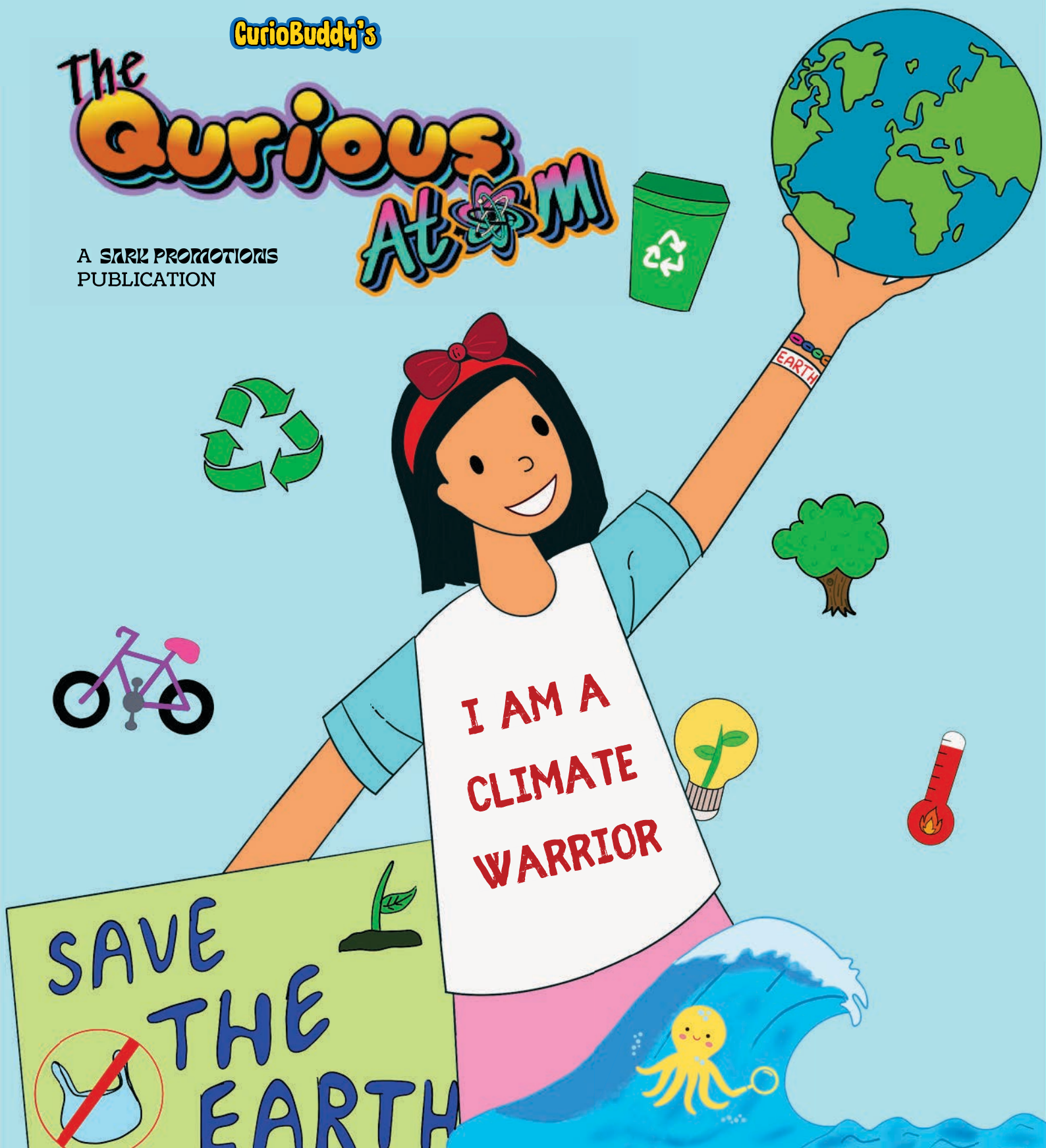


CurioBuddy's

The Curious At-OM

A SARK PROMOTIONS
PUBLICATION

Save the Earth

This edition explores environmental challenges like biodiversity loss, plastic pollution, and overfishing. Packed with fun facts, activities, and simple actions, it empowers young minds to protect our planet!

ABOUT THE COVER

A spirited young girl attending a "Save the Earth" campaign while holding a colourful poster and the Earth in her hands. The background is filled with colourful elements such as a thermometer indicating global warming and a recycling bin. Oddy the Octopus, CurioBuddy's mascot floats in the flooding waves shown in the image.

Pg 11

**Drip
Detectives!**

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Meet Oddy! Our Curious Explorer




Hey friends! I'm Oddy the Octopus—curious, clever, and full of ideas! With my eight arms, I explore mysteries, solve puzzles, and bring science to life. Let's dive in and discover how to save our planet earth together.

Get in Touch

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For Parents

Encouraging curiosity and a love for learning is one of the greatest gifts we can give children. The Curious Atom (TQA) is crafted to nurture young minds through engaging science stories, hands-on activities, and fun experiments. Designed for ages 8-15, it makes learning enjoyable while motivating critical thinking and other 21st century skills in kids. Through this special edition, children will not only discover the importance of saving our planet but also learn how they can be planet saviours by taking small, meaningful actions.

Challenge

Can you go a whole day without using single-use plastic? Track what you avoid and find creative swaps! Science says small changes add up to a big impact. Are you up for it?



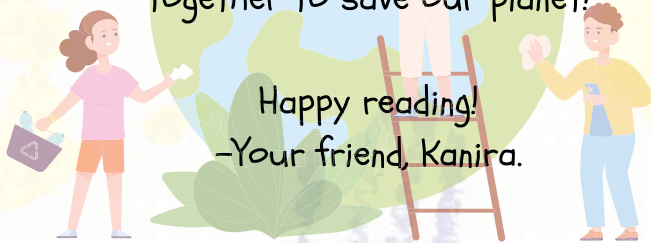
Loving Earth!

In this special Save Our Planet edition of The Curious Atom, we explore the environmental challenges faced by our world and how young minds can be part of the solution.

From protecting biodiversity and tackling plastic pollution to fighting wildlife poaching and promoting sustainable habits, this issue is filled with engaging articles, fun activities, and inspiring ideas. Learn about the wonders of nature, real-world conservation efforts, and simple actions you can take to make a difference.

Every small step counts. By understanding sustainability and exploring innovative solutions, you can contribute to creating a greener future and even invent new ways to help the Earth thrive. Let's work together to save our planet!

Happy reading!
-Your friend, Kanira.



About Us

The Curious Atom (TQA) is an exciting science magazine designed for curious minds aged 8-15. Co-created by science explorer kids like our chief editor, Kanira Gupta (10 years) and academicians, TQA blends fun and learning through illustrated articles, hands-on experiments, brain-teasing puzzles, and fascinating science stories. Each digital issue explores themes like space, biology, chemistry, and technology. We make science easy and engaging for our primary and middle school learners. TQA also highlights real-world applications, inspiring young readers to think critically and explore solutions for a better future. With interactive activities, science news and captivating facts, TQA sparks curiosity, builds knowledge, and encourages creativity. Join us in making science fun and inspiring for the next generation of innovators!

SCAN HERE



SAVE OUR PLANET

What is Climate Change?

Climate change refers to long-term shifts in temperatures and weather patterns, primarily caused by human activities like burning fossil fuels and deforestation. It impacts ecosystems, biodiversity, and global living conditions.

Activity Time!

What you need:

- Two identical glass jars
- 4 cups of cold water
- 10 ice cubes
- One clear plastic bag
- A thermometer

How Climate Change Affects the Environment

Climate change is reshaping our environment, causing rising sea levels, extreme weather events, and disrupted ecosystems. Species face habitat loss, agriculture struggles with shifting patterns, and water scarcity grows, demanding urgent action.

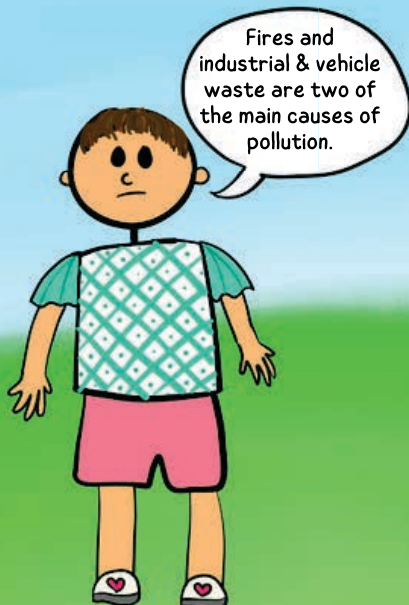


What to Do:

1. Fill each glass jar with 2 cups of cold water.
2. Add 5 ice cubes to both jars.
3. Cover one jar with a clear plastic bag (representing greenhouse glass).
4. Place both jars in direct sunlight for one hour.
5. Measure and compare the water temperature in each jar.

Observations:

The jar covered in a plastic bag gets warmer as it traps heat, mimicking the greenhouse effect. This demonstrates how greenhouse gases trap heat on Earth, highlighting climate change concerns.



The Earth's average surface temperature has risen by about 1.2°C (2.2°F) since the late 19th century, primarily due to increased greenhouse gas emissions from human activities.



The world's oceans absorb about 90% of the heat trapped by greenhouse gases, causing sea temperatures to rise. This leads to the melting of polar ice caps and the loss of habitats for marine life.

What is the Greenhouse Effect?

The greenhouse effect is a natural process where gases in the Earth's atmosphere trap heat from the Sun, keeping the planet warm enough to support life. Without it, Earth would be too cold to sustain life.

However, increased greenhouse gases from human activities are intensifying this effect, leading to global warming.



Why is Reducing Carbon Emissions Important?

Reducing carbon emissions is vital to slow down global warming, minimize extreme weather events, and protect ecosystems. It also ensures a sustainable future for humans, animals, and the planet.

Tips to Reduce the Greenhouse Effect



1. Switch to renewable energy.
2. Turn off unused electronics.
3. Use energy-efficient appliances.
4. Walk, bike, or carpool.
5. Plant trees.
6. Recycle and compost.
7. Save water.
8. Eat less meat.
9. Use public transport.
10. Spread climate awareness.

The Ocean's Silent Struggle

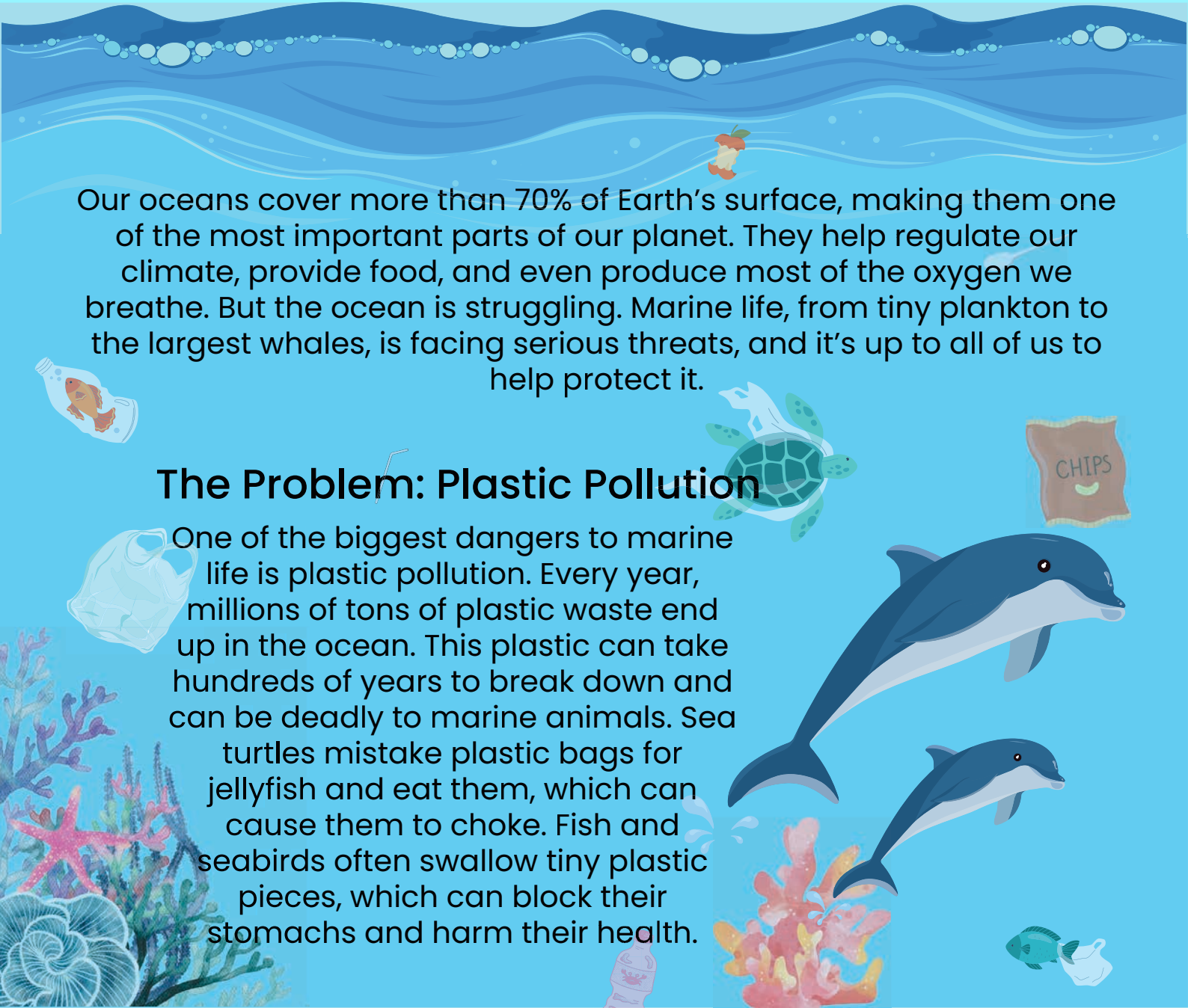
Protecting Marine Life



Our oceans cover more than 70% of Earth's surface, making them one of the most important parts of our planet. They help regulate our climate, provide food, and even produce most of the oxygen we breathe. But the ocean is struggling. Marine life, from tiny plankton to the largest whales, is facing serious threats, and it's up to all of us to help protect it.

The Problem: Plastic Pollution

One of the biggest dangers to marine life is plastic pollution. Every year, millions of tons of plastic waste end up in the ocean. This plastic can take hundreds of years to break down and can be deadly to marine animals. Sea turtles mistake plastic bags for jellyfish and eat them, which can cause them to choke. Fish and seabirds often swallow tiny plastic pieces, which can block their stomachs and harm their health.



1. Reduce, Reuse, Recycle

- Avoid single-use plastics like straws, bottles, and bags. Recycle whenever possible, and try to reuse items instead of throwing them away.

2. Participate in Clean-Up Events

- Join or organise beach or river clean-up events to help remove plastic waste before it reaches the ocean.

3. Spread the Word

- Share what you've learned about ocean pollution with your friends and family. The more people who understand the problem, the more people can help!

4. Support Ocean-Friendly Products

- Look for products made from sustainable materials, and choose eco-friendly brands that care about the environment.

5. Protect Marine Animals

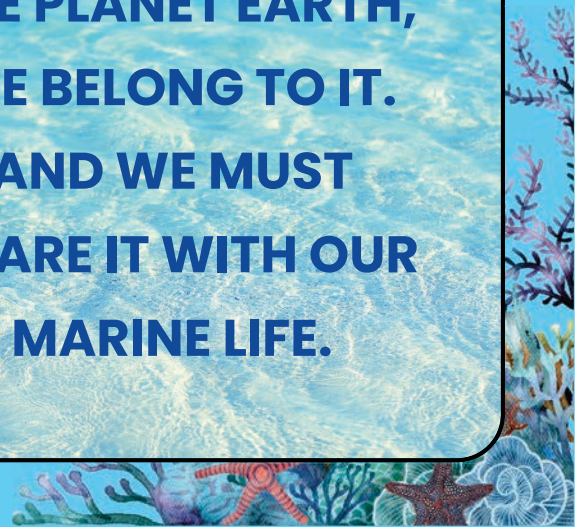
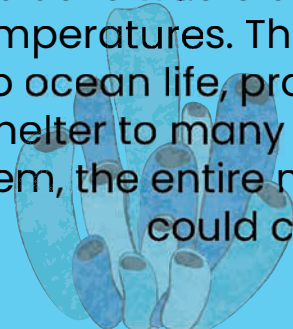
- Avoid eating seafood from unsustainable sources. Support companies and initiatives that protect marine life.



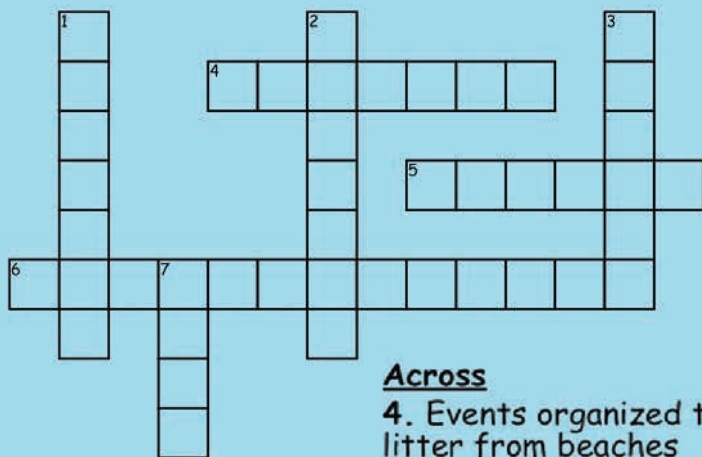
The Impact on Marine Life

The ocean is home to an incredible variety of life. But pollution isn't just harming animals—it's damaging entire ecosystems. Coral reefs, known as the "rainforests of the sea," are dying because of both plastic waste and rising ocean temperatures. These reefs are vital to ocean life, providing food and shelter to many species. Without them, the entire marine food chain could collapse.

**WE DON'T OWN
THE PLANET EARTH,
WE BELONG TO IT.
AND WE MUST
SHARE IT WITH OUR
MARINE LIFE.**



Save the Ocean!



Across

4. Events organized to collect litter from beaches

5. These animals often mistake plastic bags for jellyfish

6. Tiny pieces of plastic that harm marine life

Down

1. A harmful type of waste often found floating in the ocean

2. The process of turning waste into reusable material

3. Large marine animals affected by pollution, like humpbacks

7. A large ecosystem where fish and other marine creatures find shelter

Answers on Page 19



The Future of Our Oceans



There's still hope for our oceans if we act now. By making small changes in our daily lives, we can all play a part in reducing pollution and protecting marine life for future generations. The ocean is our planet's lifeblood, and it's up to all of us to help keep it healthy and thriving.

Let's dive into action and protect the ocean, before its silent struggle becomes a lost cause.



Did You Know?

2021-2030 is the United Nations Decade of Ocean Science for Sustainable Development.



Dive Deep: Exploring the Layers of the Ocean!

The ocean is like a giant layer cake. Each layer has its unique features and amazing creatures. Let's take a journey from the sunny surface to the mysterious depths.

1. The Sunlight Zone (0–200 meters)

This is the brightest and warmest layer, where most ocean life hangs out. Sunlight reaches here, helping plants like seaweed and phytoplankton grow. You'll find colourful fish, dolphins, and even sharks swimming around!

2. The Twilight Zone (200–1,000 meters)

Deeper down, the water gets darker and colder. This is the Twilight Zone, where sunlight barely reaches. Creatures here have amazing adaptations, like big eyes to see in the dark and glowing bodies.

3. The Midnight Zone (1,000–4,000 meters)

Welcome to the deep, dark Midnight Zone, where it's pitch black and freezing cold. The pressure here is HUGE, but some incredible animals thrive, like the anglerfish with its glowing lure and the giant squid.

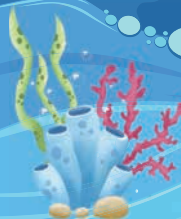
4. The Abyssal Zone (4,000–6,000 meters)

This layer is near the ocean floor, where it's super dark and the pressure is crushing. Strange creatures like sea cucumbers, tripod fish, and giant isopods live here.

5. The Trenches (6,000–11,000 meters)

The deepest part of the ocean is the Trenches, like the Mariana Trench. It's so deep that Mount Everest would fit inside with room to spare! Only the toughest creatures, like the snailfish, can survive here.

Did you know that the sunlight zone is home to coral reefs, the "rainforests of the sea," bursting with life and colour. We've explored less than 5% of the ocean—there's still so much to discover!



The Curious Chronicles of Jungle Grove

Ch-16: Mandy Wonders about Weather

Mandy's classroom was buzzing with excitement as Ms. Dorothea Deer wrote the theme of the month on the board: Save Our Planet.

This month, we'll explore how we can help the environment through small but meaningful actions, Ms. Deer announced. By the end of the month, each group will present a project to show how we can make a difference.

Mandy and her friends quickly gathered to brainstorm ideas. "We could plant trees!" suggested Mina Mouse. "Or organise a clean-up drive," added Tanya Tiger. But Max Monkey had another idea. "What if we make eco-bricks?"

"What are eco-bricks?" Mandy asked, intrigued.

"They're plastic bottles filled with non-recyclable waste, like wrappers and plastic bags, packed tightly until they become sturdy building blocks," Max explained. "They can be used to make benches, walls, and even furniture instead of letting plastic pollute our land and oceans!"

Ms. Deer loved the idea and encouraged them to start collecting plastic waste. Over the next few weeks, Mandy and her classmates worked hard, gathering used plastic and stuffing bottles tightly. It wasn't easy. Each bottle had to be packed perfectly to become strong enough for construction. But they didn't give up.

STORY



By Republic Day, their eco-bricks were ready. The school set up a special area in the garden where the students arranged them into a colorful seating bench. During the flag-hoisting ceremony, Ms. Deer proudly presented their project to the entire school.

Mandy beamed with pride. Not only had they built something useful, but they had also spread awareness about plastic waste and conservation. As she looked at her

classmates, she realised that saving the planet wasn't just about big changes. It was about small, everyday actions that added up to something powerful. As the national anthem played, Mandy felt a new sense of responsibility. This was just the beginning. There was so much more they could do to protect their home, their planet. And she was ready for it.



Drip Detectives

Find & Fix Water Leaks!

Instructions:

1. **Check the Faucets:** Go around your home and check all the taps. If you find a dripping faucet, place a cup underneath and time how long it takes to fill one teaspoon. Imagine how much water is wasted in a day!
2. **Toilet Leak Test:** Add a few drops of food coloring into the toilet tank. Wait for 10 minutes without flushing. If the water in the bowl changes colour, there's a leak!
3. **Fix & Report:** If you find leaks, inform an adult and suggest fixing them. Even a small drip can waste litres of water every day!
4. **Challenge:** Try to reduce water use for a week—turn off taps while brushing, take shorter showers, and collect rainwater for plants.

Amazing Fact:

A single dripping tap can waste over 11,000 litres of water in a year—enough to fill a small swimming pool!

Activity Alert!

Become a Drip Detective and save every drop! Just like Mandy, the monkey, you can also contribute in saving the planet through your small, everyday actions.

Let us understand how small leaks waste water and learn how to detect and prevent them at home.

What You Need:

A small notebook, pencil, food colouring (optional), a timer or stopwatch.

Your Turn!

Water is one of Earth's most precious resources, and every drop we save helps protect our planet! Now that you've joined Mandy the Monkey in becoming a Drip Detective, I'd love to hear from YOU! Have you learned new ways to save water at school or home? Do you have your own creative tips to help the Earth? Share your stories, letters, drawings, or even videos with us! The best ones will be featured in CurioBuddy magazines, on our website, or social media. Let's work together to make every drop count and keep our planet happy!

XOXO, Kanira



5 Global Misdeeds that Affect Environment

Environmental degradation brought on by humans is a persistent, worldwide issue. Almost half of the twenty-first century's third decade is over, yet we face numerous environmental concerns, as outlined in the United Nations' 2030 Agenda for Sustainable Development. We summarise some of the major worldwide environmental concerns that the UN says we must overcome this decade:



Around 22% of animal species are in danger of going extinct as a result of the over-exploitation of natural resources, which jeopardises valuable habitats.



SAVING BIODIVERSITY

Plant native flowers and trees in school gardens to support local pollinators.

Participate in community cleanups to protect natural habitats from litter.

WILDLIFE CONSERVATION

Learn about endangered species and spreading awareness through school projects.

Avoid buying products made from animal parts like ivory or exotic skins.

PLASTIC REDUCTION

Use reusable water bottles and lunch containers instead of single-use plastics.

Organise “no plastic day” challenges at school to reduce plastic waste.

5 Means to Reduce Human Ecological Footprints

WASTE MANAGEMENT

Sort waste into recycling, compost, and trash bins in schools and at home.

Encourage classmates to upcycle materials for creative projects and crafts.

Support sustainable seafood options by researching and choosing responsibly sourced fish.

Spread awareness about protecting marine life by creating posters

PROTECTING MARINE LIFE

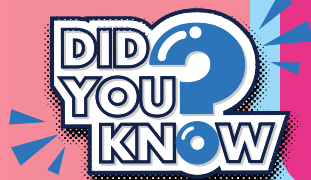
I Spy...

Zebras have amazing night vision – as good as an owl.



Super Social

Spirited animals, zebras are willful and playful, social and standoffish, resilient and vulnerable.



Zebras have powerful kicks that can hurt ferocious enemies like lions and hyenas.

Species

Found in Africa, there are three species of Zebra– the plains zebra, the mountain zebra, and the Grevy's zebra. While the plains zebra is the most widespread type, Grevy's zebra is the endangered type with less than 3000 left on earth.



I am the best at karate. I have a lot of black belts.

The 31st January is International Zebra Day

Zebras

World Hippopotamus
Day is observed on
February 15.



Hippopotamus

Strong & Speedy

They can run up to 30 km/h on land—faster than most humans.

Big Bite

Their teeth can grow over 1.5 feet long, and they have one of the strongest bites in the animal kingdom.

Oozing Pink

Hippos don't sweat like humans—instead, they ooze a pinkish-red liquid often called "blood sweat," which acts as sunscreen and protects their skin from infections!

Hippos are listed as Vulnerable due to habitat loss and illegal hunting for their ivory-like teeth.

Water Lovers

Hippos can hold their breath for up to 5 minutes and even sleep underwater.

Ants

EARTH'S LITTLE HELPERS

Nature's Cleaners

Ants are nature's tiny cleaners! They help clean up the environment by eating leftover food, dead insects, and other organic materials. This helps keep our surroundings clean and prevents bad smells.

Planter & Gardener

Ants are also fantastic gardeners. Some ants collect seeds and store them in their nests. Sometimes, these seeds sprout and grow into new plants. This helps plants spread to new places and grow strong.

Pest Control Hero

Ants are natural pest controllers! Some ants hunt and eat harmful insects that can destroy crops and gardens. By keeping these pesky insects in check, ants help farmers and gardeners grow healthy plants and vegetables.

Team Work & Community

Ants live in large colonies and work together like a big family. Each ant has a specific job, like finding food, taking care of the queen, or protecting the nest. By working together, ants show us the power of community and cooperation.

Recycling Champions

When ants find a dead insect or a fallen leaf, they chew it up and turn it into tiny pieces. These tiny pieces become part of the soil and provide nutrients for new plants to grow. This process of breaking down and recycling materials is called decomposition, and ants are experts at it!

Amazing Ant Facts

- There are over 12,000 different species of ants in the world!
- Ants can lift and carry objects that are 10 to 50 times their own body weight.

DIY

Fun with Ants



Materials Needed:

- Sugar
- Water
- A piece of paper or a small tray
- A magnifying glass (optional)

1. ANT TRAIL Experiment

Instructions:

- Mix a small amount of sugar with water to create a sugary solution.
- Place a few drops of the sugary solution on the paper or tray, creating a small trail.
- Observe how ants follow the trail. Use a magnifying glass for a closer look at how ants communicate and follow the scent trail.

Learning Points:

- Learn about pheromones and how ants use them to communicate.
- Observe the organized behaviour of ants as they follow the trail to the food source.

2. ANT HABITAT Experiment

Materials Needed:

- A clear plastic or glass container with a lid
- Sand or soil
- Ants (you can collect them from your garden or purchase an ant farm kit)
- A small piece of food (like bread or fruit)

Instructions:

- Fill the container with sand or soil, leaving some space at the top.
- Gently place the ants into the container. Be careful not to harm them.
- Place a small piece of food in the container to feed the ants.
- Cover the container with the lid, ensuring there are small holes for air circulation.
- Observe the ants as they dig tunnels and create their habitat.

Learning Points:

- Understand how ants build their nests and create intricate tunnel systems.
- Learn about the different roles of ants within their colony (e.g., workers, soldiers, queen).



WONDER

WHY?

**PLASTICS
DON'T
DECOMPOSE**



Plastics don't break down too quickly because of a complex mixture of stabilisers. It also takes more effort and energy to break down plastic because its carbon bonds are different from those in nature. Bacteria cannot access or recognise the chemical linkages found in them.

Bees play a crucial role in preserving ecological balance and biodiversity. Around 400 different agricultural plant species and one-sixth of all flowering plant species worldwide are pollinated by bees. Thus, they are essential to a third of the world's food output.

**BEEES ARE
IMPORTANT
FOR PLANET**



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2024

YR4



Have you ever looked up at the night sky and wondered what's out there? Well, space is full of fascinating objects, and one of the newest discoveries is a space rock called **2024 YR₄**! Let's learn more about this exciting space find.

What is 2024 YR₄?

2024 YR₄ is a type of space rock known as an asteroid. Asteroids are small, rocky objects that orbit the Sun, just like planets and moons. They can be found all over space, especially in the asteroid belt between Mars and Jupiter. This newly discovered asteroid is estimated to be 130 to 330 feet wide. Some are big, some are small, and they come in all sorts of shapes!

When was 2024 YR₄ discovered?

As the name suggests, 2024 YR₄ was spotted in the year 2024 (December 27) by a telescope in Chile. Scientists use powerful telescopes to scan the skies and look for new asteroids. When they find one, they give it a special name that helps them keep track of all the space rocks they study.

NEWS

UPDATE

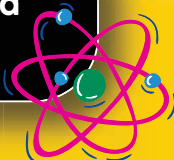
Can 2024 YR₄ visit Earth?

While asteroids sometimes pass close to Earth, most of them, including 2024 YR₄, stay at a safe distance. However, astronomers closely monitor all space rocks to ensure they don't come too close to our planet. They use special tools and math to predict the paths of asteroids and keep us safe.

The chance of asteroid 2024YR₄ hitting Earth in 2032 is a meagre 1.6%. It will not be visible until 2028 once it moves away from Earth over the next few months.

Galileo Galilei

Born on February 15, 1564, he was an Italian astronomer, physicist, engineer, and mathematician. He is known as the "Father of Modern Science and Astronomy". He made a significant contribution to the development of the telescope. He also found Jupiter's four large moons. His theories are regarded as the cornerstones of kinematics, heliocentrism, and astronomical study.

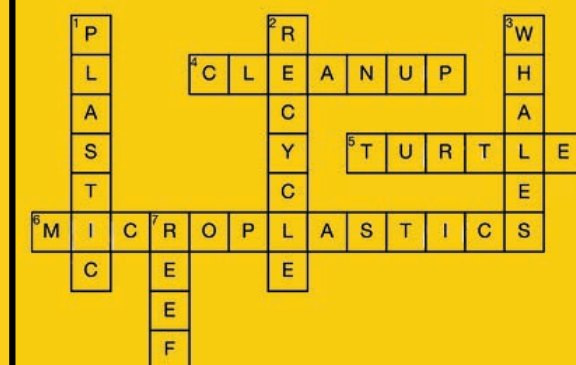


Know The Scientist

Crossword Solution

Page 8

Save the Ocean!



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