



TEXT PLEDGE

RISE UP

ACTIVITY BOOK

**PROTECT
THE ENVIRONMENT**

Grades 9-12



NAME: _____



TEXT PLEDGE IS A NONPROFIT IN GREATER GRAND RAPIDS, MI, THAT SEEKS TO CHANGE THE WORLD ONE PLEDGE AT A TIME. OUR 10 PLEDGES FOCUS ON ENDING SOME OF THE WORST SOCIAL ISSUES AFFECTING OUR COMMUNITIES, FROM DISTRACTED DRIVING TO ACTS OF VIOLENCE. EACH PLEDGE CHALLENGES MEMBERS TO PRACTICE COMPASSION, SPEAK UP WHEN THEY WITNESS INJUSTICE, AND HELP OTHERS IN TIMES OF CRISIS. TOGETHER, WE CAN MAKE THE WORLD A KINDER PLACE.





A Message From Our Founder

Greetings friends,

We are here to raise awareness of protecting the environment. Preserving the earth should be urgent for every living person. Taking care of the environment is like taking care of our home—the big home we all share, called Earth! We want to keep it clean and healthy so that we can enjoy the fresh air, clean water, and beautiful nature around us. Imagine a world where the trees are always green, the oceans are full of fish, and the sky is clear and bright. That's the kind of world we want for ourselves and for the future. In this lesson you will learn how to reduce, reuse and recycle properly. Additionally, you will take a closer look at your own habits and learn what it means to be carbon neutral. Every little thing we do adds up to make a big difference.

Visit us at TextPledge.us and share with us what you're doing to make the environment a better place in your community.

Happy Learning!



Ms. Naomi
Founder at the TextPledge Project



PLASTIC RECYCLING

Did you know there are SEVEN different classifications of recyclable plastics? Do you know which items are included in each category? Research each category below and write three items that belong in each category.



polyethylene terephthalat

PET or PETE. It is found in single-use bottled beverages such as Soft drinks, water, ketchup, mouthwash bottles etc..

high-density polyethylene



polyvinyl chloride

PLASTIC RECYCLING

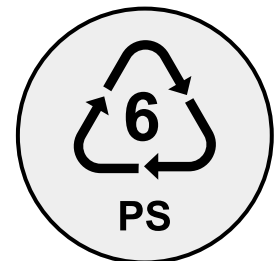
(cont.)

low-density polyethylene



polypropylene

Polystyrene



Other (**BPA, Polycarbonate and LEXAN**). This category was designed as a catch-all for polycarbonate (PC) and “other” plastics. Number 7 plastics are used to make **baby bottles, sippy cups, water cooler bottles** and **car parts** etc..

THE JOURNEY OF PLASTIC

Solve the three math equations below to uncover some shocking statistics as you go through the journey of plastic

About $2^4 * 5^2 * 10^6$ tons of plastic is produced from byproducts of refining of crude oil.

Answer:

$$16 \times 25 \times 1,000,000 = 400,000,000$$



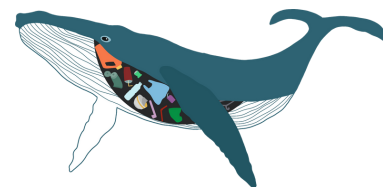
It reaches the hands of consumers in different forms.

Nearly $5^2 + \sqrt{144} + 42$ percent of it goes to the landfills after being used and thrown away.



Due to improper handling, it enters waterways and from there to rivers and finally ending up in oceans.

During this time from landfill to ocean, it gets broken down into smaller micro-plastics which cause a great deal of damage to about $10^2 * \sqrt{49}$ types of marine animals and birds that either accidentally eat them or get caught in them.



E-WASTE

Electronic waste, or e-waste, refers to all items of electrical and electronic equipment and their parts that have been discarded by its owner as waste without the intent of re-use. Unlike several other types of waste, e-waste cannot be simply discarded by throwing it in any recycling bin. It should be properly discarded by specific recycling center/ electronic retail stores.

In this activity, several common e-wastes are shown. Find the respective recycling centers for these items in your area and note them in the space provided.





ECO-FRIENDLINESS SCORE

Tick all the habits that you are following. Then calculate your eco-friendliness score

- I choose to walk or take public transportation when available.
- I turn off the faucet while I am brushing my teeth.
- I own a reusable water bottle that I refill regularly.
- I turn off lights when not in use.
- I unplug my computer and kitchen appliances when not in use.
- I recycle properly.
- I own a reusable grocery bag.
- I reduce food waste by composting.
- I have a garden or have planted a tree at some time in my life.
- I skip eating meat once a week.

Add it up!

0-3 Are there more ideas you could be doing to help protect the planet? Circle three additional items from this list and make a goal for yourself. Can you accomplish these three things for a single day? Try it!

4-7 You are doing great! Can you add two more items from this list to your list for the next 7 days? Try it!

8-10 You are active in protecting the planet. What additional steps could you take that are not on this list?

BONUS: Share your score with your friend group and share your own eco-friendly goals/behaviors moving forward.

GREENHOUSE GASES

Greenhouse gases are gases in Earth's atmosphere that trap heat. They let sunlight pass through the atmosphere, but they prevent the heat that the sunlight brings from leaving the atmosphere. Can you match the greenhouse gas to its description? Use your research skills to investigate.

This gas is released during the decay of organic matter in anaerobic (low oxygen) environments, such as wetlands and rice paddies.

Human activities, including livestock digestion, rice cultivation, landfills, and the production and transport of coal, oil, and natural gas, release significant amounts of this gas.

This gas is released during natural processes like respiration and volcanic eruptions. Plants also absorb CO₂ during photosynthesis.

The burning of fossil fuels (coal, oil, and natural gas), deforestation, and various industrial processes significantly increase levels of this gas in the atmosphere.

This greenhouse gas is the most abundant greenhouse gas in the Earth's atmosphere. Its concentration in the atmosphere is primarily controlled by natural processes like evaporation and condensation.

This gas in the lower atmosphere is a result of chemical reactions between nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. These pollutants come from vehicle emissions, industrial processes, and other human activities.

These gases are entirely synthetic and do not occur naturally. They are used in various industrial applications, including refrigeration, air conditioning, insulation, and electrical equipment.

Chlorofluorocarbons
(CFCs)

Carbon Dioxide (CO₂)

Methane (CH₄)

Water Vapor (H₂O)

Nitrous Oxide (N₂O)

Perfluorocarbons
(PFCs)

Hydrofluorocarbons
(HFCs)

Ozone (O₃)

Sulfur Hexafluoride
(SF₆)

PUZZLE OF LAYERS

The atmosphere of earth is comprised of five layers. These layers extend up to 10,000 km above earth's surface. Uncover the names of each layer by solving the puzzles below. Each number represents a letter of the alphabet.

For example, a = 1, b = 2, c = 3.... z = 26.

20, 18, 15, 16, 15, 19, 16, 8, 5, 18, 5

T, _R_, _O_, _P_, _O_, _S_, _P_, _H_, _E_, _R_, _E_

19, 20, 18, 1, 20, 15, 19, 16, 8, 5, 18, 5

—, —, —, —, —, —, —, —, —, —, —, —

13, 8, 19, 15, 19, 16, 8, 5, 18, 5

—, —, —, —, —, —, —, —, —, —

20, 8, 5, 18, 13, 15, 19, 16, 8, 5, 18, 5

—, —, —, —, —, —, —, —, —, —, —, —

5, 24, 15, 19, 16, 8, 5, 18, 5

—, —, —, —, —, —, —, —, —



The diagram shows a cross-section of the Earth's atmosphere with five distinct layers represented by concentric semi-circular bands of different shades of blue. The innermost layer is the darkest blue and is labeled 'Troposphere'. The layers extend upwards from the Earth's surface, which is depicted as a green and blue globe at the bottom.

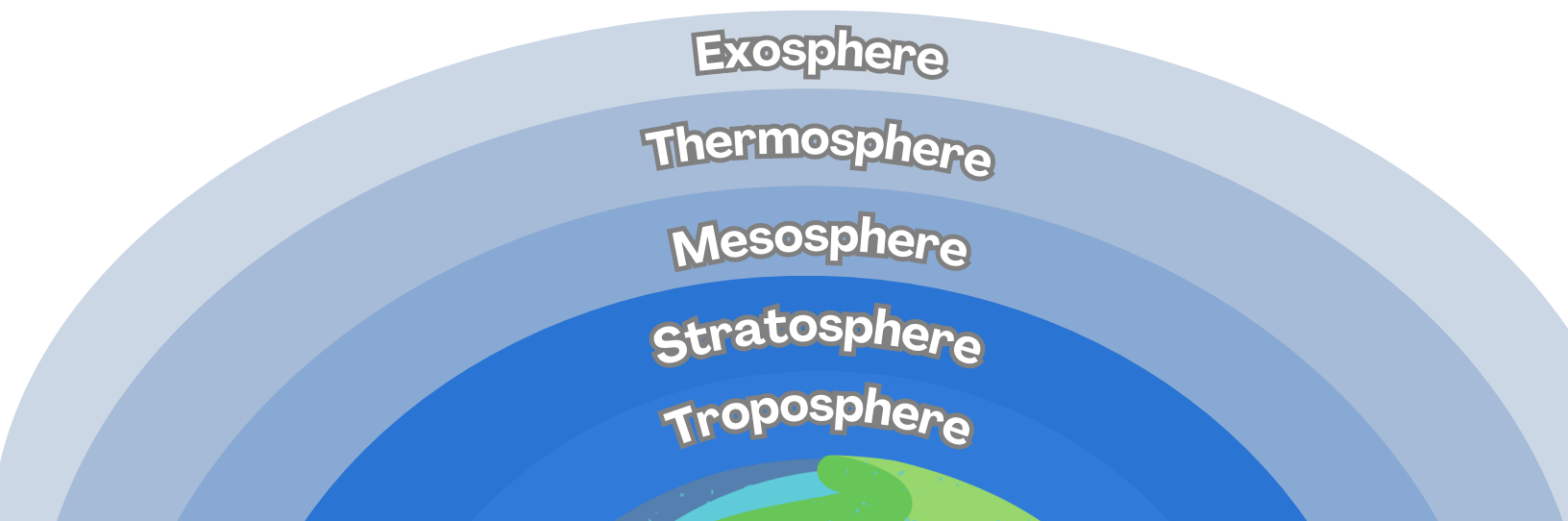
Troposphere

WHAT ATMOSPHERE?

The atmosphere of earth is compromised of five layers. These layers extend up to 10,000 km above earth's surface. Can you identify each atmospheric layer based on the clues below? Write the correct layer next to each statement below. Layers may be used more than once.

- The third layer of Earth's atmosphere from the surface. This layer is characterized by decreasing temperatures with increasing altitude.
- The outermost layer of Earth's atmosphere. The region where outer space begins.
- The lowest layer of Earth's atmosphere, where weather events occur. Above the Earth's surface and below the stratosphere.
- Contains the ozone layer, which absorbs and scatters the sun's ultraviolet radiation. Commercial jet aircraft fly in this layer due to its stability and lack of weather events.
- Named after the Greek words for "middle" and "sphere. The boundary between this layer and the thermosphere is called the mesopause.
- The layer of Earth's atmosphere above the mesosphere. It comes after the thermosphere in Earth's atmospheric layers.
- Temperatures here can reach up to 2,500 degrees Celsius. It is where the Northern and Southern Lights occur.
- The second major layer of Earth's atmosphere from the surface. Above the troposphere and below the mesosphere.
- Contains approximately 75% of the atmosphere's mass. The region where clouds, rain, and weather phenomena like thunderstorms occur.

Mesosphere



Race for Carbon Neutrality

Governments and international organizations worldwide have been taking increasingly aggressive steps to combat climate change. One of the key strategies to reduce greenhouse gas emissions is to encourage or mandate businesses to become **carbon neutral**. Here are some potential measures and trends that could be part of upcoming environmental protections.

Carbon Pricing: Governments may implement carbon pricing mechanisms such as carbon taxes or cap-and-trade systems. These systems put a price on carbon emissions, encouraging businesses to reduce their carbon footprint to avoid extra costs.

Carbon Offset Requirements: Businesses might be required to invest in carbon offset projects, such as reforestation or renewable energy projects, to compensate for their own carbon emissions. This helps balance out their carbon footprint.

Renewable Energy Mandates: Governments could require businesses to derive a certain percentage of their energy from renewable sources. This could involve installing solar panels, wind turbines, or other renewable energy systems on their premises or purchasing renewable energy credits.

Public Procurement Policies: Governments can influence carbon neutrality by implementing green procurement policies, preferring to do business with companies that have certified environmentally friendly practices.

Regulations on Energy Efficiency: Governments can introduce regulations that mandate businesses to improve energy efficiency, whether it's in manufacturing processes, office buildings, or transportation fleets. This can involve upgrading equipment, improving insulation, or transitioning to electric vehicles.

Congratulations!

You have completed the activity book. Taking this pledge is just one symbol of your commitment to make the world a kinder place.

What happens next?

Students can continue to make a difference through the following actions:

- Reflect and practice self-awareness.
- Speak up and confront social issues and injustices.
- Know where to find resources and support.



**Complete our survey for a chance to win
Text Pledge swag!**

Share your thoughts about our activities! We want to know how to make them better.



TEXT PLEDGE

RISE UP

Commit to all ten pledges

1

**STOP DISTRACTED
DRIVING**

6

**STOP DOMESTIC
VIOLENCE AND ASSAULT**

2

**END
DISCRIMINATION**

7

**END DRIVING UNDER
THE INFLUENCE**

3

**END ACTS
OF VIOLENCE**

8

**STOP HUMAN
TRAFFICKING**

4

**PREVENT BULLYIN AND
CYBER BULLYING**

9

**PROTECT ANIMAL
RIGHTS**

5

**RAISE MENTAL HEALTH
AWARENESS**

10

**PROTECT THE
ENVIRONMENT**

www.textpledge.us