LAOIS COUNTY COUNCIL

CLIMATE ACTION LAOIS

Primary school resource for 2nd-6th class

4 Lesson plans linked to a video clip with information on a different aspect of climate change.

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WELCOME!

These lessons complement videos created by Laois County Council around the topics of Climate Change, natural cycles, the atmosphere, the carbon cycle and the water cycle. Central throughout the lessons is the idea of cycles of life and interconnected processes in the natural world. The first video explores the idea of balance as a central concept in understanding how the natural world sustains life. In exploring the atmosphere, the carbon cycle and the water cycle children will become increasingly aware of the equilibrium upon which our systems depend. The videos can be watched all the way through or paused as is suggested in the lesson plans and integrated with the activities. Teachers should use discretion in deciding which elements are most suitable for their classes. For second and third class it would be preferable to do lesson 4, The Water Cycle, prior to lesson 3, the Carbon Cycle as it is more relatable for the children initially.

When discussing issues of climate change, carbon emissions and imbalances in the natural world it is important to acknowledge children's feelings, and in deed our own concerns about these matters. It can be a cause for anxiety and worry among young people.

It is important that we:

- Acknowledge, name and validate these feelings
- Teach age appropriate facts, don't shy away from the truth
- Empower students to take meaningful action
- Spend time outdoors
- Focus on the positives and hopeful stories.

Lists of key vocabulary are provided which could be displayed and frequently revised.

CONTENT

LESSON OVERVIEW

	Key Learning	Intro	Development	Conclusion
Lesson 1 Introduction - Cycles	Climate Change happens when our natural cycles/ systems are out of balance. A cycle is a series of events which happen in a particular order. The events happen repeatedly in a circular fashion. Every part of the cycle is important.	Exploring Balance; body and ruler balances	Exploring different types of cycles in groups and linking each cycle	Web of life; exploring interconnec -tion and interdepen- dence
Lesson 2 Atmosphere	Explore the link between breathing, air and atmospheric pressure, through simple individual and whole class experiments. Discover that carbon dioxide is an important part of the atmosphere.	Demonstrat -ing air pressure with two simple experiments	What is carbon dioxide? Experiment to explore Greenhouse Effect	Matching definitions Creating a carbon pledge.
Lesson 3 The Carbon Cycle	Carbon is an important element which is present in all organic matter. It is part of an ongoing cycle. Burning of fossil fuels has lead to an imbalance of carbon dioxide in the atmosphere.	What is carbon?	Carbon or not Examine graph of increasing Carbon Dioxide.	Draw a diagram of Carbon Cycle. Prepare to introduce others to the carbon cycle

LESSON OVERVIEW

	Key Learning	Intro	Development	Conclusion
Lesson 4 The Water Cycle	Water is part of an ongoing cycle involving precipitation, collection, evaporation, transpiration, condensation.	Evaporation Experiment Identifying water near our school	Drawing Water Cycle Condensati -on Experiment	Water Cycle Drama and Comic Strip

INFO FOR TEACHERS

Climate Change

Climate change refers to the long-term changes in global temperatures and other characteristics of the atmosphere. Climate has changed throughout Earth's long history, but this time it's different.

Human activities such as burning fossil fuels release gases into the atmosphere called greenhouse gases, these gases trap the heat from the sun which inturn warms the planet, creating climate change.

Life Cycles, Interconnection and Interdependence

Exploring the concept of the cycles on our planet and of living organisms is a powerful tool for helping students make sense of the complexity, diversity, and interconnectedness of life on Earth. It is also an opportunity to see order in the natural world and to see how that order can be studied and predicted using the tools of science.

The Atmosphere

Earth's atmosphere is a jacket of gases that surrounds our planet. It keeps us warm, gives us oxygen to breathe, and it is where our weather happens. This is an excellent demonstration of what our atmosphere for children.

Climate Jargon Buster
https://climatejargonbuster.ie/wp-content/uploads/2021/02/ClimateJargonBuster_A-Z_a.pdf

Carbon

Carbon in Our Daily Lives: We all encounter carbon throughout our daily lives. Your body contains carbon. The air you breathe contains carbon dioxide. The food you eat contains carbon. The clothes you wear contain carbon. Through our use of the carbon-containing materials we move carbon from one place to another more quickly than would naturally happen. This activity illustrates the ubiquity of carbon by focusing on carbon-containing objects likely to be familiar to students:

- Seashells come from organisms that extract calcium and carbon from the water around them to form calcium carbonate shells. $CaCO_3$ is a white, insoluble solid and is also the main component of chicken eggshells and pearls.
- Wood contains carbon because it comes from a plant that once completed photosynthesis, taking in carbon dioxide to produce glucose and build its cell walls out of cellulose.
- Plastic is derived from petroleum, which contains hydrocarbons, compounds composed entirely of hydrogen and carbon. Petroleum was once tiny marine organisms that lived millions of years ago in the world's oceans.
- Fabric contains carbon. In plant-based fabrics such as cotton or modal, the carbon comes directly from plants. If it is polyester or acrylic, it is made from petroleum products which contain carbon, and petroleum was once marine organisms. If it is wool or silk, the carbon came from an animal, which ate plants to acquire its carbon.
- Carbonated beverages are named for the carbon dioxide gas that has been dissolved in the liquid, creating their fizz. Some carbon dioxide remains dissolved in the liquid even if the drink has stopped making bubbles.
- A glass of water also contains carbon dioxide gas, although in much lower concentrations than carbonated beverages. This is because carbon dioxide diffuses into water. The amount of carbon dioxide in the glass of water is directly related to the amount of carbon dioxide in the air. This is the same way the carbon dioxide gets into the oceans to cause ocean acidification.

What is carbon dioxide?

Carbon dioxide is an important gas for life on the planet.It is crucial to maintaining the protective blanket that is Earth's atmosphere. Carbon dioxide is often called 'C-O-2' (pronounced see-oh-two) and written as CO2 because 'C'stands for carbon and 'O' stands for oxygen. Carbon dioxide is one of the primary greenhouse gases on Earth.

Greenhouse gases trap heat from the Sun. Without greenhouse gases, that heat would escape Earth's atmosphere and go back into space. Human activities, such as burning fossil fuels and cutting down forests, are changing the balance between how much carbon is in the air and how much carbon is stored in plants and the ocean. These activities cause the amount of CO2 in the air to rise. Big increases in CO2 in our atmosphere can negatively affect Earth's climate.

So is carbon dioxide bad?

Here's the big, important thing about CO2: It's a greenhouse gas. That means CO2 in the atmosphere traps heat close to Earth. It helps our planet hold onto some of the heat it gets from the Sun so the energy doesn't all escape back into space.

If it weren't for this greenhouse effect, Earth's ocean would be frozen solid. If not for the greenhouse effect, Earth would be an ice ball! Earth would not be the beautiful blue and green planet of life that it is.

So, CO2 and other greenhouse gases are good — but only up to a point. CO2 is so good at holding in heat from the Sun that even a small increase in CO2 in the atmosphere can make Earth even warmer.

Throughout Earth's history, whenever the amount of CO2 in the atmosphere has gone up, the temperature of Earth has also gone up. And when the temperature rises, CO2 levels in the atmosphere increase even more, mostly because of the role the ocean plays in the carbon cycle. As ocean temperatures increase, oceans release stored carbon dioxide into the atmosphere – like a glass of soda losing its bubbles on a warm day.

CURRICULUM LINKS

	2nd Class	3/4th Class	5/6th Class
Geography	Environmental Awareness and Care		
	SU: Caring For My Locality **Learning Outcomes** (LO) *-- become aware of ways in which the environment can be polluted or harmed* *-- begin to realise that people, animals and plants depend on each other*	**SU: Environmental Awareness & Caring For the Environment** **LO:**-- *recognise how the actions of people may have an impact on environments* *-- come to appreciate the need to conserve the Earth's resources*	**SU: Environmental awareness & Caring** **LO:** become aware of the importance of the Earth's renewable and non-renewable resources -- explore some examples of the interrelationship of climate, natural features, flora, fauna and human life in different environments - Weather, climate and atmosphere -- explore the relationship of climate to plant, animal and human life
	Natural Environment		
	SU: The Local Natural Environment Observe, discuss and investigate water in the locality Record and communicate experiences and observations using simple drawings, plans and displays **Planet Earth in Space** Develop familiarity with the spherical nature of the Earth	**SU : Rocks and Soils** Compare and Contrast Materials focusing on certain criteria: Carbon	**SU: Weather, climate and atmosphere** Explore he relationship of climate to plant, animal and human life -develop simple understanding of some atmospheric features
Maths / PE	**Gymnastic: Balance**		**Number: Balancing Equations**
SPHE	**S: Myself and the Wider World**		
	SU: Developing Citizenship Appreciate the environment and develop a sense of individual and communit y responsibility for caring for the environment and being custodians of the Earth for future generations.		
			Realise and begin to understand the unequal distribution of the world's resources

CURRICULUM LINKS

Science	**S: Living things**	**SU: Plant and animal life**	
	Become familiar with life cycles **Environmental Awareness:** begin to realise that people, animals and plants depend on one another	**LO:** become aware of life processes and how environmental conditions influence living things Identify interrelationships	**LO:** identify interrelationships and interdependence between plants, animals and environment Become aware of life processes
	S: Materials		
	SU: Properties and Characteristics of Materials **LO:** Group materials according to their properties; carbon		**SU: Properties and Characteristics of Materials** **LO:** explore origin of materials, group according to properties/ composition -recognise that gas, such as air, occupies space, has mass and exerts pressure -become aware that air is composed of different gases
	S: Environmental Awareness and Care		
	SU: Caring for my locality **LO:** develop an awareness that air, water, soil , living and non-living things are essential to the environment -begin to recognise that people, animals and plants depend on one another -realise that there is individual and community responsibility -identify, discuss and implement simple strategies for improving and caring for the environment -become aware of ways in which the environment can be polluted or harmed	**SU: Environmental Awareness** **LO:** Recognise how the actions of people can impact on environments -appreciate the need to conserve resources	**SU: Environmental Awareness** **LO:** Explore interrelationship of climate, natural feature, flora, fauna and human life -recognise and investigate aspects of human activities which may have positive or adverse effects on environments -come to appreciate the need to conserve the Earth's resource
		SU: Caring for the environment **LO:**Identify a local, national or global issue Realise there's a personal and community responsibility to take action	
	S: Energy and Forces		
	SU: Heat **LO:** measure changes using a thermometer		

LESSON 1

What is Climate Change; Introduction to Cycles

Video 1
What is climate change ?
https://youtu.be/dKZezdWiUK0

Key Question
What is Climate Change? What are natural cycles?

Key Points of Learning

- Climate Change happens when our natural cycles/ systems are out of balance
- A cycle is a series of events which happen in a particular order. The events happen repeatedly in a circular fashion. Every part of the cycle is important.

Key Vocabulary

Balance, cycles, atmosphere, carbon, equilibrium, climate change, carbon dioxide, methane.

Teacher Preparation

- Print and cut up life cycles, print life cycle pictures, print reflection sheet.
- Get Post-its or small pieces of paper in two different colours.
- Ensure children have access to 30 cm rulers, bricks and various items to balance (rubber, parer, cubes).

Video 1
What is climate change ?

https://youtu.be/dKZezdWiUK0

Intro

Watch Video 1 to 00:48

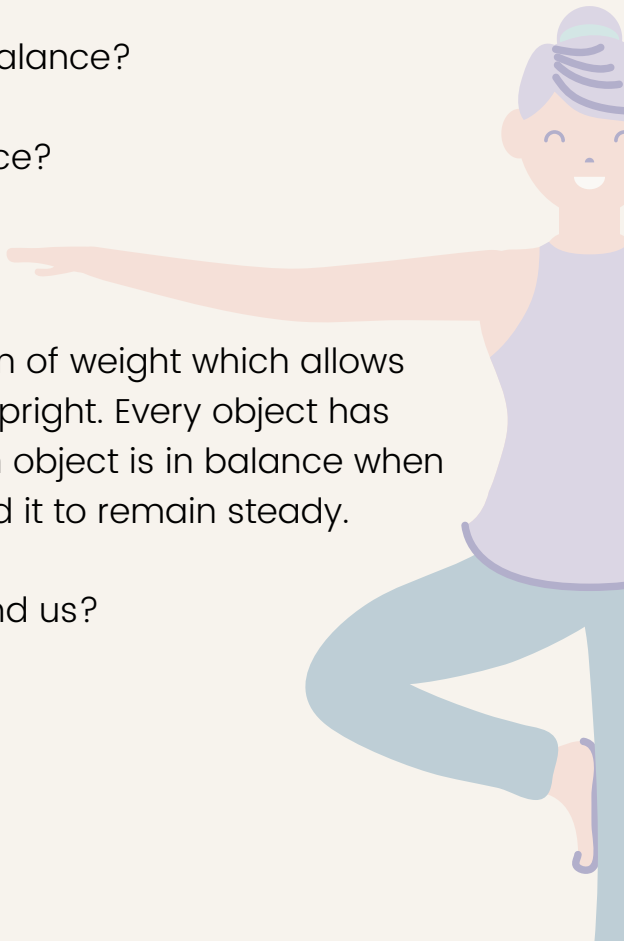
- Ask children to try a few balances; balance on one leg, try to pick something up while balanced on one leg, balance a book on their head.
- Create a simple balance using a ruler balanced on a block. Explore what objects can be balanced. Eg. two rubbers and a parer etc.
- Discuss:

1. What does it mean for something to be in balance?
2. When is it important to be in balance?
3. What happens when you loose your balance?
4. Do other things loose their balance?

Explain

Balance exists when there is an even distribution of weight which allows someone or something to remain steady and upright. Every object has forces, or energies of motion , acting upon it. An object is in balance when all the forces that push or pull on it have caused it to remain steady.

How does this balance apply to the world around us?



Development

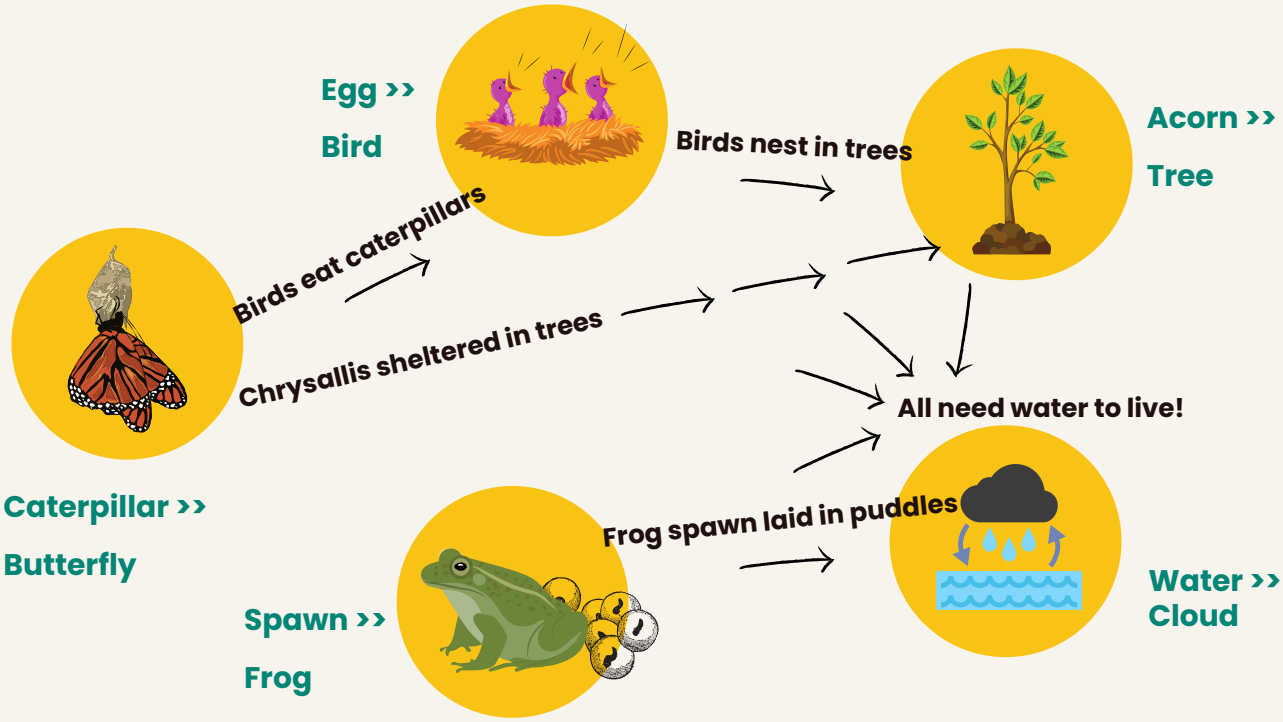
Watch Video 1 to 1:43

Discuss :

- What different cycles were mentioned in the video?
- Can you think of any other cycles?

Look at this cycle of the year. What other elements impact on the cycle of the year? Consider where we live, altitude, how close you are to the equator, how close you are to the sea.

Explore in groups these different life cycles (draw these on the board):



Development

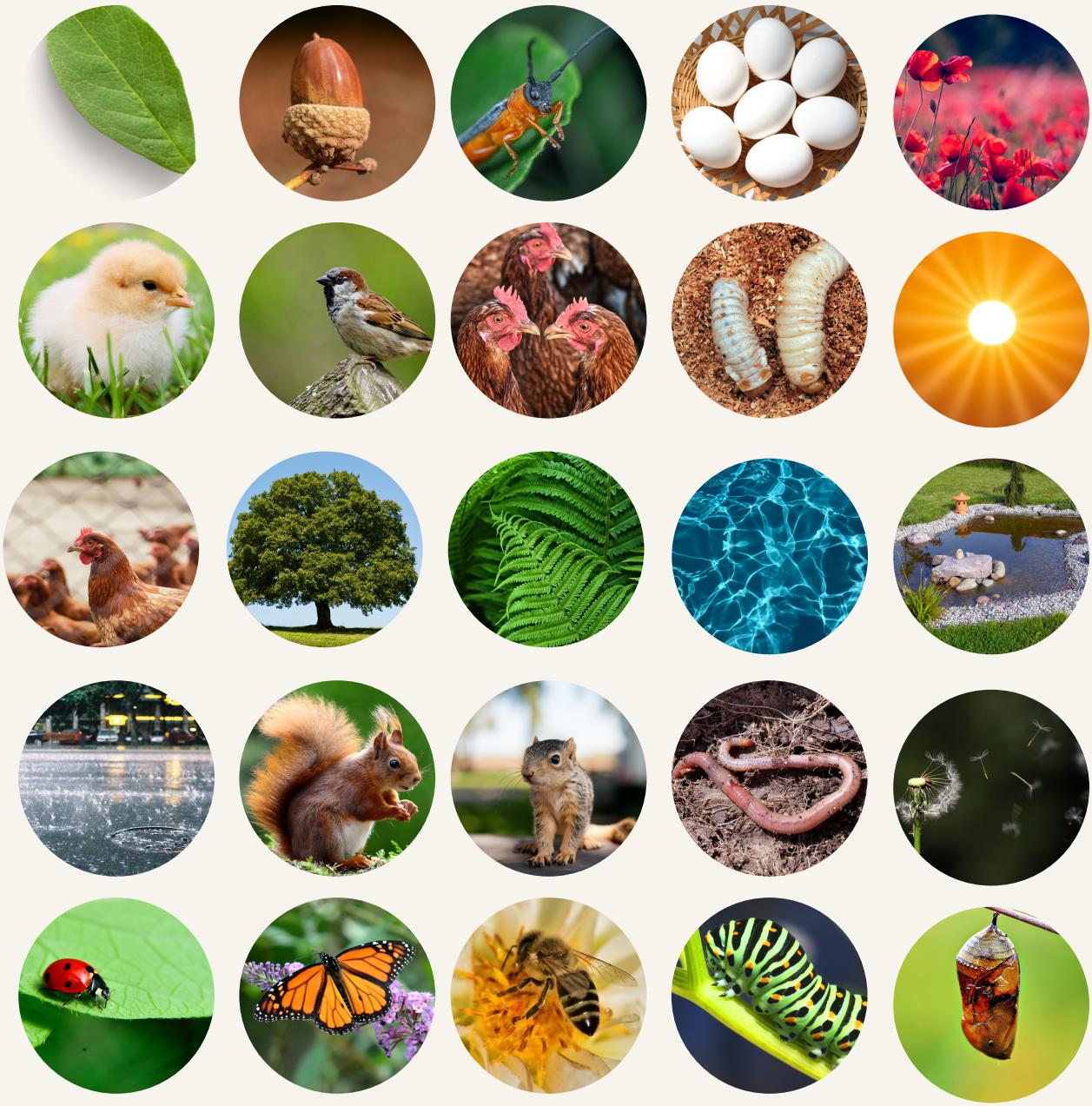
Watch video 1 from 1:43 onwards

- **4th - 6th class** on post-its or two different colours of paper ask children to identify:
  - Conditions which might help the cycle stay in balance (eg. habitat being undisturbed, weather conditions being predictable)
  - Conditions which might lead to the cycles being out of balance (eg. destruction of habitat, use of pesticide which harms one part of the cycle, too many animals eating the seeds of a plant)
  - Display the cycles for all children to see. Ask children to identify links between the different cycles. Link these using string or draw links on whiteboard.

Cycles

Ask students to choose a photo and then stand in circle. They can then make connections with other elements of the life cycle.

- Pass a ball of thread around the circle as students make connections with one another.
- When every student has made at least one connection, choose one or a few students to drop their string, in order to demonstrate the interconnection and interdependence between each element in the cycle.



Conclusion

Web of Life Cycles and Connections

- Using the prompt sheet below, encourage students to reflect on what they have learned and elicit questions prior to the next lesson.

Explore more

- Explore balancing equations in maths
- Explore balance in PE

Use the following vocabulary to help you write about what you have just learned:

Balance, cycles, atmosphere, change, stable, carbon, equilibrium, climate change, carbon dioxide, methane.

I used to think	Now I think	I feel	I wonder

Video 1 Key Vocabulary

Balance, cycles, atmosphere, carbon, equilibrium, climate change, carbon dioxide, methane.

LESSON 2

Our Atmosphere

Video 2
Our atmosphere
https://youtu.be/rN0yu8aJ7lM

Key Questions
What is the purpose of our atmosphere?
Why is balance important in our atmosphere?

Key Points of Learning

- Explore the link between breathing, air and atmospheric pressure, through simple individual and whole class experiments.

Key Vocabulary

Atmosphere, breathing, gas, vacuum, atmospheric pressure, pressure limits, maintain heat, carbon dioxide, Greenhouse Gas Effect, capture heat, methane, Greenhouse Gasses oxygen, nitrogen

Teacher Preparation

- Print: Recap sheet
- Collect: Ruler, Newspaper, Plastic Bottle (check first that the bottle works as some stronger plastic bottle don't demonstrate the point very well)
- For GHG demonstration: Two thermometers, one glass jar with a cover (cling film will do) OR some ice cubes and cling film.

Video 2
Our atmosphere

https://youtu.be/rN0yu8aJ7lM

Intro

Watch Video 2 to 00:54

Discuss

- What happens when we breathe?
- What gasses are in the air around us?

Air is the invisible mixture of gasses that surrounds Earth. Air contains important substances, such as oxygen and nitrogen, that most species need to survive. Nitrogen and oxygen make up about 99 percent of Earth's air. People and other animals need oxygen to live. Carbon dioxide, a gas that plants depend on, makes up less than 0.04 percent.
Sometimes the word 'atmosphere' is used to describe the air around and above us.

Explain

How can we show that air is pressing on everything?

- Squeeze air out of a plastic bottle. Let go and see what happens. (The bottle regains its shape because air pressure forces air back into the bottle). Now put the lid on before you let go and see what happens. (No air can get in so the bottle stays squeezed.)
- Put a ruler on the desk/table with a bit sticking over the edge. Spread out some newspaper over it and smooth it down so that it is flat. Now try to lift the paper by hitting the wood. (When you hit the wood the air pressing down on the newspaper makes it difficult to lift the paper).

Development

Watch Video to 01:42

Discuss:
What is the role of the atmosphere?

- Protects us
- Keeps us warm

Using a ball, to represent earth and a small blanket demonstrate, to represent atmosphere. how the atmosphere protects and keeps us warm.

What is carbon dioxide?

- Discuss definition with the children
- Where does it come from?

Made up of carbon and oxygen, CO_2 is all around us naturally. It comes from decaying and living organisms, and from volcanoes. CO_2 is released when burning fossil fuels like coal and oil. It's the most important contributor to human-caused global warming.

Begin experiment to explore the greenhouse effect.

- Place one thermometer inside glass jar and cover with lid or cling film.
- Place outside on a clear, sunny day with another thermometer beside it.
- Observe how temperature changes.
- This could also be done with two equal sized blocks of ice, wrapping one in cling film or other covering to explore the effects of increased carbon dioxide in atmosphere.

Time	Thermometer 1	Thermometer 2

Development

The Greenhouse Effect: The greenhouse effect is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. This process makes Earth much warmer than it would be without an atmosphere. The greenhouse effect is one of the things that makes Earth a comfortable place to live.

- Observe the balance of carbon dioxide etc. How it has changed?

Conclusion

- Add to reflection sheet from previous lesson.
- What is one action can you take to reduce carbon emissions.
- Create a carbon pledge as a class!

Explore more

- **Exploring How Lungs Work Experiment :** https://www.sfi.ie/site-files/primary-science/media/pdfs/col/lungs_activity.pdf
- **Can you Balance Activity:** https://www.sfi.ie/site-files/primary-science/media/pdfs/col/can_you_balance.pdf
- **Air Takes Up Space:** https://www.sfi.ie/site-files/primary-science/media/pdfs/col/investigating-the-atmosphere-air-takes-up-space.pdf
- **Meet the Greenhouse Gases:** https://climatekids.nasa.gov/greenhouse-cards/
- **Scroll to see each layer of the atmosphere:** https://climatekids.nasa.gov/whats-in-the-atmosphere/

Video 2 Key Vocabulary

Atmosphere, breathing, gas, vacuum, atmospheric pressure, pressure limits, maintain heat, carbon dioxide, Greenhouse Gas Effect, capture heat, methane, Greenhouse Gasses
oxygen, nitrogen

atmosphere	Layer of gas that surrounds the earth
air	It surrounds the earth. Also called the atmosphere.
Respiration	The body's way of taking in oxygen and giving out carbon dioxide.
gas	State of matter when it is not a liquid or a solid.
Atmospheric pressure	The weight of the air pushing down on us
Carbon dioxide	A powerful gas. It is part of the air we breath and is released when fossil fuels are burned.
Greenhouse Effect	Due to increased greenhouse gases the temperature of the earth is rising.
Greenhouse gases	Gases that trap heat from the Earth's surface escaping from the atmosphere. Like a blanket it makes the earth warmer.
Oxygen	One of the main gases which make up air. We need it to breath and get energy from food.

LESSON 3

The Carbon Cycle

Video 3
The carbon cycle
https://youtu.be/YSMwCGZ1qZU

Key Questions
What is carbon? How does the carbon cycle work? How has the balance of carbon dioxide become unbalanced in our atmosphere?

Key Points of Learning

- Carbon is an important element which is present in all organic matter. It is part of an ongoing cycle. Burning of fossil fuels has lead to an imbalance of carbon dioxide in the atmosphere.

Key Vocabulary

Carbon, resources, system, digest, ingest, carbon dioxide, decompose, soil, peat bogs, oceans, plants, storage sinks, disrupt, carbon cycle, convert, photosynthesis, oxygen, burn, energy requirements, coal, oil concentrated energy, parts per million, industrial revolution

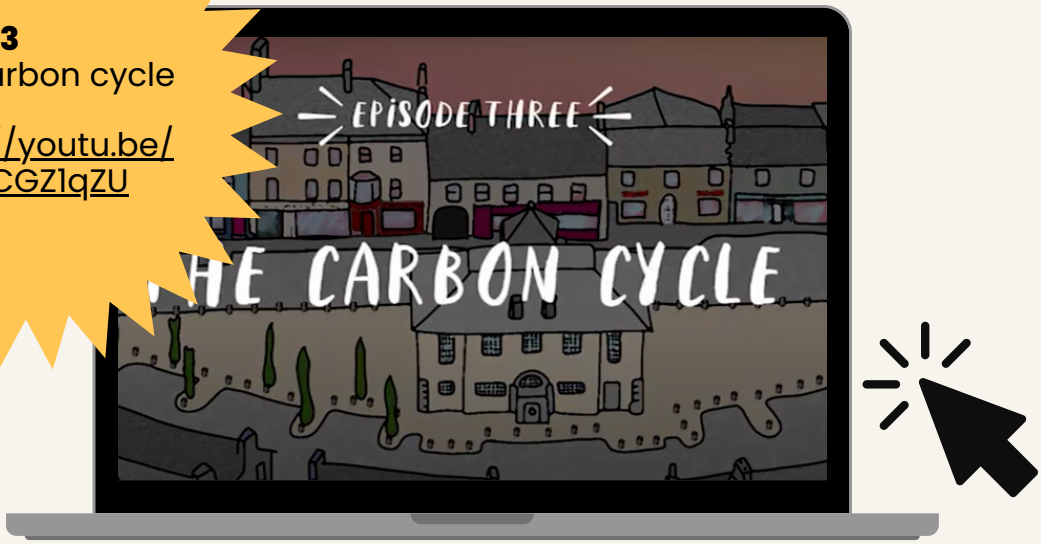
Teacher Preparation

Collect:

- Seashells
- Piece of wood
- Plastic
- Fabric
- Carbonated beverage
- Cup of water

Video 3
The carbon cycle

https://youtu.be/YSMwCGZ1qZU



Intro

Take a deep breath. Breath out. You just breathed out carbon dioxide.

Assess students prior knowledge with discussion or word map :

- What is carbon?
- Where have you heard the word carbon?

Watch video 3 until 01:32

Everything living has carbon in it. It is the building block of life. All living things on Earth contain carbon. Even you contain carbon. Lots of it! Like every other living thing on this planet, we are a part of Earth's carbon cycle. Plants take in CO2. They keep the carbon and give away the oxygen. Animals breathe in the oxygen and breathe out carbon dioxide. Carbon, including carbon dioxide, has cycled into and out of the air for a long time. This cycling of carbon has stayed balanced over long periods of time. carbon combines easily with many other elements to form other substances with different properties. For example, carbon can combine with oxygen to form carbon dioxide (shake carbonated beverage or have them breathe out to highlight that it's a gas).

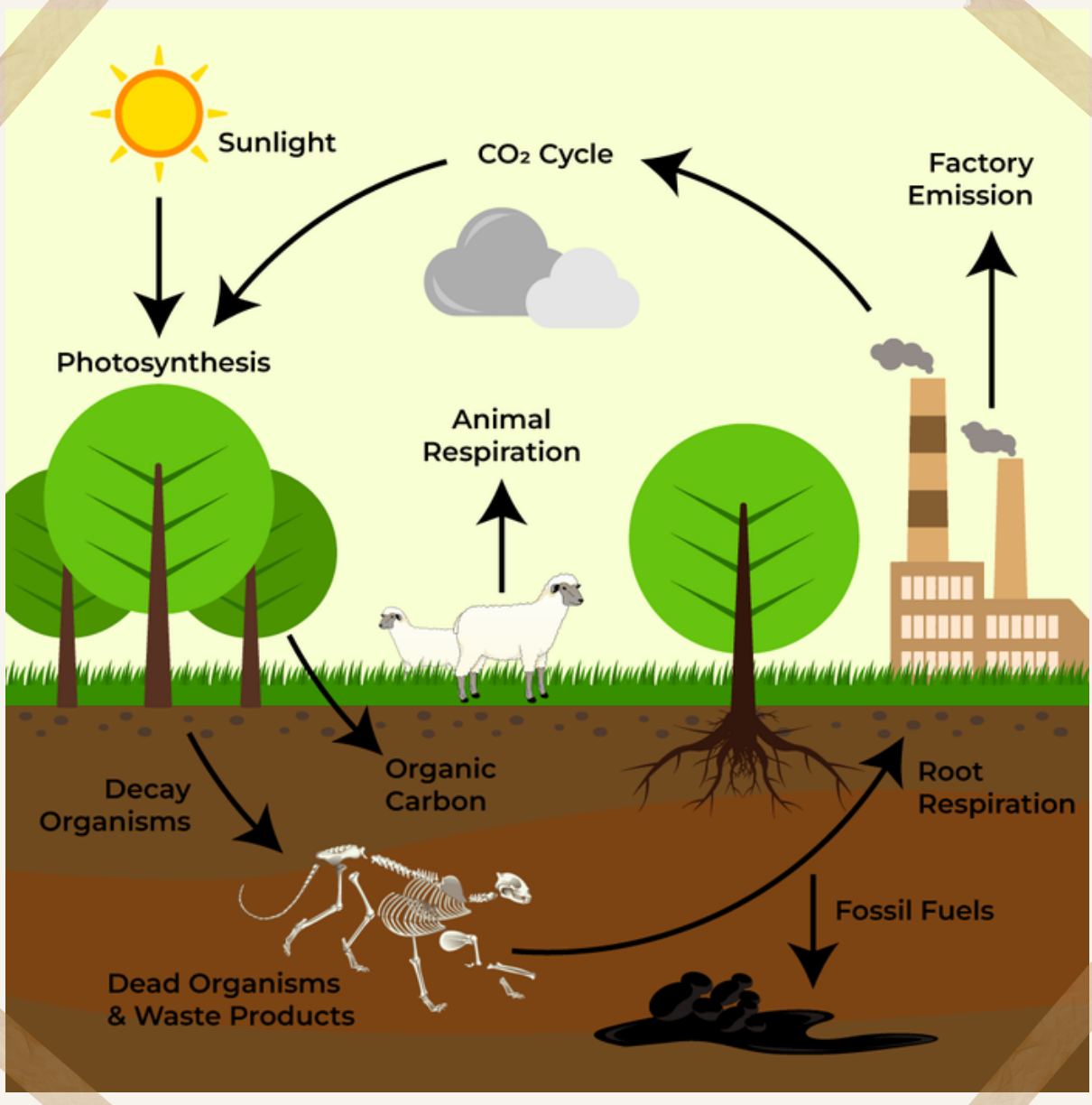
Explain

Give children two or three minutes to write down as many things as they can think of that contain carbon (living things, plants, stones , water, air). Share answers or turn it into a game where children rub out the item if another group calls it out. Winner is the person with the most 'original' ideas once all are called out.

Development

Show a diagram of the carbon cycle.

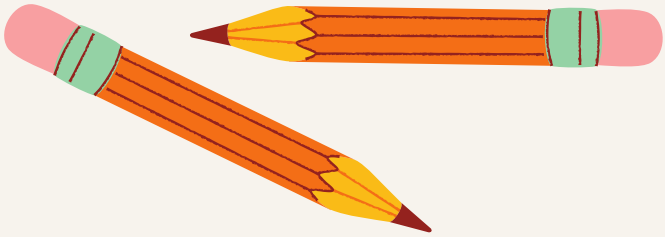
- In pairs ask children to explain to one another what they see and what they think is happening.
- Explain the carbon cycle to class.



Development

- Ask students to gather the items listed below.
- In pairs or groups ask children to fill out investigation sheet, identifying whether or not the items contain carbon.

Item	Does it contain carbon?		Explain answer
	Yes	No	
wood			
plastic			
fabric			
Fizzy drink			
Cup of water			
seashell			



Watch video 3 from 01:25

- Note the increase of Carbon Dioxide.
- What do you think has caused this increase in Carbon Dioxide in the atmosphere?
- In what ways do you produce more carbon than your grandparents? Their grandparents?

Conclusion

- Brainstorm ideas of how you would talk to someone at home about the carbon cycle.
- Role play having this conversation with a partner.
  - Tell them what you found most interesting
  - Start with something that really interests them.
  - Rehearse what you are going to talk about
  - Ask if they have any questions

Explore more

- For 5th and 6th Class this Carbon Cycle game is an amazing way of making the carbon cycle real for them. https://www.calacademy.org/educators/lesson-plans/carbon-cycle-role-play
- Carbon Cycle: https://www.youtube.com/watch?v=A4cPmHGegKI
- Link in with the Industrial Revolution in 5th or 6th class
- Explore how our bogs and peatlands can be used to sequester carbon, with this lovely child-narrated video from National Parks and Wildlife Service: https://www.youtube.com/watch?v=Fu_QQQNnQq0
- The Carbon Cycle: https://youtu.be/U7DbEeBXQBQ

Video 3 Key Vocabulary

Carbon, resources, system, digest, ingest, carbon dioxide, decompose, soil, peat bogs, oceans, plants, storage sinks, disrupt, carbon cycle, convert, photosynthesis, oxygen, burn, energy requirements, coal, oil concentrated energy, parts per million, industrial revolution

LESSON 4

The Water Cycle

Video 4
The water cycle
https://youtu.be/xn6koPTMzLI

Key Question
How does water move through its cycle? How can we show different parts of the water cycle such as condensation and evaporation?

Key Points of Learning

- Water is part of an ongoing cycle involving precipitation, collection, evaporation, transpiration, condensation.

Key Vocabulary

Fountains, water, council, treated, droplets
Air currents; warm and cold, condense, precipitation, groundwater, collecting, plants- oxygen, respiring, transpiring, aquifers, evaporates, oxygen, water droplets

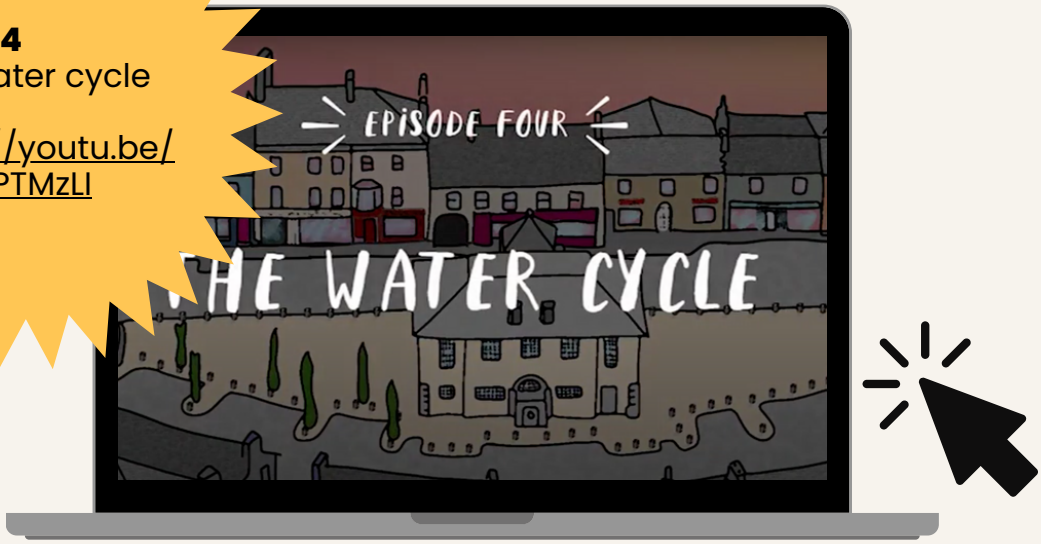
Teacher Preparation

Collect:

- Kitchen paper
- Plastic zip loc bag
- Globe and map of local area (or Google maps)

Video 4
The water cycle

https://youtu.be/xn6koPTMzLI



Intro

Earlier on the day of lesson or day before

- Ask a child to wet two pieces of kitchen paper and Wring out most of the moisture.
- Place one piece of wet paper on a plate and the other in a secure zip-loc bag.
- Place them in a bright warm place.
- Ask the children what they think will happen.
- Ask children to draw their predictions, labelling and explaining their predictions accordingly depending on age.
- Leave experiment and return to it later in the day before the lesson.

Observe what has happened. Where has the water gone? Has the water disappeared? How come the results are different? Drawing on the cycles discussed in previous lessons, ask the children how this demonstration might be part of a larger cycle.

Explain

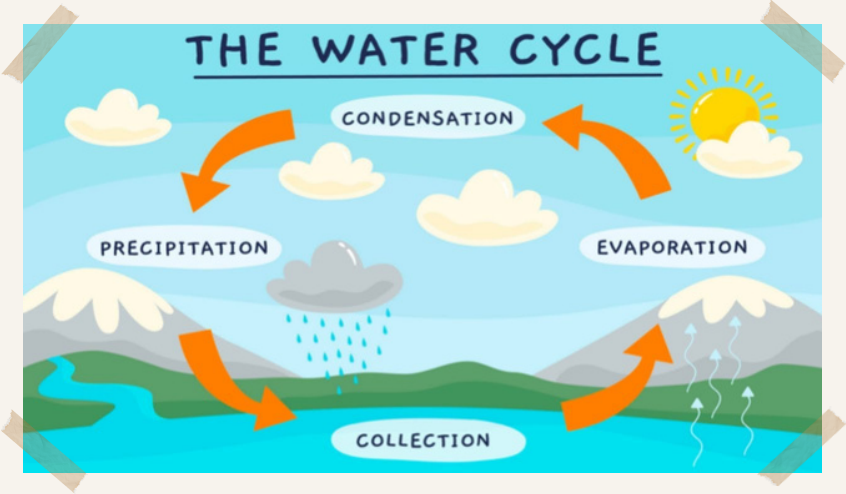
The exposed cloth will be drier as the water molecules were able to escape into the air when they were heated unlike the cloth in the bag where the molecules could not escape.

Looking at globe/Google maps; where is most of the water on earth? Other than the seas, where is water stored? Where is the nearest body of water to your school? Use this map to explore the nearest waterways to your school: https://gis.epa.ie/EPAMaps/Water Is it fresh water or salty?

Development

Watch video.

Pause video after each step of the cycle and ask children to draw on whiteboard or smaller individual diagrams.



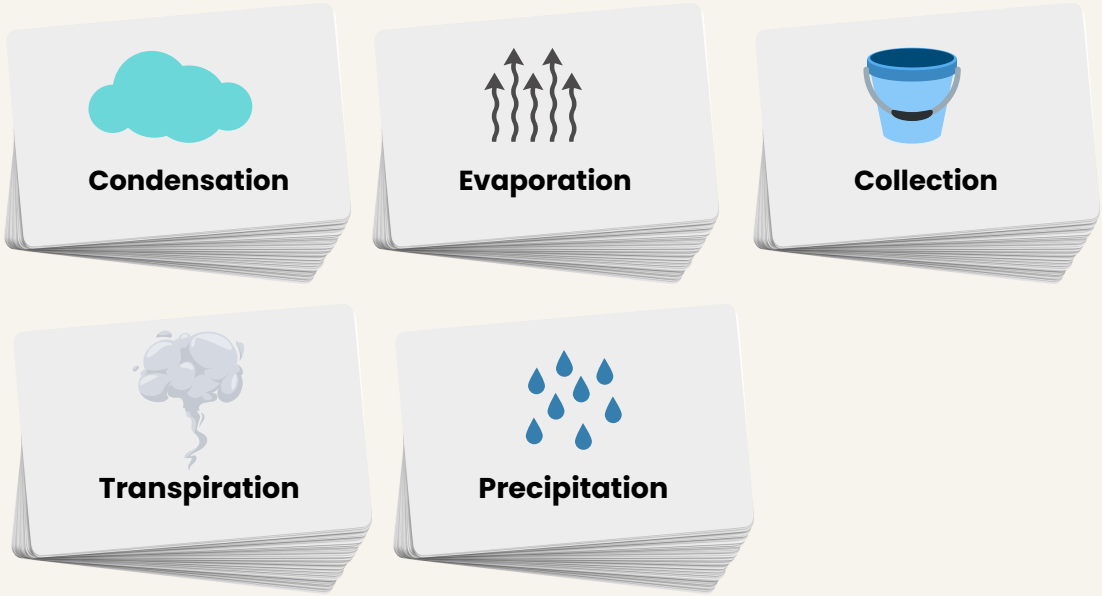
Explain the four stages:
1. Evaporation happens when warmth from the sun causes water from the sea, lakes and rivers to rise into the air and turn to vapour, which then merge together to form clouds.
2. Condensation happens when water vapour turns back into liquid, and forms clouds in the sky. 3. Precipitation is when water (which could be rain, snow, hail or sleet) falls from clouds in the sky.
4. Run off happens when much of this water flows into lakes and rivers, and gets carried back to the sea.

Experiment

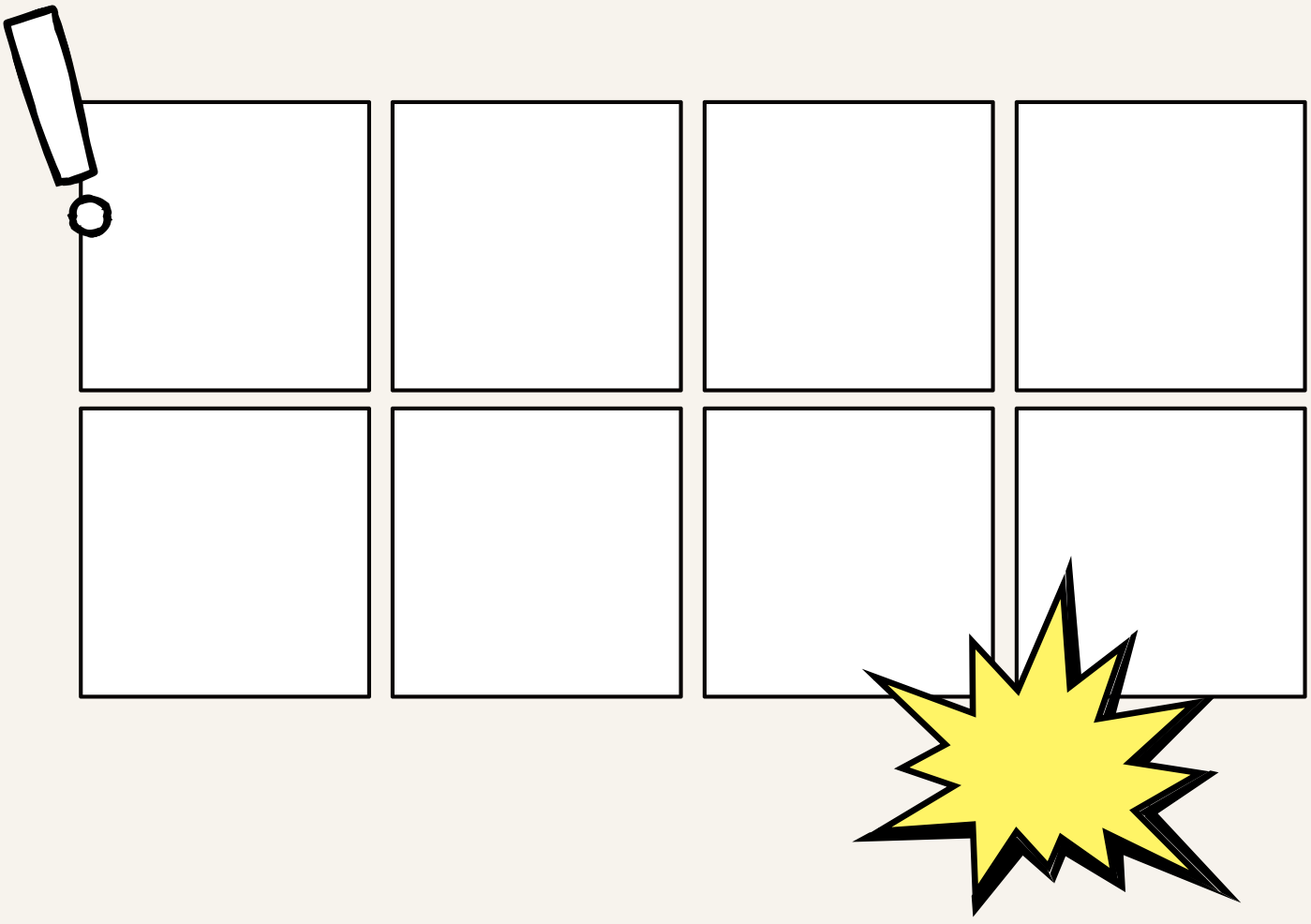
- Pour a few inches of very hot water into the jar.
- Cover the jar with a plate and wait a few minutes.
- Then put the ice cubes on the plate.
- What happens to the water?
- The cold plate causes the water vapour in the warm air, which is inside the jar to condense and form water droplets.

Conclusion

- In groups of four or five give children cards with the 4 stages of the cycle. Ask them to create a drama based around the stages.



- Make a comic strip with a molecule of water as the main character. The comic must include text that explains what is happening in each frame.



Explore more

- NASA Climate Kids have fantastic resources exploring how water is essential for life on earth as well as how satellites collect data and do research about water: https://climatekids.nasa.gov/menu/water/

Video 4 Key Vocabulary

Fountains, water, council, treated, droplets, Air currents; warm and cold, condense, precipitation, groundwater, collecting, plants- oxygen, respiring, transpiring, aquifers, evaporates, oxygen, water droplets

Lessons Recap

1 cycle I learned about	**The most important words I learned...**	**I can reduce my own carbon emissions by...**	**How I can prove there is atmospheric pressure...**
You can find carbon in...	**I'm confused about...**	**The most interesting thing was...**	**I think.....** **I feel....** **I wonder...**

Video 1 Key Vocabulary

Balance, cycles, atmosphere, carbon, equilibrium, climate change, carbon dioxide, methane.

Video 2 Key Vocabulary

Atmosphere, breathing, gas, vacuum, atmospheric pressure, pressure limits, maintain heat, carbon dioxide, Greenhouse Gas Effect, capture heat, methane, Greenhouse Gasses oxygen, nitrogen

Video 3 Key Vocabulary

Carbon, resources, system, digest, ingest, carbon dioxide, decompose, soil, peat bogs, oceans, plants, storage sinks, disrupt, carbon cycle, convert, photosynthesis, oxygen, burn, energy requirements, coal, oil concentrated energy, parts per million, industrial revolution

Video 4 Key Vocabulary

Fountains, water, council, treated, droplets, Air currents; warm and cold, condense, precipitation, groundwater, collecting, plants- oxygen, respiring, transpiring, aquifers, evaporates, oxygen, water droplets

LAOIS COUNTY COUNCIL

CLIMATE ACTION LAOIS

Primary school resource for 2nd-6th class

4 Lesson plans linked to a video clip with information on a different aspect of climate change.

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