Michigan LEARNING CHANNEL
A PUBLIC MEDIA PARTNERSHIP

SUMMER!

FUN ACTIVITY BOOK

TWEENS

On TV. Online. Statewide. VISIT MichiganLearning.org

SPECIAL THANKS TO OUR
MICHIGAN LEARNING CHANNEL PARTNERSHIPS:

Content Partners:

826Michgian
American Chemical Society
Ann Arbor District Library
Battle Creek Symphoy Orchestra
Career Girls
Chris Anderson Science Around Cincy
City Opera House
CODE.org
Colorado Springs Conservatory
Detroit Institute of Arts
Detroit Zoo
Grand Rapids Ballet
Huron-Clinton Metroparks
Illustrative Mathematics
INPACT at Home
Kinetic Affect
LearningScienceIsFun
Library of Congress
Little Kids Rock
Lucky Cat Productions
MAISA Literacy Essentials
Michigan Architectural Foundation
Michigan DNR
Michigan EGLE
Michigan Humanities Council
Midland Center for the Arts
Mindful Practices
Mr. E in the D
MSU Extension
NASA
North Carolina Department of Public Instruction
Positive Impact for Life
SchoolKit
Roadtrip Nation
SciGirls
Signing Time
SIS4Teachers
Speak It Forward
Square One Education Network
STEM Greenhouse
Story Pirates
Storycorps
The Diatribe
Traverse City Area Public Schools
United States Air Force
WORLD Channel
YouCubed

Local PBS Stations

WKAR - East Lansing
Detroit Public Television
WCMU - Mount Pleasant
WDCQ - Saginaw
WGVU - Grand Rapids
WNIT - South Bend
WNMU - Marquette

Partner PBS Stations

PBS
PBS Books
PBS Kids
APT (Alabama Public Television)
LPB (Louisiana Public Broadcasting)
PBS SoCal
PBSNC
TPT (Twin Cities PBS)
WCMU
WHRO
WIMAGE
WNET (New York Public Media)
WQED
WUCF

WATCH on the Michigan Learning Channel
or stream the channel at MichiganLearning.org

Visit MichiganLearning.org and follow @MichLearning on social media to find out more.

The Michigan Learning Channel is funded through a grant awarded by the Michigan Department of Education and the U.S. Department of Education.

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DEAR GROWN-UPS,

Summer is full of opportunities to play and learn and we want to make it easy to find inspiring, kid-friendly activities! That's why we've worked with PBS stations and content creators from across the country to bundle up some of our favorite activities into one, easy-to-carry-anywhere book. We hope you and your kids will use this to inspire learning all summer long!

Here are a few quick tips to keep your kids excited about learning this summer:

- **ASK LOTS OF QUESTIONS**. Encourage your kids to participate in conversations by asking them questions like: Why do you think that happened? What will happen next?
- **ENCOURAGE KIDS TO SEARCH FOR ANSWERS**. When your children ask you "why?" see if you can work together to figure out what they need to know or do to find the answer.
- **TRY SOMETHING NEW**. Summer is a great time to try new things like reading a new kind of book, tasting a new food or exploring a new park.
- **JUST HAVE FUN**. Summertime only comes along once a year, so be sure to take the time to relax and have fun while you're learning.
- **BUILD LASTING, POSITIVE MEMORIES THAT WILL LAST A LIFETIME!**

HOW TO USE THIS BOOK

- Keep in mind that this book spans multiple grade levels. Your child won't be using every single page, but choosing a few lessons each week. The goal is to keep kids' brains engaged with a taste of reading, writing, math, art, science, and physical activity every week.
- The grade levels are merely guides to get you started. We recommend starting with the grade that your child just completed and adjusting as needed. Don't be shy about using a different grade level or just picking and choosing lessons that look interesting. This has been a tough year for our children and we want your child to feel proud and confident.
- This book aligns with the content on the Michigan Learning Channel, which can be used on live tv or on demand. There are about 2-3 hours a week of video lessons, plus lots of activities in this book that don't use a screen. We recommend getting outside everyday, reading everyday and having enjoyable moments together as a family!
- This book is designed to use for 8 weeks of summer. We suggest spreading it out over a few days each week and finding a time that works for your family. If you have older children they may do better in the evenings.
- As you go through the weeks, you will find each week has a theme and a link to videos that go with the activities. You can find all the video lessons, plus interactive virtual events and more at **www.michiganlearning.org/summer**.

How do the students in your life use the Michigan Learning Channel? We would love your feedback! Feel free to contact us at mlc@dptv.org.

Michigan Learning Channel Team
MichiganLearning.org

Dates and Themes

The summer program runs from June 20 to August 14, 2022.
Each week has a set of lessons, plus additional programs, activities, and field trips based on the weekly theme.

Take Flight (June 20-26):
From planes and kites to butterflies and birds, discover the fables and physics of things that fly.

Under Water (June 27-July 3):
Dive deep into oceans, rivers, and our own Great Lakes to discover what it takes to live beneath the waves.

Heroes (July 4-10):
Celebrate our nation's birthday and the people we call heroes, whether they are veterans, everyday helpers, or the kind who wear capes.

Creatures (July 11-17):
From the prehistoric to the present, learn about the fascinating features of creatures near and far.

Engineering (July 18-24):
Meet the people who design bridges, cars, and video games and learn how to think like an engineer.

Great Outdoors (July 25-31):
Explore the world outside your door and the incredible parks and waters that belong to us all.

When I Grow Up (August 1-7):
All summer we'll learn about different careers—this week, think about all the exciting possibilities in your future!

Shoot for the Stars (August 8-14):
Look up at the night sky and into outer space and meet people who risked everything to follow their dreams.

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Facebook Live at fb.me/michlearning
www.michiganlearning.org/summer

Follow @MichLearning on social media to find out more.

Where to Find the Michigan Learning Channel

Find your favorite shows anywhere you go!

Scan the QR Code:

Scan any of the QR codes in this book to see the accompanying video right on your device.

On Demand:

Video lessons and activities at MichiganLearning.org

Click your grade level for this week's selected lessons

Or, use "Find a Lesson" to search by grade, subject, and educational standard

On the App:

Find shows on the free PBS app

The PBS App is available for mobile devices, Roku, Apple TV, and on many Smart TVs.

Search for Read Write Roar, Math Mights, Extra Credit, DIY Science Time, Wimee's Words, InPACT at Home, Simple Gift Series, and more great programs.

On the Livestream:

Watch the 24/7 livestream at MichiganLearning.org/live-tv

On TV:

Find us on broadcast television with an antenna

Coming soon to:

Charter Cable services in Northern Michigan and the Upper Peninsula.
Visit MichiganLearning.org/Schedule for details

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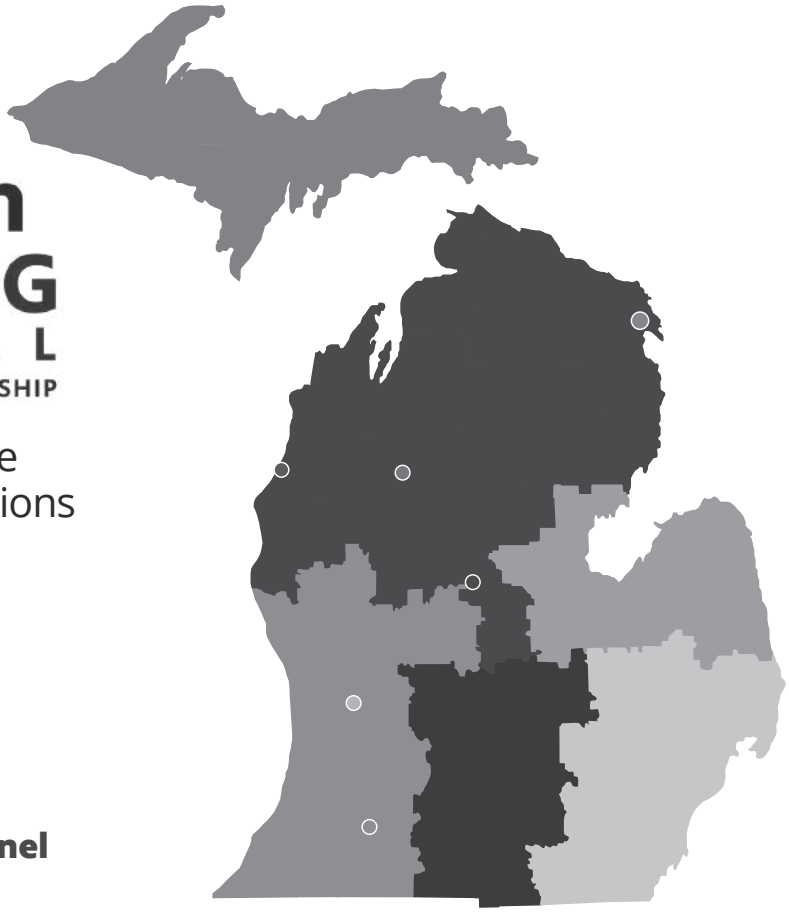
Serving Schools Statewide
Through Your Local PBS Stations



Watch On-Demand at MichiganLearning.org

@MichLearning

The Michigan Learning Channel is Available On:

WCMU
Alpena Channel 6.4

Cadillac
Channel 27.4

Manistee
Channel 21.4

Mt. Pleasant
Channel 14.4

Shelby Shawl
Shelby.shawl@cmich.edu

WDCQ
Delta College Public Media
Channel 19.5
Lauren Saj
laurensaj@delta.edu
(989) 686-9346

WGVU
Grand Rapids
Channel 35.6

Kalamazoo
Channel 52.6
Rachel Cain
cainra@gvsu.edu

WKAR
WKAR Public Media
Channel 23.5
Summer Godette, M.Ed,
summer@wkar.org
(517) 884-4700

WNMU
WNMU-TV
Channel 13.4
Ellen Doan
WNMU Public Media
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WTVS
Detroit Public TV
Channel 56.5
Olivia Misterovich
omisterovich@dptv.org

WNIT
Michiana PBS
Channel 34.5
Sheri Robertson
srobertson@wnit.org
Cass and Berrien counties

COMING SOON
to Charter Cable in Northern and Mid-Michigan and the Upper Peninsula

Rescan Your TV to watch on Broadcast

Your remote control and TV menus may vary, but the steps are the same. Your TV will scan for all available channels.

TV sets connected to cable, satellite or other pay TV providers do not need to scan.

How to Scan

1. Press menu on your remote control.
2. Select setup.
3. Choose antenna then channel scan or auto tune.

rev 2/22

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WEEKDAY SUMMER SCHEDULE

TIME	GRADE	WHAT'S ON
5AM	Preschool - Kindergarten	Let's Learn
6AM		PBS Kids shows
6:30AM		Wimee's Words, Simple Gifts Series
7AM		Let's Learn
8AM		Read, Write, ROAR! (Kindergarten)
8:30AM		Math Mights (Kindergarten)
9AM	1st - 3rd Grade	Read, Write, ROAR! (1st Grade)
9:30AM		Math Mights (1st Grade)
10AM		Read, Write, ROAR! (2nd Grade)
10:30AM		Math Mights (2nd Grade)
11AM		Read, Write, ROAR! (3rd Grade)
11:30AM		Math Mights (3rd Grade)
12PM		Live From the City Opera House: It's Storytime
12:30PM		PBS Kids shows
1PM	4th - 6th Grade	Extra Credit
1:30PM		Math & Movement
2PM		Story Pirates
2:30PM		DIY Science Time, SciGirls
3PM		Curious Crew
3:30PM	1st - 3rd Grade	Cyberchase, Into the Outdoors
4PM		Read, Write, ROAR! (2nd & 3rd Grade)
4:30PM		Math Mights (2nd & 3rd Grade)
5PM	Preschool - Kindergarten	Read, Write, ROAR! (Kindergarten & 1st Grade)
5:30PM		Math Mights (Kindergarten & 1st Grade)
6PM		Let's Learn
7PM	4th - 6th Grade	Extra Credit
7:30PM		Math & Movement
8PM		Story Pirates
8:30PM		DIY Science Time, SciGirls
9PM 5AM	6th - 12th Grade	Nature, NOVA, American Experience, Ken Burns and other PBS programming

Details at MichiganLearning.org/schedule

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WATCH on the Michigan Learning Channel.
Episodes are available on-demand or stream the channel at **MichiganLearning.org/summer**

Visit MichiganLearning.org and follow @MichLearning
on social media to find out more.

Learn at Home with PBS KIDS

Schedule Begins October 4, 2021

Explore reading, math, science, life lessons, and more on the PBS KIDS 24/7 channel and live stream!
The TV schedule below offers you and your child a chance to learn anytime alongside your friends from PBS KIDS.

TIME (M-F)	SHOW	GRADE	LEARNING GOALS
6/5c am	The Cat in the Hat Knows a Lot About That!	PK-1	Science & Engineering
6:30/5:30c am	Ready Jet Go!	K-2	Science & Engineering
7/6c am	Peg + Cat	PK-K	Math
7:30/6:30c am	Super WHY!	PK-K	Literacy
8/7c am	Daniel Tiger's Neighborhood	PK-K	Social & Emotional Learning
8:30/7:30c am	Daniel Tiger's Neighborhood	PK-K	Social & Emotional Learning
9/8c am	Sesame Street	PK-K	Literacy, Math, Social & Emotional Learning
9:30/8:30c am	Elinor Wonders Why	PK-K	Science & Engineering
10/9c am	Clifford the Big Red Dog	PK-K	Social & Emotional Learning, Literacy
10:30/9:30c am	Dinosaur Train	PK-K	Science
11/10c am	Let's Go Luna!	K-2	Social Studies
11:30/10:30c am	Curious George	PK-K	Math, Science & Engineering
12 pm/11c am	Nature Cat	K-3	Science
12:30 pm/11:30c am	Xavier Riddle and the Secret Museum	K-2	Social & Emotional Learning
1/12c pm	Molly of Denali	K-2	Literacy
1:30/12:30c pm	Hero Elementary	K-2	Science & Engineering
2/1c pm	Cyberchase	1-5	Math & Science
2:30/1:30c pm	Pinkalicious & Peterrific	PK-1	The Arts
3/2c pm	Pinkalicious & Peterrific	PK-1	The Arts
3:30/2:30c pm	Elinor Wonders Why	PK-K	Science & Engineering
4/3c pm	Donkey Hodie	PK-K	Social & Emotional Learning
4:30/3:30c pm	Curious George	PK-K	Math, Science & Engineering
5/4c pm	Alma's Way	K-1	Social & Emotional Learning
5:30/4:30c pm	Xavier Riddle and the Secret Museum	K-2	Social & Emotional Learning
6/5c pm	Molly of Denali	K-2	Literacy
6:30/5:30c pm	Hero Elementary	K-2	Science & Engineering

Access FREE, at-home learning activities, tips, and more on pbskidsforparents.org

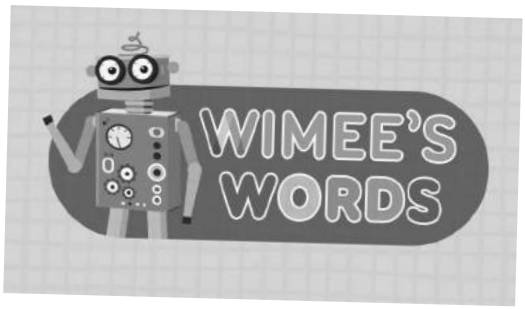
LIVE Virtual Events

As part of the Summer Program, students can participate in live virtual events via Facebook Live. Events are interactive and presenters will take student suggestions and questions in real time. Recorded versions of these events will also be available online.

Live virtual events will be hosted on the Michigan Learning Channel Facebook page.

Wimee's Words Live!

Recommended for ages 4-8



Join the loveable robot puppet Wimee and his friends as they discover more about the weekly theme. Wimee needs your help to write stories! Give Wimee your favorite words and ideas in the comments and watch as he incorporates them into stories and songs in real time. Your ideas may even be featured in future episodes of "Wimee's Words" on PBS!

Wimee's Words Live! with the Michigan Learning Channel
Every Wednesday, June 21-August 9, 4pm
Live on the Michigan Learning Channel Facebook page

Great Lakes Now Watch Party with the Belle Isle Aquarium

Recommended for ages 8 and up

GREAT LAKES NOW

The monthly PBS show *Great Lakes Now* explores the water, people, and environmental issues that tie together the whole Great Lakes basin. Once a month, they team up with the Belle Isle Aquarium to take a deep dive into the themes of the show. Students will have the chance to ask questions of the guest scientists and meet fantastic fish and other creatures.

***Great Lakes Now* Watch Party**
Friday, July 1, 1pm
Friday, August 5, 1pm
Live on the Michigan Learning Channel Facebook page

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Learn Anywhere!

On Air. Online. On Demand.

Serving students statewide through your local PBS station, the Michigan Learning Channel has everything kids need to build their brains and engage in learning key concepts to succeed in school!

Preschool

Read, sing, and play with your little one.

Wimee's Words
Join Wimee, the fun, lovable robot that inspires kids to learn through creativity.

Simple Gift Series
Make music, find something new, and read with Betty the Bookworm.

POP Check
Mindful practice tools to Pause, Own what we are feeling, and Practice relaxing.

Kindergarten to 3rd Grade

Keep kids learning with fun lessons taught by Michigan teachers.

Read, Write, Roar
Kids build literacy skills with engaging ELA lessons.

Math Mights
Build number sense and learn strategies for solving math problems.

InPACT
Get moving with this home-based physical activity program.

4th to 6th Grade

Short, engaging videos and hands-on lessons keep tweens engaged.

Extra Credit
Creative writing, math, fitness, career exploration, and more!

Curious Crew
Dr. Rob Stephensen and inquisitive kids take a hands-on apprach to scientific exploration.

Story Pirates
Bite-sized literary lessons with comedians, authors, and teachers.

VISIT us online to view all shows, learn about events, and download activities!

www.michiganlearning.org

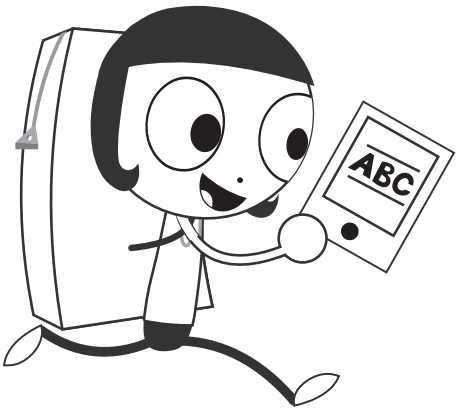
Follow @michlearning to find out more.

Learn at Home with PBS KIDS

Play and learn anytime and anywhere with free apps from PBS KIDS! Use the chart below to find the app that aligns to your child's grade, learning goal, and favorite PBS KIDS show - then download it on your on your mobile or tablet device to play online, offline, or anytime.

Apps for Social & Emotional Learning

Daniel Tiger for Parents	PK-K	Social & Emotional Learning
PBS KIDS Games app	K-2	Multiple Learning Goals
PBS KIDS Video app	K-2	Multiple Learning Goals

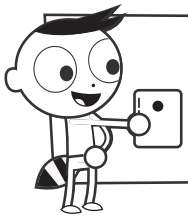


Apps for Literacy Learning

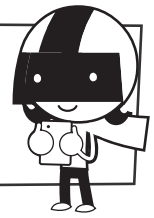
Dinosaur Train A to Z	PK-K	Literacy, Science
Molly of Denali	K-2	Literacy
PBS KIDS Games app	K-2	Multiple Learning Goals
PBS KIDS Video app	K-2	Multiple Learning Goals

Apps for STEM Learning (Science, Technology, Engineering & Math)

PBS Parents Play & Learn	PK-K	Literacy, Math
Play & Learn Engineering	PK-K	Science and Engineering
PBS KIDS Measure Up!	PK-K	Math
Play & Learn Science	PK-K	Science
Splash and Bubbles for Parents	PK-K	Science
Splash and Bubbles Ocean Adventure	PK-K	Science
The Cat in the Hat Builds That!	PK-K	Science and Engineering
The Cat in the Hat Invents	PK-K	Science and Engineering
Jet's Bot Builder: Robot Games	K-2	Science and Engineering
Photo Stuff with Ruff	K-2	Science
Ready Jet Go! Space Explorer	K-2	Science
Ready Jet Go! Space Scouts	K-2	Science and Engineering
Nature Cat's Great Outdoors	K-3	Science
PBS KIDS ScratchJr	1-2	Coding
Outdoor Family Fun with Plum	1-3	Science and Engineering
Cyberchase Shape Quest	1-5	Math
PBS KIDS Games app	K-2	Multiple Learning Goals
PBS KIDS Video app	K-2	Multiple Learning Goals



pbskids.org/apps



GET IT ON Google Play

Download on the App Store

Week 2: Under Water June 27 – July 3

Dive deep into oceans, rivers, and our own Great Lakes to discover what it takes to live beneath the waves.

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

Playlists this week: www.michiganlearning.org/underwater

Watch Math Park	60 mins. of activity	Read 20 minutes	Watch Great Lakes Now	Go swimming
Read 20 minutes	Watch Story Pirates	Make density art (pg. 20)	Go fishing	60 mins. of activity
60 mins. of activity	Make a heatless lava lamp (pg. 23)	HAVE FUN! (Free Space)	Watch InPACT at Home	Read 20 minutes
Watch DIY Science Time	Go swimming	Watch Math Park	Watch Story Pirates	Watch Extra Credit
Watch Great Lakes Now	Read 20 minutes	Build a pond viewer (pg. 21)	60 mins. of activity	Watch Math Park

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WORD FIND

Michigander Fish

The State Park Explorer Program offers **free fishing programs** at many state parks throughout the summer months. Are you ready to go fishing? How well can you recognize different species of fish? Complete the word search below of fish common to Michigan. For a **bonus point,** circle the names of the fish you see during your stay here at the park!

```
                  P Y Z
            B T O G N I X V C
        H S A K S Y R S D I M D Z
    O B G F R B S P S E A R L W S J R
  R A K H R R L A A N N E C P H S P B K
K G Y H K G Z N B D O C H S U I R E M S K
Y V A B K B C H H R B F L P F T Y B B E I
V E K M V K D T Q T D S L E Q U E G S X L J C
A N J S N I U I H U Y N S E Y G F K S U S I O
V R F D D Z O Y E G O U E G T R Q I T E N O X Q D
V D O M X M G R S J M T O L S O U S B I I U G R L
J A L O L F N U W P E U Z U L S L H B F M C U L Q
S E V U L S P Q U Q N G M X O N O Z K X A N J L F W H
Y T G A Y I Z W T R V R Z Z H G V W O C C E I G W N J
L G M R K A C O D I O A T R O U T P P H R G O C A N N
S N E U Q W A K O H L Q S H T U Z O E E F F Q L H
Y K Z A I E G R W E C R P C T D L D U R H W Y L V
G H O P U P Y J D J Z Y V R R Q X L H C C N S E J
Z O Y E G N U L L E K S U M Q B P R U S H Y Y
D P W H S I X Q N B M P X Y N K M V V M Y L E
V K E L N D W H G I T B T C I U E L E Q P
Z V I R Y D X X V A A S I W V M U I L C Y
L F L A K E S T U R G E O N W A H T U
O R B L X S A L M O N Y R O E L X
B I Q X U E D B B R X Q D
H X K G J H N P A
K K P
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Bluegill

Lake Sturgeon

Largemouth Bass

Muskellunge

Northern Pike

Salmon

Smallmouth Bass

Smelt

Steelhead

Trout

Walleye

Whitefish

Yellow Perch

Density Art

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

Scanning this

helps you

2. You'll need:
    a. This printout
    b. Plain printer paper or canvas paper
    c. Food coloring
    d. Vegatable Oil
    e. Pipette or straw
    f. Pan

Discussion Questions:
Does the type of paper impact the art?

How can you manipulate the colors to make more colors than you originally had in the food coloring box?

What if you added something like glitter to the oil and water mixture?

Fun Fact:
Symmetry is used in photography to create beautiful images. Butterflies have a line of symmetry down the center of their bodies.

A POND WITH A VIEW

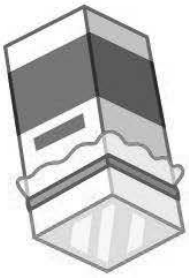
DIFFICULTY: EASY

While there is action all around a pond, what do you think is happening *in* the water? Ponds are filled with animal and plant life that have special qualities that help them spend all or most of their lives underwater. Make this pond viewer to bring on your next pond exploration!

MATERIALS

- One-half gallon milk carton
- Scissors
- Waterproof, strong tape (e.g. duct tape) or a sturdy rubber band
- Heavy, clear plastic wrap

LET'S MAKE A POND VIEWER!



1. Have an adult cut off the very top of the milk carton and the very bottom to create a rectangular tube.
2. Tear off a sheet of plastic wrap and place it over one of the open ends. Fold down the plastic wrap… make sure wrap is smooth and tight for clear viewing.
3. Using the tape or the rubber band, secure the plastic wrap in place. Keep the plastic wrap as tight as possible so you have a flat viewing surface.

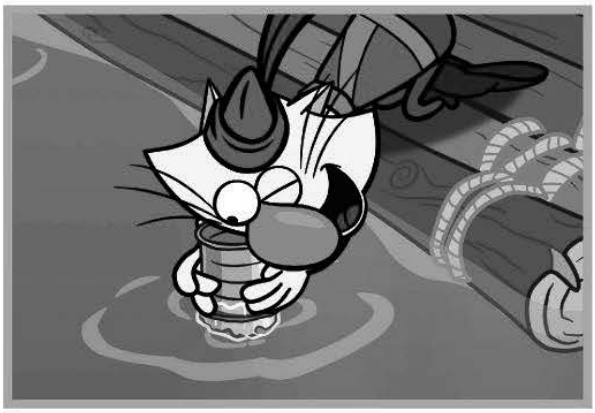
pbskids.org/naturecat

POND VIEWING TIPS

1. Splashing and stirring up mud will make it difficult to see into the pond. Be as still as possible when using your viewer.

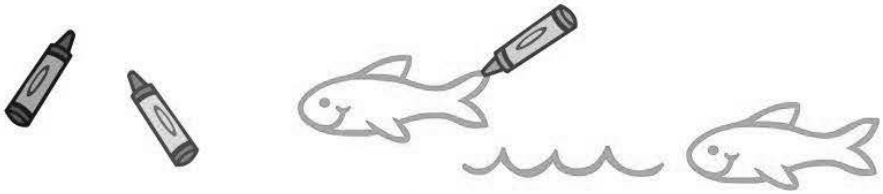
2. Despite what NatureCat says, it is noble and fun to get wet! If the shoreline is murky, slowly wade out to your knees before using your viewer where it may be less murky.

3. Other ways to view: on a dock, over the side of a canoe, or in a stream, lake or tide pool!



LET'S TAKE A CLOSER LOOK

Describe a plant or animal that you see. Draw a picture of it, and ask an adult to help you identify and label your picture.



pbskids.org/naturecat

DIY Heatless Lava Lamp

FUN FACT

Lava lamps were invented in 1948 and were originally called "Astro Lamps." The lava lamp made its television debut in the US in the 1960s on a show called "Doctor Who." Sales skyrocketed after this TV appearance!

MATERIALS

- 2-liter bottle
- Vegetable oil
- Water
- Effervescent tablets
- Food coloring
- Funnel

DIFFICULTY

DENSITY

Density is a measurement of the matter an object has within a given volume. Objects with more matter in a given volume have a higher density. Objects with less matter in the same amount of volume have a lower density. Density is found by dividing the mass of an object by its volume.

VISIT

DIYSCIENCETIME.ORG

FOR MORE SCIENCE FUN!

What runs but never walks?

*Answer on the next page

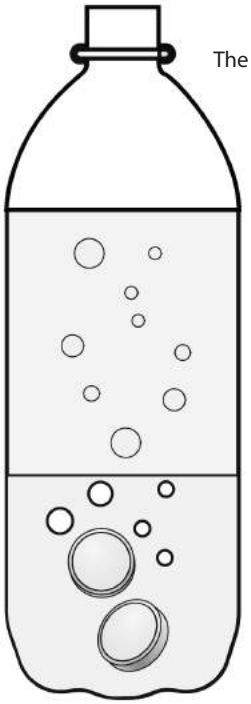
ALABAMA PUBLIC TELEVISION

DIY SCIENCE TIME

"Science is wherever YOU are!"

*Joke Answer -
The water from your faucet!

DIY Heatless Lava Lamp



EXPERIMENT

Step 1: Gather your materials.

Step 2: Clean and rinse your empty 2-liter bottle.

Step 3: Pour 3 cups of water into your bottle.

Step 4: Add food coloring to the water.

Step 5: Gently pour vegetable oil into the bottle and observe how the water and oil interact.

Step 6: After allowing the water and oil to settle, drop pieces of the effervescent tablets into the bottle.

Step 7: Observe what happens!

WHY IT WORKS

The oil and water stay separate because they have different densities. The oil floats on the water because it's less dense than water. When the effervescent tablet sinks to the bottom, it mixes with the water and starts a chemical reaction that produces carbon dioxide, a gas that rises through the oil. When these bubbles rise, they pull some of the colored water up and through the oil. The gas eventually escapes at the top, but the water falls back down through the oil because it is more dense!

EXTEND YOUR LEARNING

- What happens if you add more pieces of effervescent tablet, or change the amount of water in the bottle?
- Try shining a light, like a flashlight, through the bottle. What can you see differently?
- Is there a limit to the number of times you can repeat the experiment?

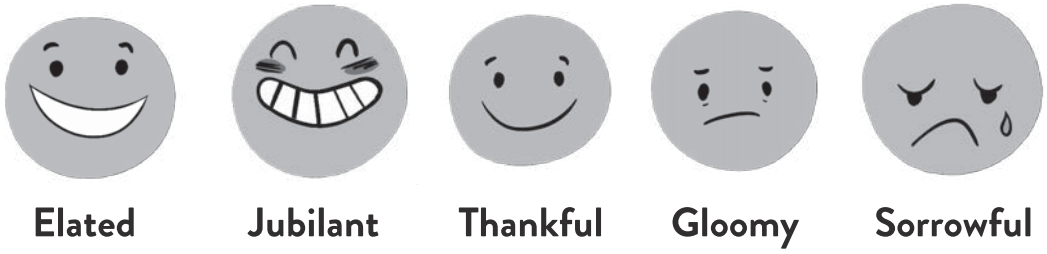
WORKFORCE CONNECTION

Paint chemists are scientists who study the properties and use of paint. Most paints are made of the same basic ingredients: pigments, binders, liquids, and additives. How these ingredients interact due to their densities plays an important part in determining the way that paint performs. Paint chemists study things like how well a paint can cover a surface or how long a paint may be able to last outside in the weather.

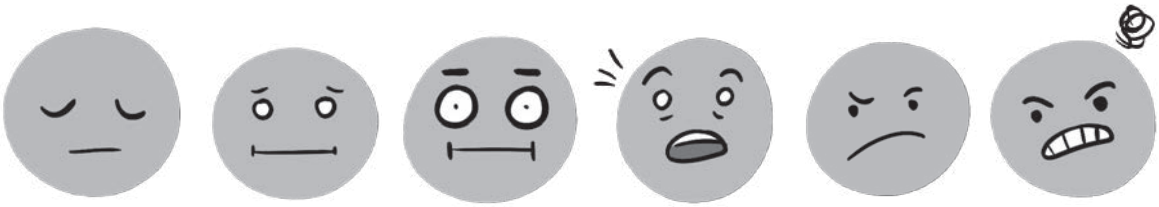
SHOW NOT TELL! Emotion

THE STORY PIRATES CREATOR CLUB

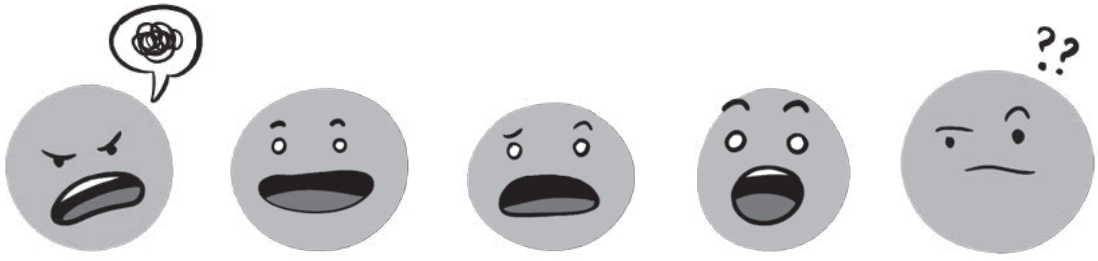
What **emotion** would you like to "Show, Not Tell"? Pick one from the examples below, or just choose your own! If you're not sure what some of the words mean, look at the picture of the face for a clue.



Elated Jubilant Thankful Gloomy Sorrowful



Lonely Anxious Petrified Startled Frustrated Furious



Irate Amazed Bewildered Shocked Inquisitive

Who is your character?	SHOW the emotion to the reader. What does the character SAY because they feel that way?
What **emotion** are they feeling?	

Week 3: Heroes

July 4-10

Celebrate our nation's birthday and the people we call heroes, whether they are veterans, everyday helpers, or the kind who wear capes.

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

Playlists this week: www.michiganlearning.org/heroes

Watch Math Park	60 mins. of activity	Read 20 minutes	Do a good deed	Spot a mail truck outside
Read 20 minutes	Watch Story Pirates	Build an inertia walker (pg. 29)	Watch DIY Science Time	60 mins. of activity
60 mins. of activity	Spot a fire truck outside	HAVE FUN! (Free Space)	Watch InPACT at Home	Read 20 minutes
Watch DIY Science Time	Do a good deed	Watch Math Park	Watch Story Pirates	Draw a plant superhero (pg. 27)
Watch Extra Credit	Read 20 minutes	Watch Extra Credit	60 mins. of activity	Watch Math Park

Michigan LEARNING CHANNEL
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AT-HOME ACTIVITY

Design Your Own Plant Superhero

Big Idea: There are many different types of plants. Some types of plants are good at cleaning the air to make it better for us to breathe.

Explore: Below are three different types of plants. All of these plants are good at cleaning the air inside your house to get rid of pollutants. Pollutants are small, unhealthy things that can get into the air, sometimes from new rugs or cleaning supplies. These plants breathe in the pollutants when they take in air, making it healthier for us inside.

Peace Lily

Areca Palm

Snake Plant

Look at the three plants above. What do you notice that all of these plants have in common (What color are they? What parts of the plant do you see?) What do all plants need?

_____

_____

How are these plants different from each other?

_____

_____

(continued on page 2)

For more *Cyberchase* adventures with plants, watch "Plantasaurus" on pbskids.org/cyberchase.

Funding for *Cyberchase* is provided by The JPB Foundation, the Heising-Simons Foundation and Ernst &Young LLP.
Additional funding is provided by Lynne and Marc Benioff, the Tiger Baron Foundation, Shailaja and Umesh Nagarkatte and Ellen Marcus.

AT-HOME ACTIVITY

Design Your Own Plant Superhero

DRAW PAGE

Take turns drawing your plant superhero on this page. Start with the top section and make sure to draw down just below the dotted line. Fold over the top section when you are done and pass on to the next person for the middle section.

Fold back here when top section is done.

Fold back here when middle section is done.

(continued on page 4)

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DIY Inertia Walker

FUN FACT

Inertia combined with the gravitational pull from the sun, is what keeps our planet, Earth, orbiting the sun.

MATERIALS

- Inertia walker printout
- Scissors
- Tape
- Marble
- Ramp

DIFFICULTY

INERTIA

Newton's 1st law states an object at rest remains at rest, and an object in motion remains in motion unless acted on by an unbalanced force. In other words, we call the tendency of an object to do nothing or remain unchanged inertia.

We often experience inertia in our lives! Think about driving in a car and someone applies the brakes. Your body tries to keep moving forward, but the seatbelt holds you safely in place. Try looking at your chocolate milk while you are stirring it next time. Although you pull the spoon out, the milk keeps spinning and swirling in the cup.

Why do dentists love riding roller coasters?

*Answer on the next page

VISIT
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ALABAMA PUBLIC TELEVISION

DIY SCIENCE TIME

"Science is wherever YOU are!"

*Joke Answer - They know how to BRACE themselves!

DIY Inertia Walker

EXPERIMENT

Step 1: Print and cut out the walker on the dashed line.

Step 2: Fold and crease the tabs on the solid lines.

Step 3: Tape the walker together where the tabs overlap. Place a marble inside the walker before taping closed.

Step 4: Build a ramp using books and a long flat surface such as a wood board or long box.

Step 5: Place your walker at the top of the ramp and release it!

WHY IT WORKS

Objects in motion want to stay in motion, and the marble inside the walker wants to roll down the ramp. The marble has enough inertia to push and force the rounded end of the walker down the ramp. Without that extra force from the marble, the walker would not be able to overcome the friction between its long side and the ramp's surface. This allows the walker to tumble and turn all the way down the ramp!

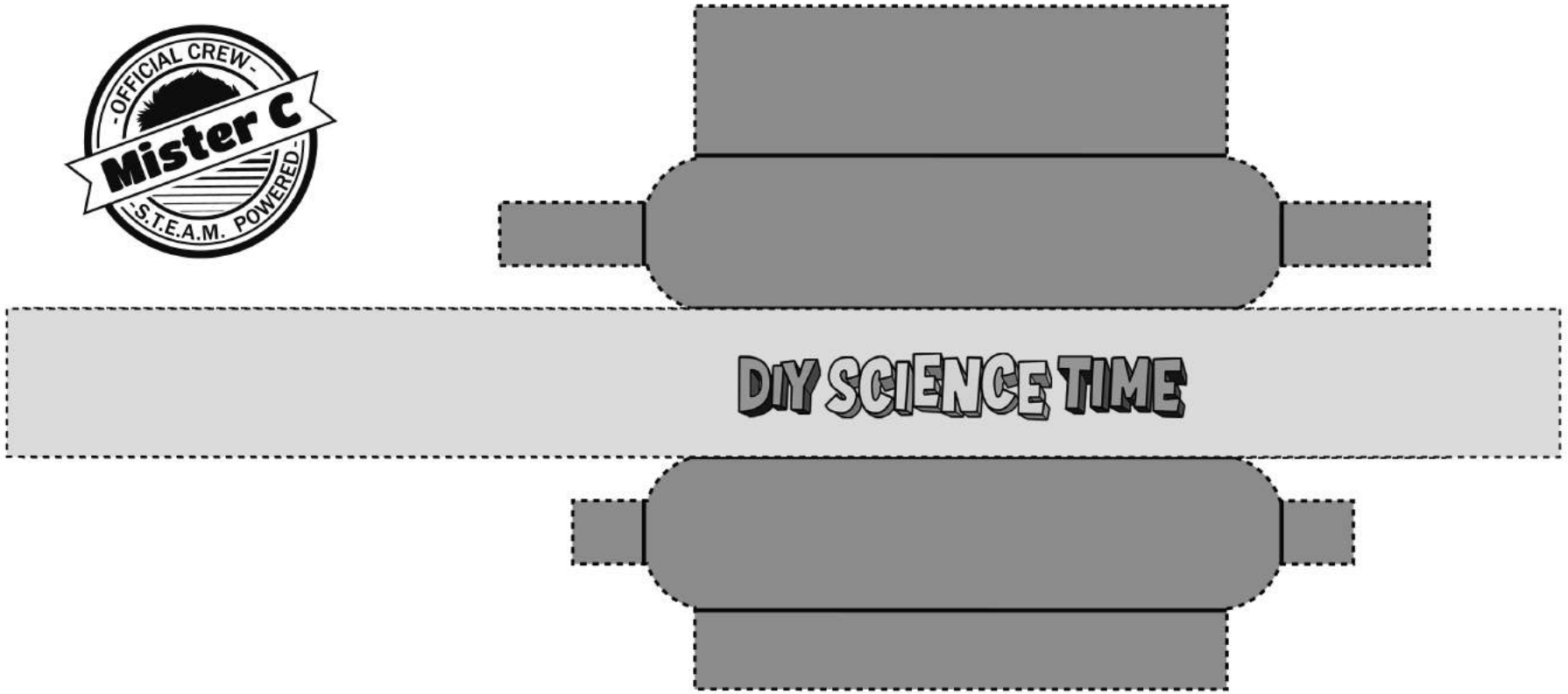
EXTEND YOUR LEARNING

- Could you design your own walker using household materials available to you?
- What happens if you use a larger or smaller marble? Can a smaller marble keep the walker moving?
- What other types of ramps could you test your walker on? Would it work on a slide at the park?
- Could you create a differently-shaped three dimensional object to be a walker? Would a cube work?

WORKFORCE CONNECTION

Biomedical engineers called kinesiologists are scientists who study how people move. Kinesiologists can help athletes improve how they perform in their sports by showing them how their motions can enhance their physical fitness and reduce chances for injuries. They must understand motion and forces, like inertia and gravity, and how they impact athletes' bodies.

DIY Inertia Walker



Fold along solid lines. Cut along dashed lines.

Directions:

Step 1: Cut out the walker on the dashed line.

Step 2: Fold and crease the tabs on the solid lines. Place a marble inside the walker before taping it shut.

Step 3: Build a ramp using books and a long flat surface such as a wood board or long box.

Step 4: Place your walker at the top of the ramp and release it!

ALABAMA PUBLIC TELEVISION

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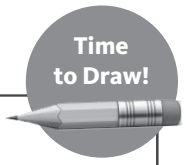
THE STORY PIRATES – CREATOR CLUB

CREATE YOUR HERO



Draw and label your hero!

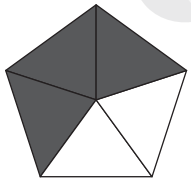
Hero's name

MATH PARK

Fractions of a Set

Directions: Scan the QR code to watch the video, and then write the fraction you see in the picture.

$\frac{4}{5}$



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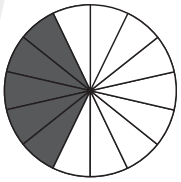

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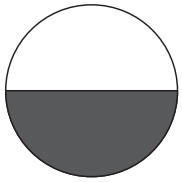

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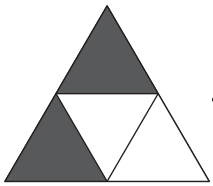

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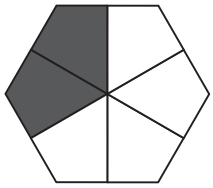

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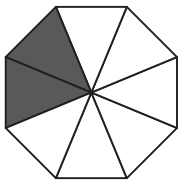

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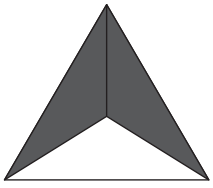

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TWEENS

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