractions you write.
6. Repeat steps 1-5 starting with Player 2. Play 8 rounds.

	Equivalent Fractions	If an equivalent fraction was created, circle the player who gets the point.		Equivalent Fractions	If an equivalent fraction was created, circle the player who gets the point.
Round 1	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2	Round 5	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 2	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2	Round 6	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 3	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2	Round 7	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 4	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2	Round 8	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2