Learning Sequence 5 -The Importance of Sea Ice

Learning Elements

Clarify understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a point of view

Show how ideas and points of view in texts are conveyed through the use of vocabulary, including idiomatic expressions, objective and subjective language, and that these can change according to context

Use interaction skills, for example paraphrasing, questioning and interpreting non-verbal cues and choose vocabulary and vocal effects appropriate for different audiences and purposes

Navigate and read texts for specific purposes applying appropriate text processing strategies, for example predicting and confirming, monitoring meaning, skimming and scanning

Use comprehension strategies to analyse information, integrating and linking ideas from a variety of print and digital sources.

Understand the use of vocabulary to express

Introduction

This week we are going to take your trip with an ice scientist all the way to the Arctic Circle to investigate the importance of sea ice

We're going to take you on a journey on an icebreaker called the Greg Mortimer and together we will understand the power that ice has in preserving life for all organisms on Earth

Once you understand the importance of this amazing formation, we will then start to understand how important ice is to every single human being on this planet.

It doesn't matter which corner of the planet you live on, ice plays an important role in making sure that life is sustainable for every human being, plant and insect on Earth.

To finish off this learning sequence, we're going to ask you to organise an event in your community which will enable everybody who lives around you to help in preserving sea ice.

What was once impossible, is now possible and it's all because of you!

Watch the welcome video with Ulyana

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Teacher Notes - This week we're going to be focusing on the importance of sea ice. We welcome you to join us on top of the icebreaker, Greg Mortimer, as we cruise towards the North Pole through an ocean filled with ice.

This lesson should allow the students to understand the importance of this amazing formation and also have a strong connection with it.

As this concept of preserving ice around the world is very abstract to many of our children, we have delivered this lesson directly from a boat within the Arctic Circle, so that the point of connexion is one step closer to your students, thus creating an emotional bond between the importance of sea ice and your children

This week your students will understand how sea ice impacts the communities of people all over the world, We want to empower them to be able to make a difference in the world and during this learning sequence, they will organise an event within your school which will allow them to make a difference in the preservation of this wonderful natural phenomenon.

greater precision of meaning, and know that words can have different meanings in different contexts.

Living things have structural features and adaptations that help them to survive in their environment

Solids, liquids and gases have different observable properties and behave in different ways

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

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

Identity, 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 with accuracy using digital technologies as appropriate

With guidance, pose clarifying questions and make predictions about scientific investigations

The influence of people on the environmental characteristics of places in Europe and North

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 write these into your books, and draw a picture to match or simply complete the task card.

Keyword task Card

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Teacher Notes - Introduce the spelling word list and choose from this list of tasks that can be repeated and expanded upon if necessary.

Copy the words into a spelling list/Vocabulary

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 Ulyana and read the following document and try to answer the following questions.

- 1. Where is most of the sea ice on Earth found?
- 2. In which layer of the Earth can we find sea ice?

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Teacher Notes – During this comprehension task, children will be required to read the task card and watch the video with myself and Ulyana.

During this task, we want to make sure that the children understand the importance of this ice

America and the location of their major countries

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

Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges

- 3. When floating sea ice becomes deformed, what three formations are created?
- 4. Why are cracks in sea ice very important for people and animals?
 - 5. What percentage of the entire planet is covered in sea ice?
 - 6. What word do we use to describe the amount of salt found in water?
- 7. What five ways does sea ice affect the whole planet?
 - 8. How do scientists measure the amount of sea ice on Earth?

formation

This will set the scene for them to design an impactful event within the school, which will allow them to feel that they are making a difference in the way that the world works and thus protecting sea ice for the foreseeable future.

This week it's all about understanding, comprehending and empowerment.

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.

You may wish to share some of your achievements with the rest of the class.

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 - Each week the students will have several minutes to touch base with the people around them or the groups on their table and discuss which of the goals they have managed to actually achieve and which goals they are finding tricky or difficult and are going to accomplish. In the coming days.

Please remember that children do not have to accomplish all ten goals. One goal is sufficient.

The Importance of Sea Ice - Make Your Choice

Whilst icebergs, glaciers and ice caps may be very, very far away from where you live. This week is all about you understanding that even though they are very distant, they still have an impact on your life.

Once we understand how important ice is, we can then begin to understand why we should all start to protect it.

Use the task card to understand the importance of this icy phenomenon, and then follow the procedure to understand that ice has an impact on the way that you, your family, and your entire community live. We need to work hard to make sure that we protect it while it is still there!

Take a look at the flow charts and answer the following questions with your partner.

- 1. Is it better if the Earth stays as it is and what would happen if the Earth warmed up?
- What kinds of animals live on or around the sea ice and are they important in the global food chain? What would happen if they became extinct?
- 3. Are Ocean currents important? What happens if they change? Would it change the weather where I live?
- 4. How important is it that the weather stays predictable? What happens when surprise things like heavy rain or extremely hot days happen by surprise?
- 5. If the ice melts then the sea levels rise. What would happen to the Earth if the sea levels became higher? Would it affect me or the people I know?

I think we can all agree that protecting the sea ice should be a priority for us all!

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Teacher notes - During this activity, we want the children to understand the difference between sea ice being present on Earth and the lack of ice on Earth, and the implications that this has on all aspects of the planet.

Children will require access to research materials such as technology or books to maximise the impact of this session.

Children are requested to work in pairs or groups and look at the task card, reading through each and every one of the results on the left and right sides of this card.

The idea behind this part of the lesson is for children to be able to establish how the disappearing sea ice can actually affect them personally.

For example, if the Earth is getting hotter, how will this affect them in their own community? If the Earth is starting to heat up, which is causing sea levels to rise, how will this affect their quality of life? And if habitats of animals are lost, such as the polar bear, what will this mean for the future of mankind?

This exercise is about building a bridge between what's happening on one side of the world and how that affects each of our students independently.

Discussion - Reuse, Recycle, Reduce

Now that you understand that the protection of sea ice is important to us all, let's take a look at some of the things we can do to help.

The small things that we do have a huge impact if everybody on Earth. We can change the lives of others by doing small things today.

Take a look at the following task card and with your partner, decide if they can be recycled, reused, or reduced. Some of these can be all three!

Once your discussion is over, make a pact to try and follow some of these in your home or school to help protect the sea ice from melting!

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Teacher Notes - This session will allow students to have an active discussion about the way that they live and whether they can reuse, recycle or reduce depending on the item listed.

Once students have decided if it's reuse, recycle or reduce, they simply need to colour in the box which indicates their choice.

Students may also wish to share their conversations with partners or with the rest of the class about which of these they are going to change in their own lives.

Each item can have multiple answers!

Let's Recycle - Community Action!

Now that you understand the importance of **recycling** and **reusing** things instead of throwing them away, we want you to persuade your community to recycle any children's books they may have in their house and bring them to school for you to collect.

Once you have collected the books, we want you to start a school fundraiser to send them to India. Once they arrive, the team at upschool will make sure that they reach communities that REALLY need them and don't worry, we will share the pictures with you so you can see the smiles on the children's faces when they receive their new books.

You'll need to create a poster to advertise your book drive. Take a look at the following example of how

How to make a poster

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Link to Libraries in India etc - https://upschool.co/libraries/

Teacher Notes - Now that our students understand the importance of recycling and reusing the possessions that we have, we want to give them some agency and independence to be able to organise their very own school community book drive.

The children will be asked to design a poster and set a closing date where parents can bring in used

your poster might look! Once you have designed it, children's books which can be donated to either a library in the subcontinent or another organisation of make sure it is sent to the families in your school! the children's choice. We are currently building libraries for communities in India, Pakistan, Nepal and Bangladesh and this is Children need to be given the agency and the where you can save the world and help others at the independence to make the choice for themselves. same time! This is where they have a chance to persuade the community to take action and save the planet, Once your collection is ready, you will need to visit alongside making a real and tangible difference in the the post office to find out how much it will cost to lives of other people in the world. send the books all that way! This process may take several weeks, but the You can take a look at some of the communities you learning which will take place from an event such as will be helping by clicking the link below! this will be lifelong. 'If you want to donate your books to another NB - If your school does decide to send your books organisation instead of posting them to India that is to schools in India using the Upschool network. totally fine too! The choice is yours Please contact us at hello@upschool.co for the address details where the books will be sent. Closing Video with Gavin Closing video with Ulyana here -During this week's learning sequence, we have https://upschool.co/courses/it-starts-with-you/less understood how important sea ice is in the lives of every organism on Earth, especially humans! on/learning-sequence-4-5 Now we truly understand that even though we may be many miles away from the sea ice, we can make small changes to the way that we live to help protect this valuable resource. By promoting and organising your book drive, you are encouraging families to recycle and reuse the possessions they have, to not only protect the sea ice, but also make other people's lives better. The process may take a long time, but today you have started and that is what's important. You are a changemaker!

Extension Activity #1 - Leadership Program Week 5

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

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.

You may think that this is a task which has no meaning. However, to the younger child in the school, 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.

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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 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

The reasoning behind this methodology is develop 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 - Seedlings in an Egg Carton (The Perfect Gift)

Now that we understand how important it is to recycle, and reuse, we are going to do just that. But this time we are also going to grow some new vegetation which provides food and a new home for some tiny creatures.

You're going to use an old egg carton and grow some seedlings inside. Once they start to grow you can then

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cut each individual egg cup out and gift them to a friend whilst explaining how important it is to reuse, recycle and reduce.	
Follow the instructions on the task card opposite and you'll be doing something amazing for the world!	