

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.

Spot a bridge outside	 Do 60 mins. of activity	 Read for 20 minutes	Draw with Scribbles and Ink	Watch Read, Write, ROAR!
 Read 20 minutes	 Watch Math Might's	Build a Birdbath with Ruff Ruffman	Watch Wimee's Words	 Do 60 mins. of activity
 Do 60 mins. of activity	Watch Wimee's Words	 HAVE FUN! (Free Space)	Pretend to be a racecar driver	 Read for 20 minutes
Watch Read, Write, ROAR!	Build using outdoor materials	 Watch Math Might's	Watch InPACT at Home	Draw a family member's car
Watch InPACT at Home	 Read for 20 minutes	Design a robot from the future	 Do 60 mins. of activity	Try a new food



Build a Better Birdbath



It's all in the column!

After a birdbath mishap, Ruff wonders if a different column would make it stronger. Which shape would support the most weight?

Help Ruff build a better birdbath. Using paper and books, investigate with three different birdbath models to find the strongest design.

Materials:

- Column templates
- Tape
- Books

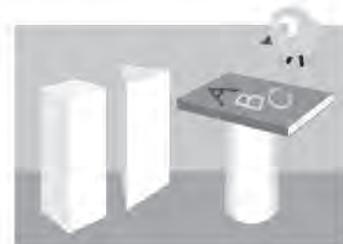
Instructions:

- 1) Print the column templates (on the following pages) and construct three different shaped columns—square, triangle, and circle.
- 2) On a hard surface, stand the three columns on end. Can you predict which shape is the strongest?
- 3) Place a book on top of the first column to create a birdbath platform. Now place that same book on the second and third columns. Did any of the columns support the book?
- 4) Now try placing two or three books on the remaining columns. To keep the weight equal, stack the same books on each column. Which was the strongest? Was your prediction correct?

REMEMBER: Columns are most stable with a balanced load. Place the books evenly on top of each column.

More Ways to Play:

- Can you build a structure that holds three or more books?
- Try using more than one column.
- Try using different types of paper.



For more fun, visit pbskidsforparents.org



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Square Column

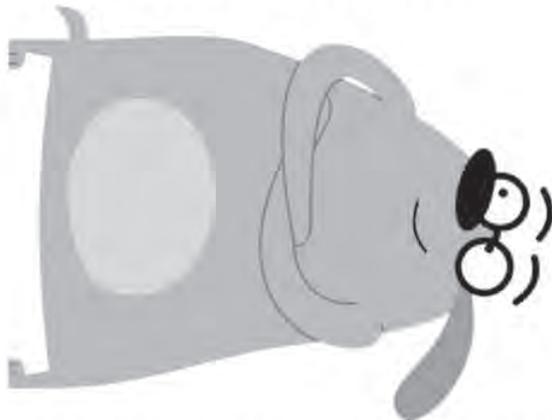
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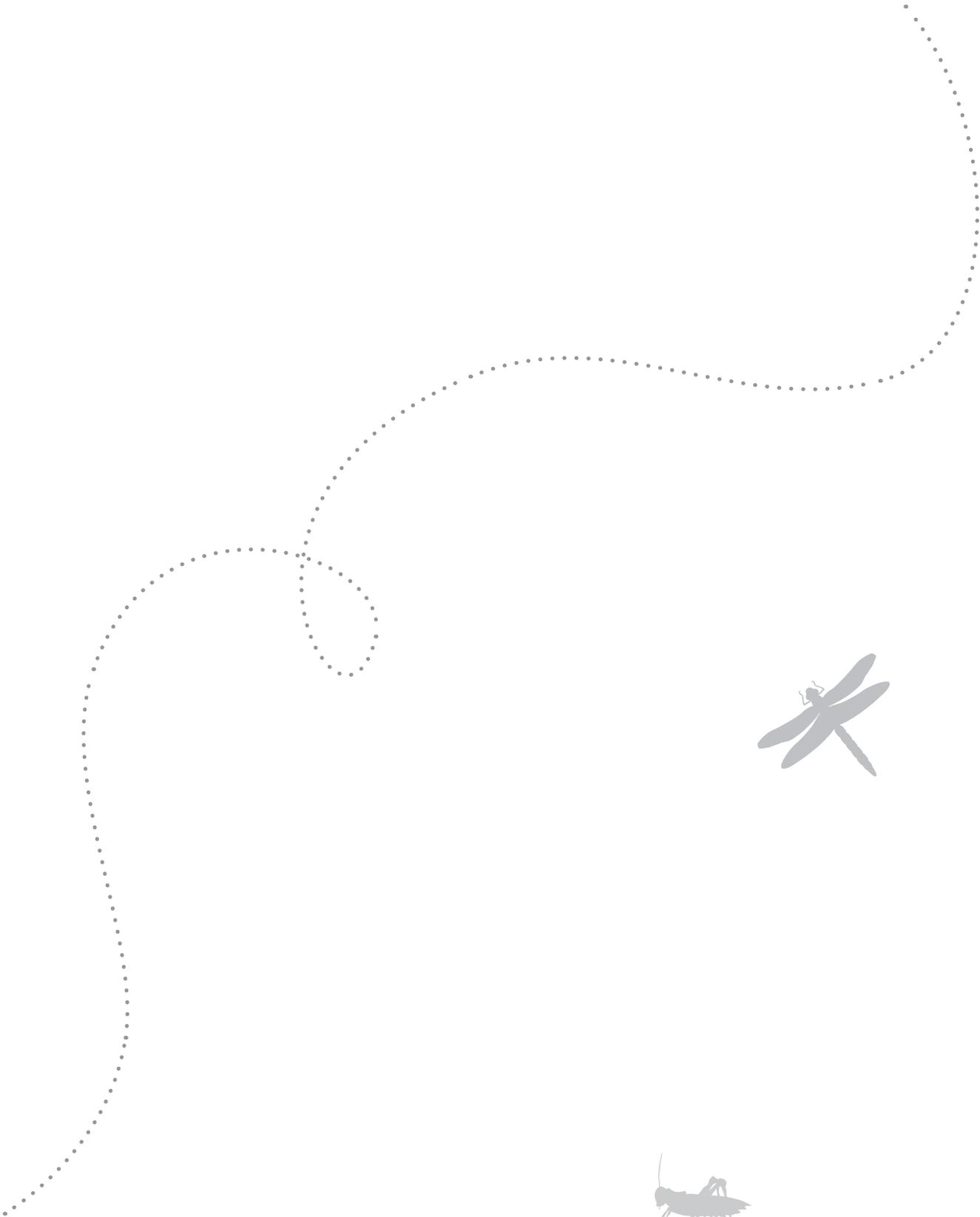


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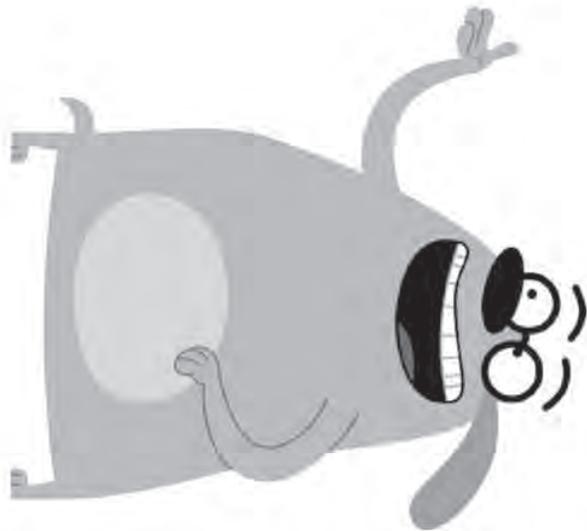


Triangle Column

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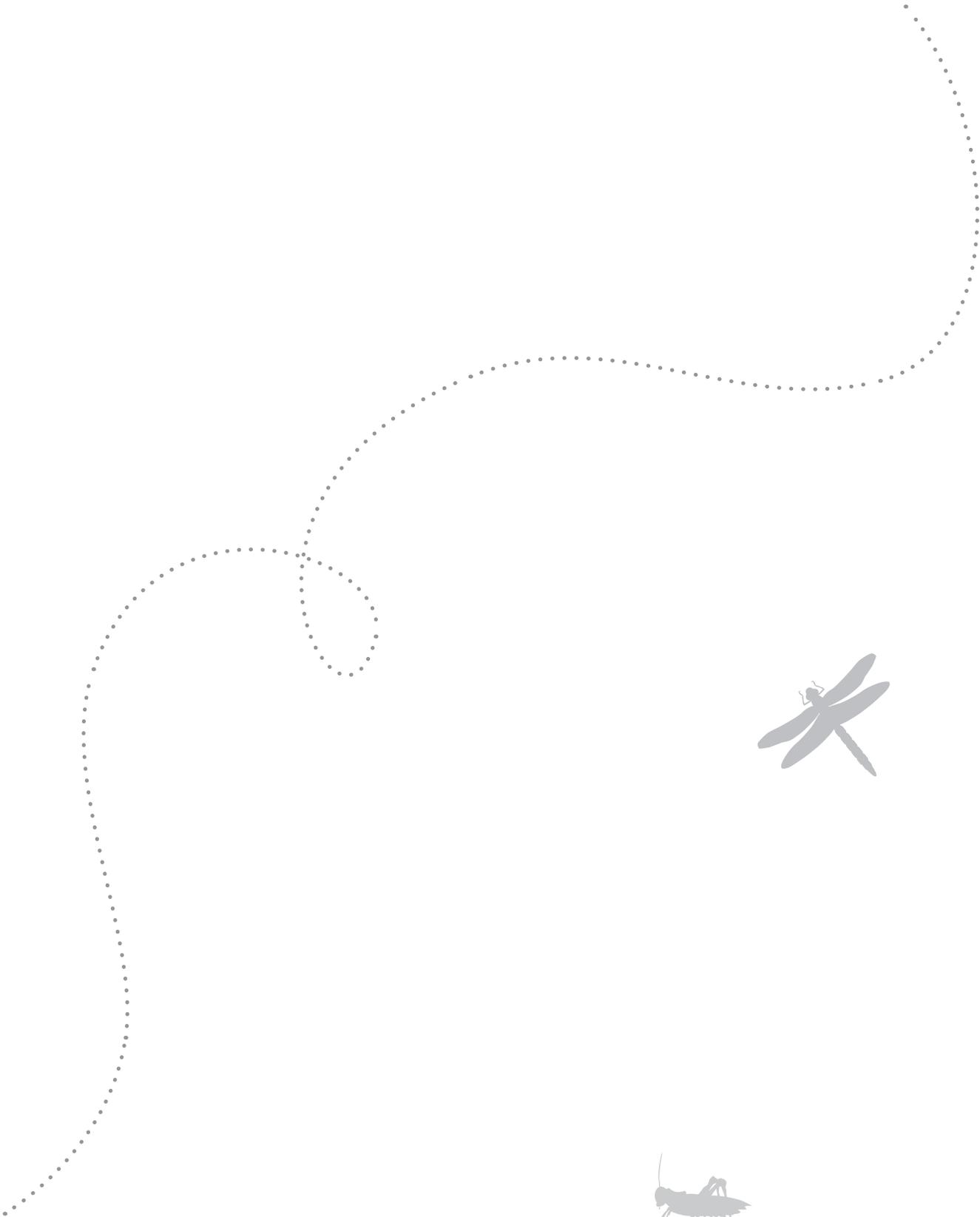
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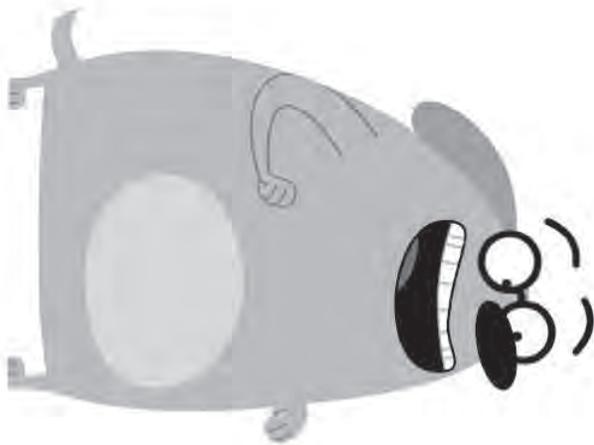
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Circle Column

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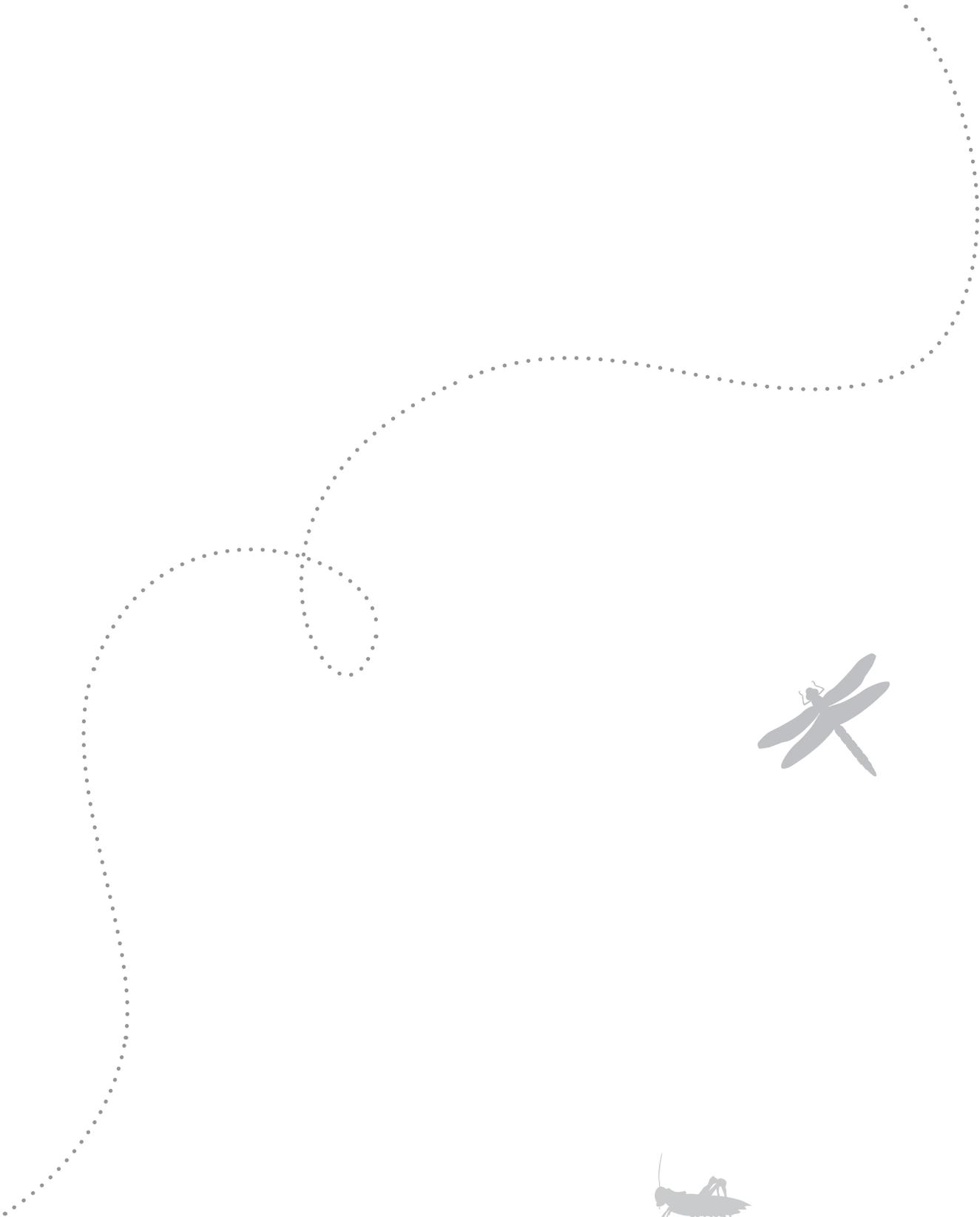
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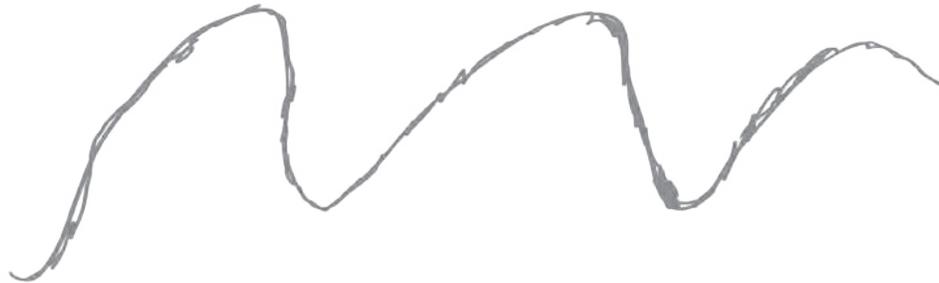


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THE SCRIBBLE GAME

Scribbles
and
Ink



Here's a scribble.
What could it be?



Add onto this
scribble and
then pass it to
a friend.



pbskids.org



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ACTIVITY GUIDE

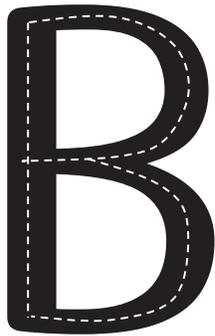
Episode 205: B is for Builders

Scan below to watch lesson



Let's Write

Have your child practice writing the (uppercase) letter B like in the word Builders. Start at the top and make a straight line down. Then make a little curve at the top and a little curve at the bottom.



Let's Talk

Talk to your child about the Michigan State Capitol Building in Lansing, Michigan that is pictured below. What do they notice about how it looks. What do they like about its design and what do they not like about its design. What would they have done differently if they had built it?





ACTIVITY GUIDE

Episode 210: Tornadoes and the Letter I

Book: *What is a Tornado?* By Robin Johnson

Scan below to watch lesson



Letter Heroes

Read the sentence out loud. Highlight or lightly color over the uppercase letter **I's** and lowercase letter **i's**.

Ii

A tornado is a huge, spinning tower.

What types of severe storms does Michigan have?

High Frequency Words

what do

Underline the high frequency words **what** and **do** in the question below.

What can we do to stay safe during a tornado?

Think About It

Circle the pictures below that are needed to stay safe during a tornado.



Colorful Collages

This activity explores

 **Shapes**

Learning Goal

Explore different kinds of shapes.



What You'll Need

- Magazines, newspapers or mail
- Construction paper
- Scissors
- Glue stick or tape

Steps

- 1. Look for shapes!** Look through magazines, newspapers and mail to cut out various shapes. Talk about their characteristics (number of sides, corners, curved, straight).
- 2. Make shapes!** You can also use construction paper to make your own shapes.
- 3. Create a shapes collage!** Glue the shapes to a piece of paper to create a shapes collage. Talk with your child about the shapes as you go. Arrange the shapes together to make an animal!

Watch Video



Talk Together

- Can you find a shape that is round?
- How many sides does this shape have? What do you notice about the sides?

Book Suggestion

***Figuras y ratones/
Mouse Shapes,***
by Ellen Stoll Walsh

Online Game

**Daniel Tiger's Neighbor-
hood: Make a Card**

[pbskids.org/daniel/
games/make-a-card/](https://pbskids.org/daniel/games/make-a-card/)



Build a Tower

Materials: connecting cubes

Directions:

1. Player 1 rolls a connecting cube onto the number mat and adds that number of cubes to their tower.
2. Player 2 repeats step 1.
3. The first player to make a tower of 20 wins.
4. If a student makes a tower with more than 20 cubes, they use the extra cubes to begin a new tower.

Number Mat

8	5	2
6	4	1
7	9	3