



SUMMER!

FUN ACTIVITY BOOK



TWEENS



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WDCQ - Saginaw
WGVU - Grand Rapids
WNIT - South Bend
WNMU - Marquette

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APT (Alabama Public Television)
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PBS SoCal
PBSNC
TPT (Twin Cities PBS)
WCMU
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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.



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.



On TV. Online.
Statewide.

Learn more about the Michigan Learning Channel at
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 Might's, 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



On TV. Online.
Statewide.

Learn more about the Michigan Learning Channel at
Facebook Live at fb.me/michlearning
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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.



Serving Schools Statewide
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MichiganLearning.org

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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
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WDCQ
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Cass and Berrien
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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.



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 Might's (Kindergarten)
9AM	1st - 3rd Grade	Read, Write, ROAR! (1st Grade)
9:30AM		Math Might's (1st Grade)
10AM		Read, Write, ROAR! (2nd Grade)
10:30AM		Math Might's (2nd Grade)
11AM		Read, Write, ROAR! (3rd Grade)
11:30AM		Math Might's (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 Might's (2nd & 3rd Grade)
5PM	Preschool - Kindergarten	Read, Write, ROAR! (Kindergarten & 1st Grade)
5:30PM		Math Might's (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

rev 02/22

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](https://twitter.com/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

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LIVE Virtual Events

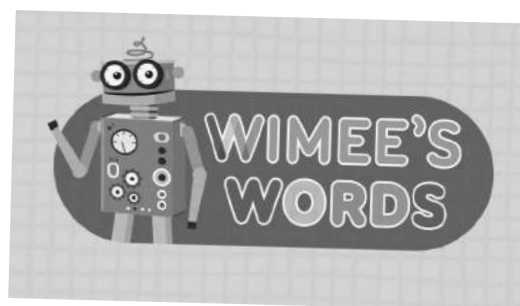
As part of the Summer Program, students can participate in live virtual events via Facebook Live. Events are interactive and presenters will take student suggestions and questions in real time. Recorded versions of these events will also be available online.

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

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.



GREATLAKESNOW

Great Lakes Now Watch Party

Friday, July 1, 1pm

Friday, August 5, 1pm

Live on the Michigan Learning Channel Facebook page



On TV. Online.
 Statewide.

Learn more about the Michigan Learning Channel at
Facebook Live at fb.me/michlearning
www.michiganlearning.org/summer



Follow @MichLearning on social media to find out more.



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 Might

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 approach 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.

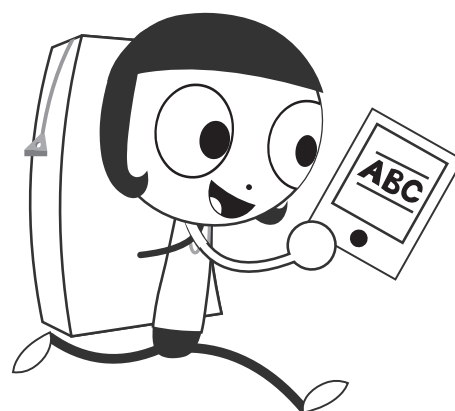


Apps for Social & Emotional Learning

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

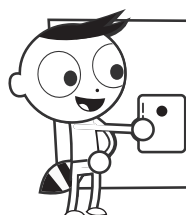
Apps for Literacy Learning

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



pbskids.org/apps



Week 6: Great Outdoors











July 25-31

Explore the world outside your door and the incredible parks and waters that belong to us all.

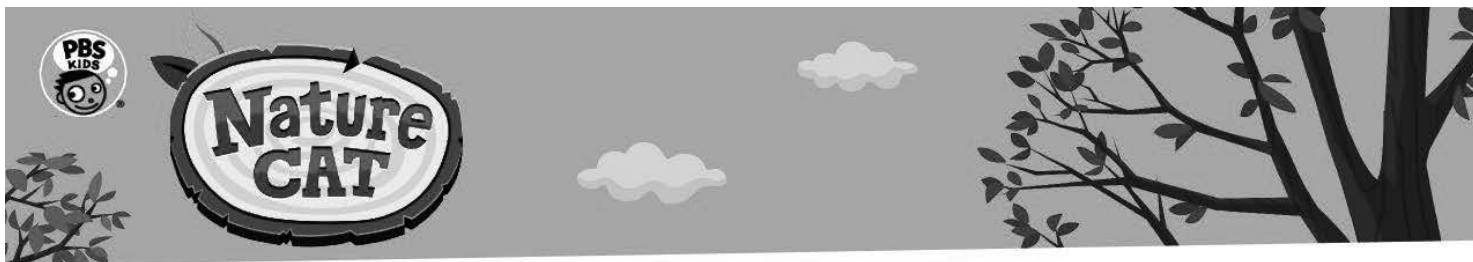
Use the sheet below to mark off this week's activities as you complete them. See if you can get a BINGO!

Playlists this week: www.michiganlearning.org/greatoutdoors



Crush a soda can with SCIENCE! (pg. 60)	 60 mins. of activity	 Read 20 minutes	 Watch the sunset	Watch Extra Credit
 Read 20 minutes	 Watch Story Pirates	Make a composter (pg. 54)	Watch DIY Science Time	 60 mins. of activity
 60 mins. of activity	 Watch Math Park	 HAVE FUN! (Free Space)	Watch InPACT at Home	 Read 20 minutes
Watch Extra Credit	 Go swimming	 Watch Math Park	 Watch Story Pirates	Make leaf rubbings (pg. 56)
Watch DIY Science Time	 Read 20 minutes	Visit a new place	 60 mins. of activity	 Watch Math Park





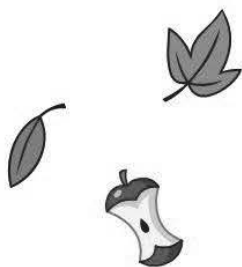
MAKE A COMPOSTER!

DIFFICULTY: EASY (REQUIRES ADULT ASSISTANCE)

What happens to a pile of old leaves outside when you add a dash of time, maybe some worms, and a healthy splash of moisture? Rich soil perfect for a garden just like Daisy's!

MATERIALS

- 1 empty two-liter soda bottle
- Sharp knife
- Nail
- Shredded newspaper
- Dirt (not potting soil -- use dirt from outside)
- Compost materials (such as grass clippings or vegetable scraps)
- Small handful of dead leaves
- Flat dish to hold compost
- Spray bottle with water

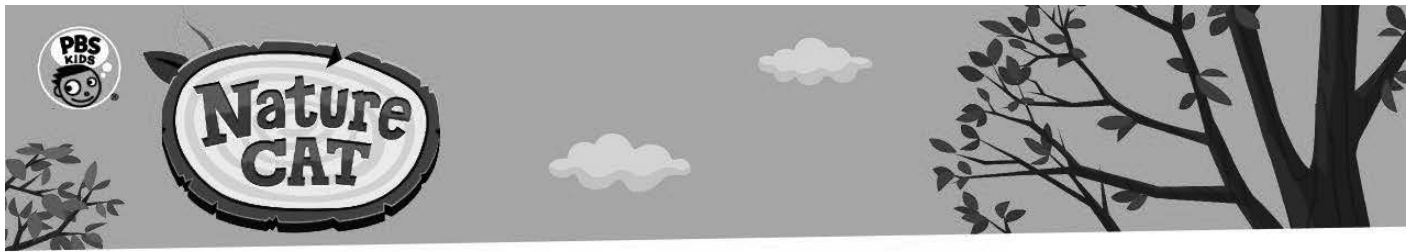




LET'S GET COMPOSTING!

- 1 Rinse the bottle and peel off the label.
- 2 Have a grownup cut off the top of the bottle as shown. Set the top aside.
- 3 Have the grownup use the nail to punch 8 to 10 small air and drainage holes along the sides and bottom of the bottle.
- 4 Put the bottle on the tray.



pbskids.org/naturecat

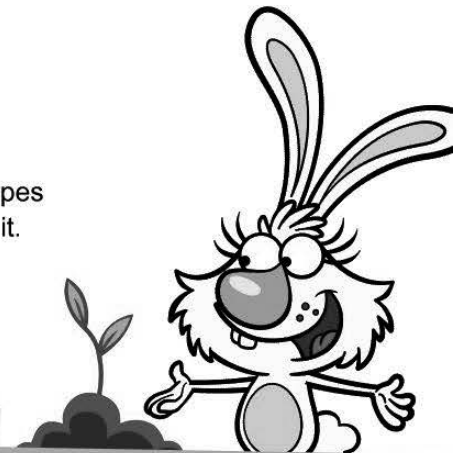


- 5 Put some dirt, shredded newspaper and old leaves inside the composter. This is your compost starter.
- 6 Use the spray bottle to wet the compost starter. 
- 7 You're ready to add some stuff to your compost! (Try grass clippings, vegetable scraps, coffee grounds, or eggshells, but do not add dairy or meat.)
- 8 Turn the bottle top upside down and nest it in the open top of the bottle. It will act like a funnel for adding a little bit of water each day to keep the contents damp.
- 9 Place in a spot where sunlight can reach it. 
- 10 Stir every few days, keep the contents damp, and let it rot! As your compost breaks down, you can add more kitchen scraps or plant litter, as well as some more soil from outside to mix in.
- 11 Cover the top of your compost with a kitchen towel when not in use.



LET'S TAKE A CLOSER LOOK

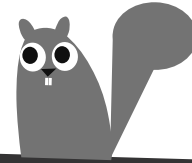
- 1 As you check your composter each day, describe what you observe.
- 2 You may see fluffy mold growing. Some people are allergic to some types of mold, so keep your compost covered when you're not working with it.
- 3 Now take your rich, healthy soil, place it in a pot, add a seed and some water and grow your very own plant!



pbskids.org/naturecat



Make Leaf and Bark Rubbings



What to Do:

- 1. Find some trees:** Take some blank paper, masking tape (optional), and crayons outside. Look for several trees with different types of bark and leaves.
- 2. Feel the bark:** Close your eyes and feel the bark of the trees. How does it feel? Which one is the smoothest? The roughest?
- 3. Make a bark rubbing:** Use tape to hold a piece of paper on the trunk or hold the paper tightly. Lightly rub a crayon horizontally over the surface of the paper on the bark, just hard enough so that the bark's texture shows on the paper. Do this to other trees and compare the rubbings.
- 4. Make a leaf rubbing:** Collect some leaves from different trees. Close your eyes and feel the leaves. How do they feel? Make leaf rubbings by putting the leaf on a piece of cardboard or a clipboard, covering it with the paper, and rubbing the crayon over it.
- 5. Make a matching game:** Once you've made several leaf and bark rubbings, play a matching game with them. Mix them up and see if you can figure out which tree each leaf and bark rubbing came from.

What You Need:

- Trees
- Plain white paper
- Crayons with label removed
- Masking tape (optional)
- Cardboard or clipboard
- Paper bag for collecting leaves



Find more games and activities at pbskids.org/naturecat



Make Leaf and Bark Rubbings

Make your leaf and bark rubbings here.

Find more games and activities at pbskids.org/naturecat

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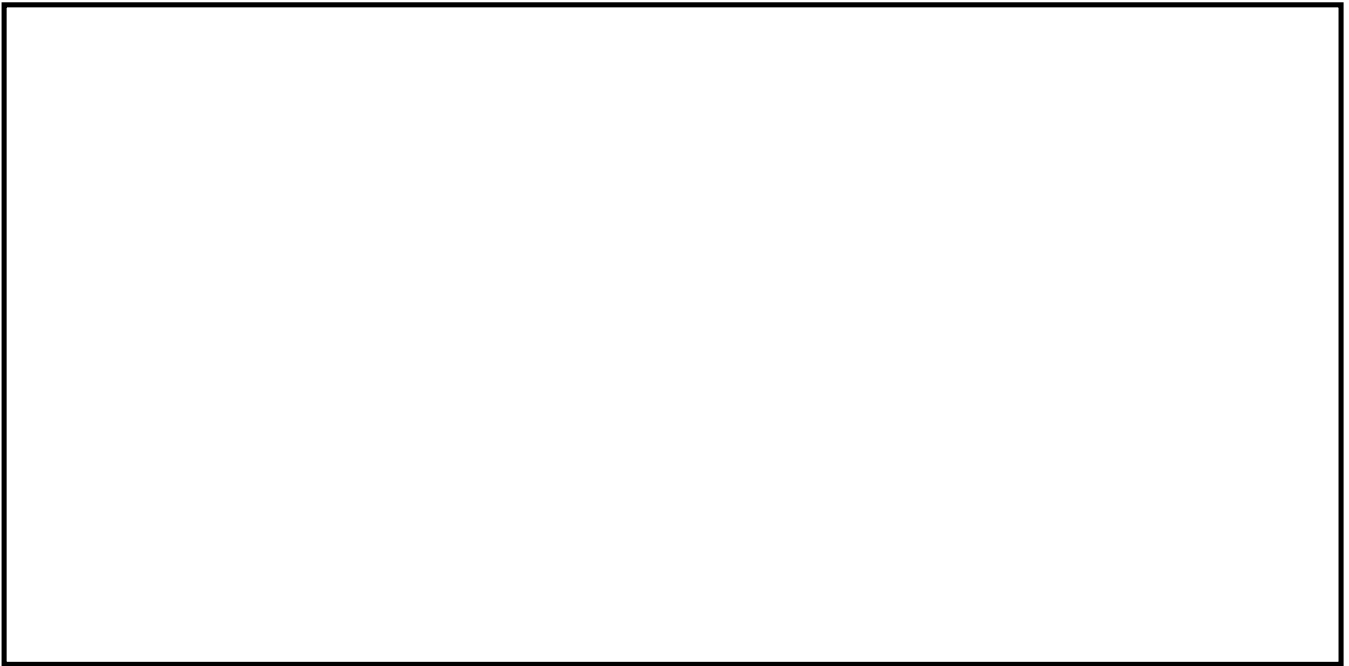
Environmental Science Issues

The video “Environmental Science Issues” discusses the importance of our environment and the steps that we can take to help protect it. Taking care of the environment is everyone’s responsibility.

Try This!

Use the space below to draw your favorite environment. It might be a beautiful beach, a tranquil park, a wild forest, or anywhere that you would love to be. Then answer the questions that follow.

My Favorite Environment



What makes this your favorite environment?

What threats does your favorite environment face? For example, what might happen if someone came and cut down the trees or dumped trash on the beach?

What could you do to help protect your favorite environment?



DIALOGUE PRACTICE

A hero story needs lots of interesting dialogue. You want the reader to be able to hear it when your hero gives an inspiring speech, or whispers a secret plan, or makes a cool snappy comment. Practice writing some dialogue for your hero that you might put into a story later! For more ideas and information, watch our Hero Stories videos at storypirates.com/storypiratesuniversity.

Write some dialogue here. Use quotation marks, and check out the next page for some words you could use instead of “said”.

You can also draw your hero in an exciting scene, and add a speech bubble for what they’re saying.

DIY Can Crush

FUN FACT

Implode is the opposite of explode. When something implodes, it quickly collapses inward. Buildings are often imploded when they need to be demolished so that the destruction doesn't hurt nearby buildings or surroundings.

MATERIALS

- An adult helper
- Stovetop or burner
- Empty soda cans
- Large bowl of ice
- Water
- Tongs

DIFFICULTY



What do you call the study of soft drinks?

*Answer on the next page

AIR PRESSURE

Air is EVERYWHERE! Air is the invisible gaseous substance that surrounds all of the Earth. There are five layers to Earth's atmosphere and gravity is pulling down on the air molecules in each layer. That pulling is what creates atmospheric pressure.

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DIYSCIENTIME.ORG
FOR MORE SCIENCE FUN!



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DIY Can Crush



EXPERIMENT

Step 1: Gather materials.

Step 2: Fill a large bowl halfway with ice water.

Step 3: Add an 1/8 cup of water to the bottom of the can (just enough to cover the bottom).

Step 4: Place the can on the center of the burner. Once it's stable, turn the burner on high until it has steamed for at least 1 minute.

Step 5: Use your tongs to grasp the can so that you can safely flip the can over and into the ice water.

Step 6: Quickly flip the can over and place into the ice water so that the opening is submerged. Be careful to not splash hot water as you flip the can.

WHY IT WORKS

As the water in the can heats up, it changes from a liquid to a gas, making water vapor. The water vapor pushes the air out of the can. Once the can is upside down in the ice water, the hot water vapor is trapped inside and quickly cools after it's submerged in the ice water. The water vapor condenses leaving empty space in the can. The air outside of the can has pressure, exerting 14.7 pounds of pressure per square inch on the can! Without the air inside of the can, the air pressure is unequal and the outside air easily crushes the can.

EXTEND YOUR LEARNING

- What would happen if you used room temperature water instead of ice water?
- What happens if you use a different sized can?
- What happens if you don't heat your can up before turning over into the ice water?
- Does the size of your ice impact the experiment?

WORKFORCE CONNECTION

Aerospace engineers have to understand how pressure and a lack of pressure (vacuum) both affect the performance of aircraft and spacecraft inside and outside of the Earth's atmosphere. Aerospace engineers design and test aircraft and spacecraft as well as missiles and satellites to learn how air impacts flight. Aerospace engineers recently were able to test how the air pressure on Mars affects the flight of a drone!

SPECIAL THANKS TO OUR MICHIGAN LEARNING CHANNEL FUNDERS:



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A Partner With Communities Where Children Come First



The State of Michigan

**Elaine and Leo Stern
Foundation**

**The Donald and Mary Kosch
Foundation**



WHAT IS MEET UP AND EAT UP?

Meet Up and Eat Up provides FREE nutritious meals for children and teens 18 years and younger.

HOW DO I SIGN UP?

No application or sign-up needed, just come and join us!

WHERE IS IT?

To find a location near you

Visit: www.michigan.gov/meetupeatup

Call: 211

Text: Food to 304-304

Mande por texto "Comida" al 304-304



SUMMER!

FUN ACTIVITY BOOK

On TV. Online. Statewide.

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



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

TWEENS



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