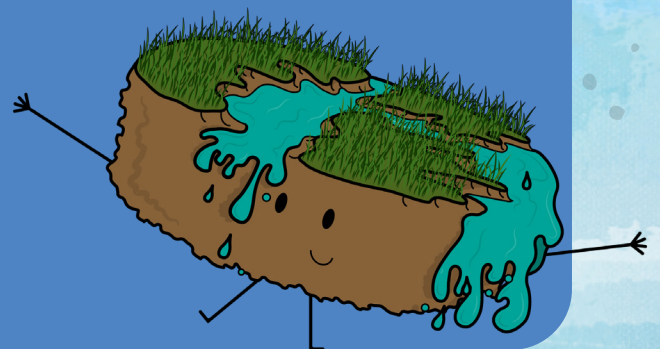
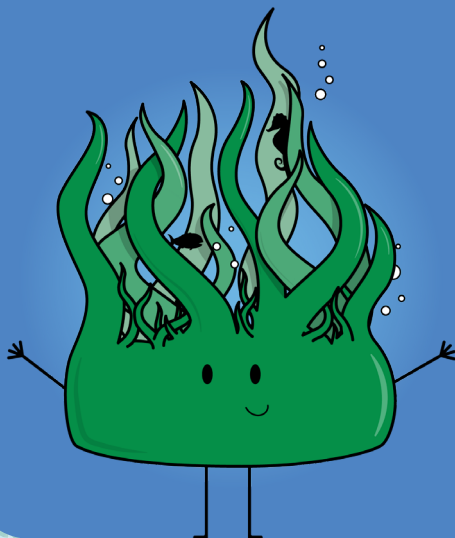


Nature's Climate Heroes

LEARNING PACK



Welcome to the **Nature's Climate Heroes** pack



What is it and who is it for?

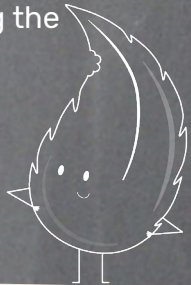
Nature's Climate Heroes is an enquiry-based learning resource designed to support children aged 7-11 years to:

- Understand the connections between nature, climate change and people.
- Investigate how nature helps our fight against climate change.
- Discover what small and local actions can be taken to give nature a boost in this bigger fight.

This resource can be adapted for younger and older audiences and tailored to your local area.

Why?

- Climate change can be scary and overwhelming, and it can make adults and children alike feel anxious.
- Often overlooked, nature plays an essential role in combatting climate change.
- We can work together with nature to be part of the solution.
- We can shape a more purposeful and positive narrative around fighting the climate and nature crises.



Sessions 1-3

Exploring the connections between nature, climate change and people

this helps students to

- Understand the interconnections between the natural world, the changing climate and humans
- Recognise that humans are part of the natural world and can help or hinder natural processes
- Change the focus of climate change from something big and scary, to something that children can play their part in preventing through simple actions in their local area

using these resources

1 - 11

Sessions 4-6

Framed around an enquiry question

A student-led group inquiry project based on four characters – our hidden climate heroes – Soil, Sea Grass, Leaf and Saltmarsh

Each hero comes with a 'top secret' folder of information about their superpowers and their hero friends

this helps students to

- Undertake self-led learning about the hidden heroes
- Identify how people can help nature's climate heroes fight climate change
- Affect change in their local area

using these resources

Nature's Climate Heroes – top secret hero files



Session 1

Making Connections

Focus:
Interconnections



This session is looking at how connections have been made between natural processes and climate change. When doing the what if part of the session it is easy to focus on the potential negative outcomes so maintaining a balance is important. Nature offers solutions as well as challenges.

Learning Outcomes

Recognise that these are connections between nature, climate change, and human activity.

By the end of the session children should be able to:

- Identify some of the challenges and opportunities facing nature.
- Understand that humans are connected as part of the natural world.
- Identify examples of nature and connections and climate change.

Resources in pack

- Teacher Guide to the pack.
- Starter "Climate Change – What is it?" Resource 1.
- Cards for sorting. Resource 2.
- How to make the web activity. Resource 3.
- Sample species connections. Resource 4.

Staff may need string/rope additionally.

Questions/discussion points

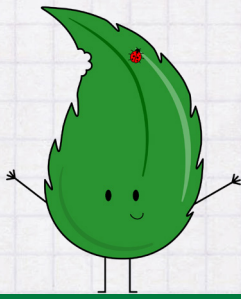
- Can you think of things in nature that are connected? (food chains are a good start).
- Are there things in our lives that we enjoy because of connections to nature? (Gardening, playing, forest school).
- Do our actions affect the environment? Is that good or bad? (It can be a bit of both).
- What one thing would you change about humans and nature? What difference would it make? (This could stimulate all sorts of things!)

Activities

1. Start by exploring what students know/want to know about climate change.
2. A card sorting activity for students to identify links between nature and climate change. Leads on to creating a web of connections to highlight those connections.
3. Ask "what if" questions to consider changes that could take place in the future.
4. Extension task to consider one species and how it is connected to others/humans.

Key messages

- Recognise the interconnectedness of nature, climate and our own activities.
- Understand and identify how looking after nature at all scales looks after the climate too.
- We are facing two interdependent emergencies – nature and climate. They are intricately – connected, both systems out of balance, and suffering because of our actions. We must solve the two together by taking actions that address both.



Session 1

Making Connections

Key Learning Outcomes

Students will:

- Recognise that there are connections between nature, climate change and human activity.
- Identify some of the challenges and opportunities facing nature.
- Understand that humans are connected as part of the natural world.
- Identify examples of nature connections and climate change.

Starter activity

- What do students understand about climate change?
- What questions would they like to ask?
- Words and questions onto a post it or whiteboard for collation.

Resources

Session 1 – Resource 1

Main activities

- Once the starter activity is done and words/questions collected, introduce what the project is about (see brief)
- Introduce the card sorting activity. Ask students to work in groups of 4-6 (there are 32 cards in total)
- Students given time to read the cards in their groups. Encourage them to start to put cards about similar topics together. Encourage discussion of why they are connecting them. Can they be grouped into facts, causes, consequences, solutions?
- When all the cards are laid out in groups, the idea is to identify connections between as many of the cards as possible. This can be done in whatever way you choose with groups sharing their thoughts and a big picture created in discussion.
 - Alternatively, each student in the group could be given one card and, using rope or string the teacher could facilitate connections between cards that the students identify. Passing the rope from one connector to another. Eventually, a complete web will be created.

Project brief, from teacher guide.

Session 1 – Resource 2

Rope/string as required

Session 1 – Resource 3

Plenary/summary

- Use the “What if” suggestions to start conversations about solution or ongoing problems.

“What if” section of Session 1– Resource 2

Possible follow up

- Draw an animal that you think is important and show some connections (see example Resource 4).

Session 2

The Big Picture

Focus:
The Big picture



This is the session where the story could lead to some negative thinking about the climate change issue. The key thing in this session is to recognise that the things we experience are often influenced by what we are exposed to – hence, the negative and positive story headlines. Seeing that there is an alternative to the negative outcome should give the students a chance to draw images of futures that are both positive and negative in outlook.

Learning Outcomes

Understand different feelings about the natural world and that they can be influenced by change.

By the end of the session children should be able to:

- Recognise that change can be good or bad.
- Understand that choices have consequences, sometimes unseen.
- Identify how external influences can shape how we feel about the future.

Resources in pack

- Resource 4 from session 1.
- Text and instructions for the story activity. Resource 1.
- Climate headlines. Resource 2.
- Habitat images. Resource 3.
- Pleistocene Park (optional). Resource 4.

Additional resources may be recent headlines that demonstrate positive or negative attitudes towards climate change.

Questions/discussion points

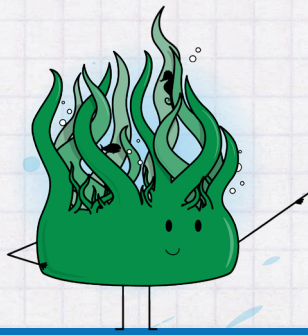
- Conversation around the story... what happened to your garden? How did that make you feel? Why do you think it happened?
- Leads nicely onto conversation around the headlines. Do you think we hear more bad stories or more good ones? Why? Is it important to hear both types of story? How does hearing the good news stories make you feel?
- Is the future already decided? What does a prediction mean? (Good chance to say that predictions don't mean that it will happen). May help with the drawing of future vision – encourage hopeful thinking.

Activities

1. Re-visit species and connection that the students had completed from session 1 (if done).
2. Imagination story – visiting the secret garden to connect students with something personal. How does change make them feel?
3. Review where we get information from – using positive and negative headlines. Consideration given to how we tend towards the negative.
4. Use images of habitats to discuss and draw visions of the future which could be both positive and negative. **Optional look at Pleistocene Park in Russia.**

Key messages

- (Start to...) Feel hopeful and paint a positive picture of the future – where collectively their actions, in hand with nature, make a brighter future (30by30 messaging) – where our land and seas are in recovery for wildlife, close to where we live.
- We are facing two interdependent emergencies – nature and climate. They are intricately connected, both systems out of balance, and suffering because of our actions. We must solve the two together by taking actions that address both.



Session 2

The Big Picture

Key Learning Outcomes

Students will:

- Understand the emotional connection we have to natural spaces we care about.
- Recognise that change can be good or bad.
- Consider knock on effects of choices.

Starter activity

- Reflection on the learning from last time. What animals have they chosen and what connections have they made?
- Why do they think that animal is important to them?

Resources

Activity based on
Session 1 – Resource 4

Main activities

- Use the story telling activity (part 1) with the students. It works best if they have their eyes closed and heads down to focus on the activity.
- When you have finished the story – ask the students to share descriptions of what they had seen/experienced before going for the second part of the story.
- At the conclusion of part 2, take feedback again from students, this time about what had changed. Record how many had positive outcomes and how many negative.
- Why do humans tend to think about negative outcomes? There is a chance to talk about what the media tells us. Use resource 2 headlines to highlight it.

Session 2 – Resource 1

Session 2 – Resource 2

Plenary/summary

- Vision of the future – use resource 3 to stimulate conversation about what the future could look like – positive and negative. How do we get there?
- One option is to look at Pleistocene Park in Siberia which is a rewilding project using animals to slow down the rate of climate change by protecting permafrost from melting.

Session 2 – Resource 3

Session 2 – Resource 4

Possible follow up

- Complete the picture they described in the plenary session. What is their POSITIVE view for the future?

Session 3

Changing your lens

INTRODUCING THE HEROES

Focus:
Changing our focus



The focus for this is that breaking down an issue into smaller pieces makes it seem more manageable/achievable. Playing the game could lead to some negative outcomes but the focusing of what can be done when we change our focus away from the big picture is important here. The heroes are an important part in that. Introducing the different lenses is about not being swayed by the big picture and trying to change the focus of where we are looking.

Learning Outcomes

Understand that climate change can be tackled by thinking and behaving on a smaller scale.

By the end of the session children should be able to:

- Start to understand that small actions can have a positive influence on big issues.
- Recognise the importance of hidden aspects of the natural world.
- Identify how connections in nature on a small-scale work together to prevent climate change.
- Understand that reducing emissions is one part of the solution and that nature offers additional help by capturing carbon.

Resources in pack

- NASA images. Resource 1.
- Instructions for the balance game and feedback suggestions. Resource 2.
- Introduction to Heroes. Resource 3

The balancing game needs space, balls, and a bucket. See resource 2 for details.

Questions/discussion points

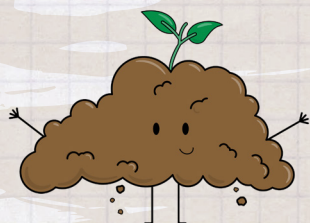
- The starter gives the opportunity to look at breaking the picture down into small bits. What do students think it means? What can it teach us about?
- Discussion around the game. What happened when more producers and extra balls were allowed? How could we make sure that the number in the box (in the middle) stayed about the same? Less producers, more absorbers.
- What things in nature take in carbon? What makes it in the human world?
- Had they heard of the different heroes? How would you get a close look at each one? Is it important to get to know them?

Activities

1. Use the NASA image of the word to help students see that one image can be made up of many. It is the same with big problems like climate change. We can look at small things that make up the big problem and address them.
2. Play the balancing game in teams as described in the resource.
3. Introduce the heroes and the equipment used to look at them.

Key messages

- Understand and identify how looking after nature at all scales looks after the climate too (nature-based solutions).
- Putting nature into recovery (link 30by30 messaging) will be incredibly important to help nature, people and our climate thrive.



Session 3

Changing your lens

Key Learning Outcomes

Students will:

- Start to understand that small actions can have a positive influence on big issues.
- Recognise the importance of hidden aspects of the natural world.
- Identify how connections in nature on a small-scale work together to prevent climate change.
- Understand that reducing emissions is one part of the solution and that nature offers additional help by capturing carbon.

Starter activity

- Use PowerPoint starter. It is a picture of Earth done by NASA, made up of thousands of photos. See what the students notice about the picture then use the zoomed in slide to show them what it is made of.
- The purpose of this activity is that sometimes we are overwhelmed by the scale of climate change and it is important to change the way we look at things – breaking it into manageable pieces can make a big difference.
- This session, and the next, is about the small-scale hidden heroes of the natural world.

Resources

Session 3 –
Resource 1

Main activities

- Play the balancing game. A good supply of balls or bean bags will be needed for this to work. Follow the instructions for the three rounds on the resource sheet.
- Reflecting on the game – round 1 should be basically balanced between the two teams. In round 2, with more producers, the balance should tip towards more balls in the bucket, further increased by the increased capacity of producers in round 3.
- How can the balance be maintained? Collect suggestions from the students. The two main points to take are that reducing producing is one way to help, but that the other way is to make sure that there are enough absorbers.
- Can the students think of any absorbers of CO₂ in the world? They are likely to say trees...but are there others?
- Looking closer – show students the image of different scientific equipment (resource 3). Ask them to identify what they are or what they have in common. They are all tools for getting us to look more closely at something (changing our view – like in the mosaic).
- Introducing “Nature’s Hidden Heroes” – we will need to look more closely, change our lens to see how we can make a difference to climate change. Use the resource to introduce the 4 heroes focused on. Do they know anything about each one? Complete the exercise that is on the slides connecting the lenses and the heroes.

Session 3 –
Resource 2.

Balls/
beanbags;
Receptacle
for balls/
beanbags to
be put in;
Large space
– indoors or
outdoors.

Session 3 –
Resource 3

Session 3
– Resource
3 (slide 2
onwards)

Plenary/summary

- Today’s session has been all about looking differently at a big problem like climate change. Make a list of things that the students think they can do to make a difference.

Possible follow up

- Perhaps before the next session, students could find out something about seagrass or salt marshes if they have never heard of them before.

Sessions 4-6

Group Tasks

Our heroes **Soil, Leaf, Seagrass** and **Saltmarsh** each come with a 'top secret' profile of information about their superpowers and their hero friends. The heroes you choose to explore can be tailored to your own locations. Each profile includes power features, fab facts, threats and vulnerabilities, ways you can help and a signposting to more resources.

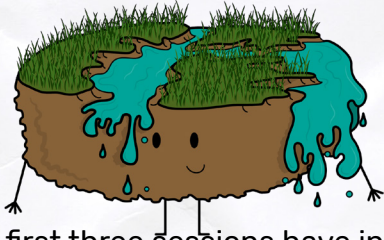
Size	The area of the UK this hero covers
CO₂ Treasure	The carbon that a hero already has stored away
CO₂ Growth Rate	How quickly a hero accumulates and stores carbon
Turbo-charged Potential	How we can boost these superpowers by caring for, restoring and expanding this hero's team
Team Members	Are the friends and family of this hero's super climate fighting ability
Climate Change indicator	Green shows the hero at full strength, red shows the hero with depleted powers
Fab Facts	Facts and information to get students started in discovering more about their hero
Threats/ vulnerabilities	Examples of how key factors that can weaken our hero's powers
How can I help?	Students explore how they can help Nature's Climate Heroes

Key Enquiry question

“Can humans be good partners for Nature's Hidden Heroes ?”

The students will be split into groups to represent each of the Heroes and spend the three remaining sessions building a picture of their hero and forging a plan of action/campaign to help them which they will share with each other and the rest of the school community.

Suggestions and ideas for each session are included on the next page.



Sessions 4-6

Group Tasks

The first three sessions have introduced the scale of the issue, the connectedness of things and started to consider the positive and negative messages. The idea for the remaining sessions is to allow child led investigation and project creation so that the outcomes are genuinely theirs.

The key information will be contained in “Top Secret Hero Folders” which are designed as a starting point to explore the individual heroes and their teams further. Evidence suggests that child led, participatory learning with outcomes determined by students is the most effective tool for behaviour change.

Session 4

Things to ask students

What is the name of your hero? Where could you find them?

Who else is in your hero’s team?

How do they help fight climate change?

Are they doing a good job without human interference?

Folder contents

Hero Profile.

Team Members profiles.

How do each take Carbon?

Other sources of information.

Actions/Activities

Use the information in the folder as a springboard to finding out more about the hero team.

Are any of the heroes represented on the school grounds? If so where? Map?

Teams with marine heroes need to think about how to connect to them. Where is the nearest example? Designing their own super slogan/ costume.

Create proper profiles for the other team members.

A cartoon strip/story to explain how carbon is removed.

Session 5

Things to ask students

What are the threats that my hero and team face?

Folder contents

Threats to the team.

Other sources of information.

Actions/Activities

Use the list of threats to springboard into investigating each. This could include planning a survey of things at home that go down drains, is there a compost bin at school? Where can they buy peat free compost? Does the school have enough plants?

Survey the school for plants/soils.

Session 6

Things to ask students

What can I do to help?

What could others do, and how can I tell them?

Folder contents

The Balancing scales.

How can I help?

Other sources of information.

Actions/Activities

Thinking about the two sides of the balance and decide on a plan of action for helping their hero. There are lots of suggestions in the pack but also consider eco-actions to reduce carbon production as well as sow meadows, make compost, campaign against plastics and pollution from school and home.

The Wildlife Trusts is on a mission to restore **a third of the UK's land and seas** for nature by 2030. We believe **everyone, everywhere, should have access to nature** and the joy and health benefits it brings. No matter where you are in the UK, there is a Wildlife Trust inspiring people about nature and **standing up for wildlife and wild places**. Each Wildlife Trust is an independent charity formed by people getting together to make a positive difference for wildlife, climate and future generations. Together we care for 2,300 diverse and beautiful nature reserves and work with others to manage their land for nature, too. You can help us bring wildlife back in abundance by becoming a **member of your Wildlife Trust** today.

Nature's Climate Heroes is supported thanks to funding raised by players of People's Postcode Lottery and awarded from Postcode Planet Trust.

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