Learning Sequence 4 - Glacial landforms

Learning Elements

Locate and collect relevant information and data from primary and secondary sources (ACHASSI095, ACHASSI123)

Organise and represent data in a range of formats including tables, graphs and large- and small-scale maps, using discipline-appropriate conventions (ACHASSI096, ACHASSI124)

Interpret data and information displayed in a range of formats to identify, describe and compare distributions, patterns and trends, and to infer relationships (ACHASSI100, ACHASSI128)

Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)

Recognise how media and important people in the community influence personal attitudes, beliefs, decisions and behaviours (ACPPS057)

Biological sciences
Living things have structural features and
adaptations that help them to survive in their
environment (ACSSU043

)Chemical sciences Solids, liquids and gases have different observable properties and behave in different ways (ACSSU077

)Earth and space sciences
The Earth is part of a system of planets orbiting

Introduction

This week we are going to be focussing on Glaciers and the way in which they help the food chain of the whole Earth function.

Whilst many of you have not seen a glacier in person, they play a very important role in keeping the Earth cool, being a habitat for life to thrive, and also shaping the world in which we live.

This week we are going to investigate how important they are and find out where your nearest glacier is.

There are over 400,000 glaciers on the planet so yours may not be too far away!

Once we understand how important the ice is, we may want to work extra hard to protect it. This week we will truly understand the importance of ice!

Each and every point on your checklist allows you to play an active role in protecting the world's ice caps and glaciers from melting.

This week we are going to be glaciologists!

Watch the welcome video with Jocelyn.

https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/

This week, the children will be researching the importance of glaciers and the role that they play in the food chain.

The children will investigate and start to understand the food chain of the Arctic Circle and the role that ice play in preserving this.

The children will then conduct research on a glacier closest to them. With over 400,000 glaciers on the planet, you are never too far away from the nearest one

Our objective is to create an understanding and a bridge between children and the preservation of the world's glaciers. The goal is to further understand how important they are and the role that they play in preserving human, organic and insect life on the entire planet.

Weekly Keywords

These words will help you during this week's lesson. You may already know some of these words however practice makes perfect!

First, read the words and then try to define them as simply as possible.

An example has been completed for you. You can

Keyword task Card

https://upschool.co/courses/it-starts-with-you/le sson/learning-sequence-4-4/

Teacher Notes – Introduce the spelling word list and choose from this list of tasks that can be

around a star (the sun) (ACSSU078)

Nature and development of science Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE081

Sequence information about people's lives, events, developments and phenomena using a variety of methods including timelines (ACHASSI097, ACHASSI125)

Analysing

Examine primary and secondary sources to determine their origin and purpose (ACHASSI098, ACHASSI126)

Examine different viewpoints on actions, events, issues and phenomena in the past and present (ACHASSI099, ACHASSI127)

)Use and influence of science Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083)

Questioning and predicting
With guidance, pose clarifying questions and make
predictions about scientific investigations
(ACSIS231)

Planning and conducting
Identify, plan and apply the elements of scientific
investigations to answer questions and solve
problems using equipment and materials safely
and identifying potential risks (ACSIS086)

Decide variables to be changed and measured in fair tests, and observe measure and record data write these into your books, and draw a picture to match or simply complete the task card.

repeated and expanded upon if necessary.

Copy the words into a spelling list/Vocabulary book for later reference.

Put each of the new words into a sentence and underline the new vocabulary in red pencil

Place the words in alphabetical order in a list.

Use a dictionary to define each of the words and place them into a vocabulary book.

Try to represent each of the words using a picture or a symbol and play the guessing game. (which image is matched to which word)

Write a paragraph containing all of the new vocabulary.

Make a vocabulary wall containing all of the new words.

Use a thesaurus to find synonyms for the words and create a synonym list.

Read and Discuss - 'Weekly Warm-Up Activity

Listen to the video with Jocelyne, read the information attached and try to answer the following questions. Some of the questions may need you to watch the video again or research in a book.

- 1. What percentage of the Earth is covered with Glacial ice?
- 2. Where are most of the Ice caps on Earth found?
- 3. Why does Clacial ice become a blue colour?
 - 4. What two things help Glaciers move?
 - 5. What do we call it when an iceberg is

https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/

Teacher Notes - This week we are introducing the topic of glaciers and ice. It is going to be a very interesting week as this is something that all children find fascinating.

The objective of the week is for children to understand that ice plays a crucial role in the food web of the Arctic and all of the organisms that live there.

This week we want children to understand that the environment plays a crucial role in the sustainability of all life on Earth. We want to be clear that the

with accuracy using digital technologies as appropriate (ACSIS087)

Processing and analysing data and information Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (ACSIS090)

Compare data with predictions and use as evidence in developing explanations (ACSIS218)

Evaluating

Reflect on and suggest improvements to scientific investigations (ACSIS091)

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS093)

Geography

The influence of people on the environmental characteristics of places in Europe and North America and the location of their major countries in relation to Australia (ACHASSK111)

The environmental and human influences on the location and characteristics of a place and the management of spaces within them (ACHASSK113)

How people with shared beliefs and values work together to achieve a civic goal (ACHASSK118)

Questioning

Develop appropriate questions to guide an

formed?

- 6. What do we call somebody who studies glaciers and ice?
- 7. Do ice caps and glaciers exist on other planets?
- 8. How do glaciers produce food for birds and whales?

environment relies on the organisms that live within it, just as much as the organisms rely on the environment.

Both are equally responsible for each other.

Your Weekly Goal Check-in

Take out your goals for tackling climate change and talk to the person next to you about which ones you have accomplished in the last week and what hurdles you have faced so far. Discuss which goals you are going to achieve this week and share ideas about how you are going to achieve them.

Tick off any goals that you have already achieved and track your progress. You are changing the world!

Well done!

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Teacher Notes – Students may wish to stand up and share their accomplishments with the rest of the class. This is a great chance to reflect on how the challenge is going and how people in the classroom are coping with the success and the hurdles that the challenge entails.

The Role of a Glacier -What does it do?

Today we will start to understand how important glaciers are in the way that the world works and how they assist it to function effectively.

During this activity we want you to read the information on how a glacier works. Each time you read a statement, put the number in each box on the diagram. When you have completed all 7, we want you to draw your own version of the diagram with all labels included

You may need to conduct some research to find out the names of the **various parts** of the glacier.

You are one step closer to becoming a glaciologist!

https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/

Teacher notes - As many children have never seen or experienced a glacier. Today's session is all about understanding the functions that glaciers play in the world by keeping the world cool and assisting animals with the process of finding food.

When children understand the scale of impact that glaciers have on the food chain, they are more inclined to understand the urgent need in protecting them

This week's extension activity should allow them to talk to their parents about the ways in which we can all help protect the global sea ice.

inquiry about people, events, developments, places, systems and challenges (ACHASSI094, ACHASSI12	Types of Glaciers - Report Now you have a good understanding of how glaciers work, we would like you to find out more about the various types of glaciers that exist. Watch the video opposite and use the task card to help you name and identify the different types of glaciers. Write a short sentence about each one and draw a diagram to match.	Video with Ulyana https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/ Task Card here - https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/ Teacher Notes - We have created a simple research card for your children to be able to identify 6 of the various types of glaciers. Children may wish to share their knowledge with the class once this is complete.
	Claciers of the World - Your Closest Clacier? There are over 400,000 glaciers on Earth. Each and every one of them has a role to play in keeping the Earth a sustainable place for us to live. Your job this week is to find your nearest glacier and conduct some research on it. Follow the task card to help you find the glacier closest to you and once located, answers the following questions to start your research. Once you have all the information your job is to start a project about the glacier and create either an information report or a diorama on the glacier. Use the task card to help you structure your research and choose either a diorama or an information report. Your mission is as follows: Step 1 - Find your nearest glacier Step 2 - Here are some of the questions you may wish to research when trying to understand your nearest glacier.	https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/ Teacher Notes - Ther following scaffold will give your children a step-by-step process of how they can find their closest glacier, research the correct questions, decide on how they want to represent their research and pass on their knowledge to a younger child. The key here is to allow your children to follow their passion and conduct their research in their own way. They must be allowed to work with whom they wish and then deliver the content to someone they trust. This is the perfect week to establish independence, choice, and confidence within our students.

Step 3 - Design a way to represent your research. Remember you will use this to teach younger children about glaciers	
Step 4 - Use your creation to teach a younger child or class about the importance of glaciers and the reasons we need to protect them.	
This may take you a few weeks to complete, but the idea is that you start today!	
Closing Video with Gavin	Closing video with Jocelyn here -
Now you truly understand how important glaciers are and the way in which they work to help animals, insects, and the whole world survive, your job is to try and find ways in which we can keep the earth cool and preserve the ice caps, glaciers and sea ice.	https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/
Next week we are going to be looking at sea ice in more detail and taking a trip on an icebreaker to see the ice in action.	
Good luck with your project. Let's change the world!	
Extension Activity #1 - Leadership Program Week 4	https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/
Charles S. Lauer said 'Leaders don't force people to follow—they invite them on a journey.' it is now time for you to invite a younger child to take a journey with you. A journey of discovery! Each week we will be asking you, as an older student to buddy up with a younger student in your school	Teacher notes - Each week we will request that your older students over buddy up, or partner up with a younger child in your school, and every week, they will pass on the knowledge they have gained from this lesson and take it to the younger cohorts within
We want you to pass on the knowledge you have gained this week to a younger student whilst developing leadership mentorship and with the responsibility of working with the youngest student in the school.	your school and develop their own leadership skills Please take a look at the very simple and child-friendly Lesson plan that I have developed above and this should be read and understood by the students before they prepare their lesson and their learning for a younger child
You may think that this is a task which has no meaning. However, to the younger child in the school,	The reasoning behind this methodology is develop

it will have a huge influence on the way that they approach education and the way they feel within school.

You will be a continuous safety net, almost like a Big Brother or sister to a younger student in the school whilst also developing leadership communication and the confidence to be able to lead into the future.

Use this template to help you plan your lesson and gather your resources before you head down to the younger children's classroom to reteach what you have just learned.

leadership, confidence, responsibility and communication skills between the older and younger students within your school. This will bring the cohort closer together and build a sense of community throughout your entire educational establishment.

Extension Activity #2 - Talk to your Parents

As an extension activity this week, you are going to organise a meeting with your parents, your grandparents and any family members who you think you may be able to convince to change the way they live to save the planet.

As you are aware, we are all following our new actions and goals to help protect the planet and create a safer. more sustainable world.

Download the following booklet and read it very, very carefully. Once you have understood all of the data and facts inside, you must then organise a meeting with your Mum, Dad, Grandma, Grandad or anybody who is willing to listen.

Your objective is to persuade them and convince them to change the way they live and follow these simple guidelines.

Remember, if you only convince one person to change the way they live, a very small amount, then you have succeeded.

Good luck.

https://upschool.co/courses/it-starts-with-you/less on/learning-sequence-4-4/

Teacher Notes - We have created a simple guide for your students to follow to be able to change the world using the persuasive power of their parents.

Each child is requested to take home a copy of the book, either digitally or in a paper version.

Following their new understanding of the importance of the way that we live, we want our students to go home and talk to their parents in great detail about the small things that they can do in their house that will have a big impact on the world and the future for everyone.

This week is all about persuasive devices, communication skills, and confidence. Some of the most important skills for the 21st-century leader!