

Week 4: Creatures

July 15-21

From the prehistoric to the present, learn about the fascinating features of creatures near and far.

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/creatures to see the playlist of videos for this week.



 Watch Math Park	 60 mins. of activity	 Read for 20 minutes	Catch a firefly	Make pendulum art
 Read for 20 minutes	 Watch Story Pirates	Watch Extra Credit	Watch DIY Science Time	 60 mins. of activity
 60 mins. of activity	Look for creatures outside	 HAVE FUN! (Free Space)	Watch InPACT at Home	 Read for 20 minutes
Watch DIY Science Time	Watch Extra Credit	 Watch Math Park	 Watch Story Pirates	Play Trail-Tac-Toe
 Go fishing	 Read for 20 minutes	Make elephant toothpaste	 60 mins. of activity	Draw a made-up creature

TRAIL-TAC-TOE

CAN YOU GET THREE IN A ROW?

When you visit a park or take a walk in your neighborhood, draw or write in the items below and tell where you saw them.

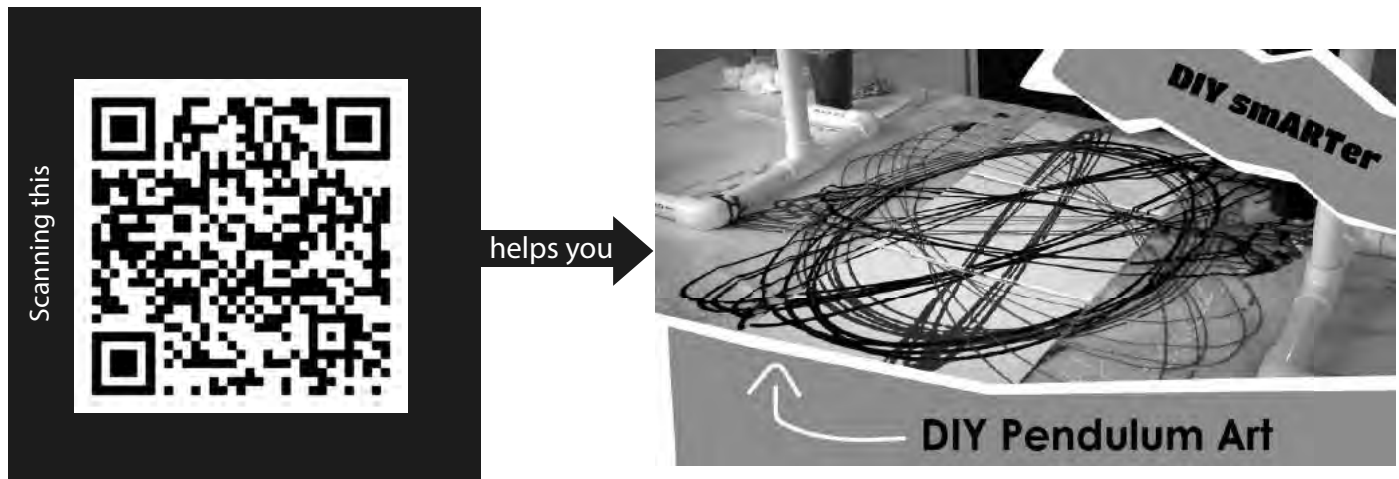
What? Where? Something that could be eaten by an animal	What? Where? A native prairie grass	What? Where? An invasive species
What? Where? Something in nature that is bright red	What? Where? Somewhere or something that helps keep water clean	What? Where? An insect home
What? Where? Something in nature older than you.	What? Where? A yellow flower	What? Where? A sign that an animal was here

METROPARKS.COM

Pendulum Art



1. Scan the QR code on this sheet to watch the video and follow along with Mr. C.



2. You'll need:

- a. This printout
- b. String
- c. Squeeze bottle or plastic cup for your bob
- d. Scissors
- e. Rubber bands and paperclips
- f. Paint
- g. Paper or canvas for painting

Discussion Questions:

What might happen if you use a longer or shorter string? How does the period of the pendulum impact your art?

What might happen if you give the condiment bottle a harder or softer push?

Does the type of paint impact the flow or pattern?

Fun Fact:

Pendulum clocks lose time when it is hot because the heat causes the metal to expand lengthening the rod. This causes the period to increase affecting the ability to keep time.



DESCRIBE YOUR HERO

What are some words to describe your hero?

What is your hero really **GOOD** at, or what is your hero's **TALENT**?

What is your hero's **WEAKNESS**, or what is your hero **AFRAID** of?

What does your hero like to do on a **NORMAL DAY**, when they don't have a big problem to solve?

DIY Elephant Toothpaste



FUN FACT

Seaweed is in our toothpaste! Seaweed acts as a thickening agent that allows toothpaste to be squeezed from its tube!

MATERIALS

- Yeast
- Dish soap
- Measuring spoons
- Empty plastic bottle
- Cup with warm water
- 3% Hydrogen peroxide

DIFFICULTY



CHEMICAL REACTIONS

Chemical reactions take place when the molecular or ionic structure of a substance is rearranged. When a chemical reaction occurs, a new substance is created and the process is irreversible. Today we will be making elephant toothpaste!

VISIT

DIYSCIENTIME.ORG
FOR MORE SCIENCE FUN!



ALABAMA PUBLIC TELEVISION

Why are chemists great at solving problems?

**Answer on the next page*

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DIY Elephant Toothpaste

EXPERIMENT

Step 1: Gather materials.

Step 2: Place 2 tablespoons of yeast into 3 oz of warm water.

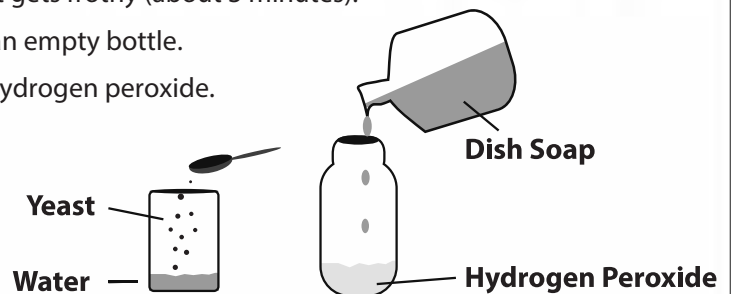
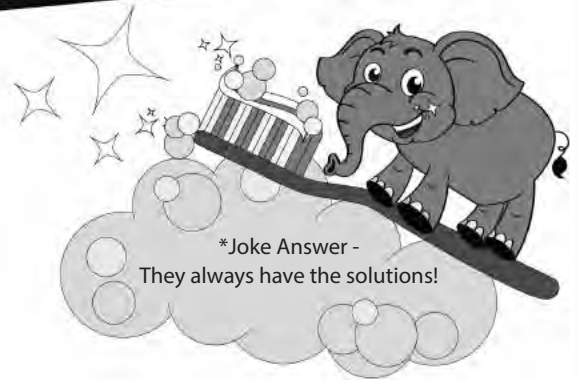
Step 3: Mix yeast and warm water, let stand until it gets frothy (about 3 minutes).

Step 4: Pour 4 ounces of hydrogen peroxide into an empty bottle.

Step 5: Squirt 1 tablespoon of dish soap into the hydrogen peroxide.

Step 6: Pour your yeast mixture into the bottle.

Step 7: Observe what happens!



WHY IT WORKS

"Elephant toothpaste" is created when a chemical reaction takes place and releases one oxygen atom from the hydrogen peroxide (H_2O_2). Hydrogen peroxide decomposes, or breaks down, into water (H_2O) and oxygen (O_2) naturally over time, but the yeast causes this to occur faster. The yeast has an enzyme in it called catalase. Catalase is a catalyst, something that increases the speed of the reaction. The catalyst is what causes the oxygen to be released quickly to create our "elephant toothpaste." So why did we add soap? We wanted to capture all of the released oxygen (gas) from the chemical reaction!

EXTEND YOUR LEARNING

- Would the experiment still work if you added more yeast?
- What happens if you don't add the soap?
- Does the shape or the size of the bottle change how the elephant toothpaste flows?

WORKFORCE CONNECTION

Cosmetologists, people who study the application of beauty treatments, work carefully with chemical reactions on a daily basis to help color people's hair. When someone's hair is bleached, a chemical reaction takes place to change the melanin from brown to a colorless (pale yellow) color. This irreversible process (chemical change) then allows the cosmetologist to apply a new color to the hair.

it's Storytime CHALLENGE

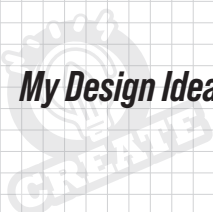
Amazing Animals



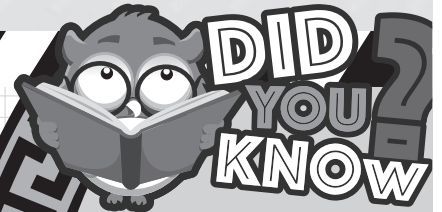
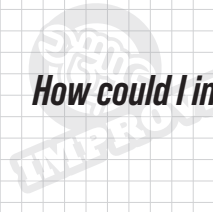
Scan here for instructions from Live From the Opera House Episode 304: Creatures

- Various Boxes
- Fun Fabrics
- Pipe Cleaners
- Foam Blocks, Cubes & Balls
- Masking Tape
- Wiggly Eyes
- Form Board
- Small Bag of Bird Seeds

My Design Ideas:



How could I improve on my design for next time?



Animals are truly amazing. Did you know that to hover, hummingbirds may beat their wings up to 200 times per second? Or that a jaguar can see in the dark six times better than a human?

POWER UP WORDS

- Adaptation
- Coexist
- Ecosystem

CAREER LIFTOFF

- › Zoologist
- › Wildlife Biologist
- › Marine Rescue Officer
- › Animal Shelter Technician

Learning Standards: 2nd Grade

2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.



MATH PARK

Equivalent Fractions

Directions: Scan the QR code to watch the video, and then circle the symbol that goes between them.

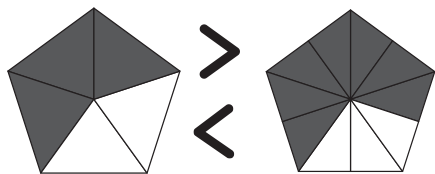
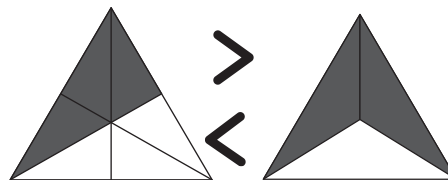


$$\frac{3}{10} > \frac{3}{5}$$

$$\frac{3}{10} < \frac{3}{5}$$

$$\frac{1}{4} > \frac{1}{8}$$

$$\frac{1}{4} < \frac{1}{8}$$



$$\frac{5}{5} > \frac{5}{15}$$

$$\frac{5}{5} < \frac{5}{15}$$

$$\frac{1}{2} > \frac{1}{4}$$

$$\frac{1}{2} < \frac{1}{4}$$

