

A GUIDE “HOW TO IMPLEMENT A CLIMATE CURRICULUM IN YOUR SCHOOL”



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INTRODUCTION

Climate change is one of the major socio-scientific issues and one of the greatest potential risks facing modern society. According to the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (Pachauri & Meyer, 2014), “it is obvious that the average temperature of the earth’s climate system is rising. The main causes of recent climate change are human activities, and unless humans actively respond to climate change, the risks will become increasingly pervasive and have irreversible effects on humans and ecosystems” (Pachauri & Meyer, 2014).

Therefore, efforts to find common social solutions through social discourse on how to deal with the risks of climate change are very important and urgent. In particular, future generations will be more affected by climate change, so children and adolescents need to play an important role in proactively responding to climate change as stakeholders on the issues (Yun, 2009).

In December 2019, the European Commission announced the European Green Deal as the strategy through which to achieve EU climate neutrality by 2050. This followed the commitments made by the EU and its member states on signing the Paris Agreement in 2015.



The goal is that while tackling the existential threat of climate change, the EU will pursue economic growth in ways which create better jobs and enhance people’s well-being.

Global climate change and its impacts on people and resources pose serious societal challenges. The actions we take today will influence future greenhouse gas emissions and the magnitude of warming; they will also affect our ability to respond and adapt to changes, and to reduce the vulnerability of people and places to harm. Educating future generations about the causes and effects of global climate change is imperative since implementing solutions depends on an informed public, for both societal and individual level actions.

"The EU is ready to play its part to respect and protect our environment and the lives of future generations."



SHORT EXPLANATION OF THE PROJECT



Climate Change Education in Primary Schools

The Climate Curriculum project addresses the urgent need to provide school curricula that take the climate crisis seriously. In many ways, children and young people are ahead of many adults in calling for this, through, amongst other things, the Fridays for Future movement. Although climate education is touched on in most schools, there is a lack of a systematic approach for schools to enable them to teach the critical key concepts across school.

This project has developed the capacity of teachers to provide future-oriented curricula that address the needs of learners, provide them with the key sustainability competencies and prepare them to become active ‘agents of environmental change’.

In the project, 4 primary schools in Türkiye, Germany, the UK and Ireland collaborated with an NGO in the UK and one in Türkiye to test innovative whole school and cross-curricular approaches which aimed to foster behavioural change through the introduction of a new methodology to learning about Climate Challenges. The development of a cross-school Climate Curriculum with age appropriate specific Learning Outcomes can enable young people to acquire the competencies and mindsets (through coherent year on year progression), where key ideas were introduced at an appropriate age, and understanding of these was reinforced and deepened by further study in each successive year of their primary school education.

To address this our key objectives were to develop a ‘Climate Curriculum’ methodology suitable for each national context - adapted and owned by each school; identify and develop classroom resources to support this; train teachers in 4 primary schools to deliver The Climate Curriculum; create a guide, toolkit, website to disseminate to school networks in 4 countries.

Quotes from children

“We need to teach younger children about climate change so they can continue to educate the next group of children.”

THE IMPORTANCE OF CLIMATE EDUCATION

Climate change is the biggest issue facing our world today. It pervades every part of our lives, and is an increasingly important factor affecting scientific, political, and social research and planning. It is imperative that we prepare students with the knowledge and critical-thinking tools they will need to handle this inevitable hurdle.

Education is an essential factor in the ever more urgent global fight against climate change. Knowledge regarding this phenomenon helps students to understand and tackle the consequences of global warming, encourages them to change their behaviour and helps them to adapt to what is already a global emergency.

In the past few years, various initiatives have been launched to try to curb climate change. Prominent among them are the 17 Sustainable Development Goals (SDGs) promoted by the United Nations (UN) since 2012. One of them, number 13, is entitled Climate Action.

The success of these kinds of initiatives is largely dependent on environmental literacy drives among populations that are often strangers to these major political agreements, and on the development of a culture of care for the climate. But what exactly do we mean by environmental literacy? Educating citizens, especially children, and raising their awareness regarding the causes and consequences of climate change.

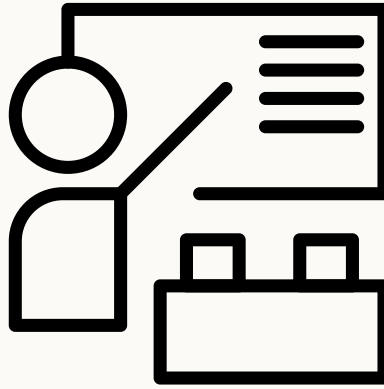
The international community recognizes the importance of education and training to address climate change. The UN Framework Convention on Climate Change, the Paris Agreement and the associated Action for Climate Empowerment (ACE) agenda call on governments to educate, empower and engage all stakeholders and major groups on policies and actions relating to climate change.

What we know about climate change today far exceeds what we knew ten or even just five years ago. It is a constantly developing and highly interdisciplinary field of study, relevant to modern living as well as students' future prospects. Climate education is not only important for students, but also academically stimulating. Thinking about the future of the environment requires students to find connections between global and local events, combine knowledge from various subjects, consider costs and consequences, and think about the big picture.

Providing our students with the latest climate science is the first step we can take to combat climate change in the coming years. The lessons that we teach today will ensure that future decision makers understand the context and impacts of climate change, and will help them make more informed decisions. By ensuring that each student has a solid foundation, we can preserve our community and environment far into the future.



OVERVIEW OF THE GUIDE



“How to implement the climate curriculum in your school” is a teacher's guidebook prepared to guide teachers on how to implement climate change teaching in primary schools. The guide has been researched and written based on the activities and methods applied by the project partners within the scope of the European Union Erasmus+ program school education project.

This multidisciplinary guide is aimed at primary school teachers (target: students aged 7 to 14) and offers turnkey sessions based on investigative approaches to help students understand climate change and the workings of land through theoretical and applied teaching methods.

The guide in your hand also includes case studies and methods on how you can teach climate change topics in line with your current curriculum in your school, and sample lesson practices obtained from the work done during the project are included in our guide.

The guidebook consists of the following sections:

- **Case Studies:** It includes sample lesson plans that include methods and techniques that show how schools implement some aspects of the curriculum.
- **Pedagogical Overview:** A brief overview of the different learning approaches suggested in the guide and some tips on how to make the most of this teaching resource;
- **Climate Curriculum:** Progressive age appropriate learning outcomes.
- **Toolkits:** It includes learning tools and methods to be used to implement the climate change curriculum in harmony with the school curriculum.
- **Sample lessons:** Lesson activities carried out in partner schools during the project.
- **We take action:** Activities to support students to express their ideas about climate change.

Quotes from children

“If one single person doesn't do anything, no one will start”

BIG IDEAS-CLIMATE CHANGE SDG 13

What should children know by the end of KS2?

‘These were written by Leeds DEC’

BIG IDEAS	LEARNING OUTCOMES
<p>1. Scientific background</p> <p>What is it? Today’s climate crisis is a long-term, large-scale rise in the Earth’s temperature, causing big changes to the weather. Some scientists predict the earth’s temperature could rise by 4 degrees celsius by the end of this century.</p> <p>How it works. Greenhouse gases in the atmosphere (like CO₂, methane and other gases) soak up the sun’s radiation and trap it as heat. Human consumption (see Big idea 3 below) relies a lot on energy from burning fossil fuels which release CO₂ (cooking, heating, cars and planes, computer storage and streaming etc). Meat production produces a lot of methane – a gas 25 times more powerful than CO₂.</p> <p>Human role. 97% of climate scientists agree that humans are the main cause of the climate change we see today.</p>	<p>1.1 Pupils can describe what climate change is.</p> <p>1.2 Pupils know that human activity has caused climate change.</p> <p>1.3 Pupils can list some examples of human activity that release greenhouse gases such as CO₂.</p>
<p>2. Urgency of need</p> <p>What is it? Temperature rises are accelerating. Scientists agree we are starting to see the first stage of climate change, with some very serious changes likely to be seen in our lifetimes. We may not see the full impact however for years or even decades.</p> <p>How it works. As the earth gets hotter, a change in the natural ecosystem takes place which then itself affects the climate. This is known as a feedback loop. For example, permafrost is ground that remains frozen all year. As the earth warms this is beginning to melt and releasing lots of trapped methane and carbon into the atmosphere. This then makes climate change even worse. These feedback loops, combined with other effects such as destruction of forests, will reach a tipping point causing climate change humans will not be able to reverse. Scientists have different opinions on when these tipping points might be reached with some warning they have already been passed.</p> <p>Human role. Scientists have encouraged world leaders to try and promise to make changes and tackle these issues. Scientists warn that greenhouse gas emissions must be massively reduced -and fast- so that we don’t reach the point where we can no longer control climate change. Human behaviour and activity needs to change.</p>	<p>2.1 Pupils can describe in simple terms the speed of climate change.</p> <p>2.2 Pupils can give an example of a feedback loop and explain why tipping points are so important.</p> <p>2.3 Pupils can describe how urgent and significant action is needed.</p>



BIG IDEAS-CLIMATE CHANGE SDG 13

BIG IDEAS	LEARNING OUTCOMES
<p>3. Impacts What is it? Impacts are already being felt at an increase in earth's temperature of 1 degree celsius from before the industrial revolution. Some scientists predict a rise of 4 degrees celsius by the end of the 21st century if we don't make changes. This would lead to irreversible damages, a major reduction in the human population and extinction for many other species. How it works. The impact on the natural environment of climate change can be seen in the earth and oceans getting hotter, rise in sea-levels, droughts, floods and other extreme weather events. "Global sea levels rose about 8 inches in the last century. The rate in the last two decades, however, is nearly double that of the last century" (NASA, 2018.) The effects on plant and animal life are disastrous and already under way. Scientists think we could be on the brink of a sixth 'mass extinction'. These changes could have deadly consequences for people too with a direct impact on loss of human life as well as food shortages and spread of diseases such as malaria.</p>	<p>3.1 Pupils can describe how big changes must take place to stop the earth continuing to heat up. 3.2 Pupils can describe some of the impacts of climate change if changes are not made.</p>
<p>4. Climate in justice Most of the greenhouse gases have come from wealthier countries in the Minority World where more people tend to eat larger amounts of meat, fly frequently and have food shipped in from around the world e.g bananas and avocados. However, the biggest impact of climate change is felt by hotter countries in the Majority World. People living in these countries who are least responsible for the problem will be first and most affected. Weather changes are already forcing many people to leave their homes in search of food – known as 'climate refugees'.</p>	<p>4.1 Pupils can explain how some parts of the world will be affected by climate change much more than others. 4.2 Pupils can describe how these parts of the world most affected are least responsible.</p>
<p>5. Feelings and responses Climate change is a huge and overwhelming issue and it is natural to respond to this with anxiety or fear. Nearly 3/ 4 of young people in the UK are anxious about climate change and 3 in 5 children are worried about the impact of climate change on their lives. Some people struggle with guilt knowing that society/ we as individuals are part of the problem. It's easy to let this guilt stop us from doing anything. But realising how big (and urgent) this problem is can also motivate us to take action. Taking action, particularly with others, can help to address climate anxiety and build hope for the future.</p>	<p>5.1 Pupils can discuss their own and others' feelings about the climate crisis. 5.2 Pupils know that anxiety is a normal response to the climate crisis.</p>
<p>6. Action Many world leaders are making a promise to try and stop the earth's temperature rising. Countries are starting to use more renewable energy (energy that doesn't run out such as the sun, wind and water) rather than burning fossil fuels. Many people are looking at their 'carbon footprint' and making changes. What can we do to help? Use and buy less – food, clothes, toys Encourage your school and family to use renewable energy suppliers Help to protect and plant trees Encourage your family to use a car less / consider switching to an electric car Talk about climate change at school and with family and friends</p>	<p>6.1 Pupils feel challenged to take action to tackle climate change.</p>

SHORT EXPLANATION OF THE CLIMATE CURRICULUM



This climate curriculum provides a framework of learning outcomes at primary level. By working on these learning outcomes, schools can ensure that they deliver the core essentials of what young people need to know by the time they move onto secondary education. The learning outcomes are not intended as an added extra to fit into an already packed school week but can be delivered through other subjects in a cross-curricular way. If your school covers these learning outcomes there's a very good chance your pupils will leave school with not only a good and realistic grasp of the issues, but also with a critical awareness of the mindsets and actions that can enable them to help solve the challenges of the climate crisis and an attitude of hope that success is possible.

This framework is accompanied by a toolkit (with resources) and a guide (with case studies) to further support your school. These resources and versions of the climate curriculum framework in German and Turkish are available on the project website; <https://www.climatechange-education.org/>

Quotes from children

"It's important to try and make the world a better place"

SHORT EXPLANATION OF THE CLIMATE CURRICULUM

"These were written by Leeds DEC"

This climate curriculum focuses on eight key areas.

Key ideas: Scientific Background

The first of the 8 key areas of the Climate Curriculum is Scientific Background. This involves a basic understanding of the scientific processes which lead to climate change. It may be that your pupils are aware of key ideas and terms from the media or other sources but research shows that they aren't necessarily clear on the details of the processes involved and how these ideas relate. This understanding is necessary as a foundation for children in order to develop their knowledge on all other areas further.

Key ideas: Urgency of Need for Climate Action

The second key area is an understanding of the urgency of the need for climate action. Without an appreciation of the scale and immediacy of the threat that the climate crisis poses, young people (and adults!) won't understand the radical nature of the challenges that face us and the changes we need to make. Teachers will rightly want to protect young people from the worst apocalyptic forecasts but equally, as young climate strikers have highlighted, and as DFE guidance stipulates, schools need to 'tell the truth' about the crisis we are in. This includes, at upper primary, beginning to understand about some key climate 'tipping points' and what the dangers are if they are triggered.

Key ideas: Impacts of Climate Change

The third area involves an exploration of the Impacts of climate change – on people, other animal species, on plants species, and on wider ecosystems. This might involve investigation into the children's local area as well as an understanding of impacts in other regions across the world.

SHORT EXPLANATION OF THE CLIMATE CURRICULUM

Key ideas: Responses to Climate Change

The fourth area offers children the chance to explore what responses are already being made to mitigate and adapt to climate change both locally and around the world. This includes responses by international bodies, such as the UN and EU, by national governments, such as the UK government's Climate laws, by local government, by business, by community groups (perhaps including at their school) and by households and individuals. This understanding that already a huge amount is being done, incredibly imaginative solutions are being pioneered and good news stories are popping up everywhere, can help children not to feel alone in caring about the future of the planet. This must be accompanied by a realistic understanding of the adequacy of these responses, an ability to think critically

Key ideas: Consumption and Climate Justice

The fifth area is Consumption and Climate Justice. These two can be seen in some ways as two sides of the same coin which is why they are placed together. Consumerism is the driver of climate change. As we have noted already, those with heavily carbon intense lifestyles are often not those who are suffering the first and worst effects of the climate crisis. They, for now, are the ones who are most able to insulate themselves from the worst impacts. Climate justice involves taking responsibility for emissions. It may involve climate reparations. The Loss and Damage Fund set up at the COP27 summit in Egypt, into which polluters pay and those suffering the effects receive support to adapt and survive is an example of countries beginning to recognise this. Children can often feel they lack agency in addressing big issues. However, they certainly do have some control over one of the biggest drivers of climate change – the consumption of goods and services – transport, clothes, food choices and (to a degree) how much they use lighting, heating etc. These are topics which have traditionally been a core element of language teaching, so exploring these in the context of climate change is relatively simple and straightforward.

SHORT EXPLANATION OF THE CLIMATE CURRICULUM

Key ideas: Possible Futures

The sixth area is often overlooked but is actually key to what children want to know about the climate: Possible Futures. Children are extremely interested in this area because it is literally their future. Of course, none of us can predict with certainty what the future will hold. However, based on modelling, scientists have outlined the parameters of a variety of future scenarios based on different levels of carbon emissions. Understanding these different scenarios makes it really clear to children that the pathways we choose now will lead to very different futures and that these choices are still ours to make. Talking about the future does not need to be filled with doom. Neither does cutting carbon targets does not have to be all about sacrificing our standard of living. Some of the future scenarios in which humanity has achieved its carbon targets are also ones in which there is a more equal society and wellbeing is enhanced in many ways which children will recognise and value. According to research, having an emotional investment in a positive vision of the future that you know is possible (even though you know it's not certain to happen) is hugely beneficial for our mental health, and also for our capacity to take action to bring that future into being

Key ideas: Mindsets and Viewpoints

The seventh area of the Climate Curriculum is an understanding of the Mindsets that have brought humanity to this point, and an appreciation of the different Viewpoints that exist on the relationship between humans and the rest of the creatures and ecosystems of Earth. The dominant viewpoint in our society is that humans are above the rest of nature and can and should use it as we wish for our own ends. Alternative viewpoints see humans as part of the rest of the natural world and recognise human interdependence with other species within ecosystems.

At first sight this may seem difficult for some children to grasp. However, sometimes children seem more able to take a step back from the predominant views of our society than adults – perhaps they haven't had so long to internalise that 'this is the way things are'? In the light of the issues of Climate Justice outlined earlier, it's really important that children have an opportunity to encounter viewpoints such as those of indigenous peoples, and people of the global South who are experiencing the impacts of climate change directly. And not predominantly as 'victims' but also as people from whom those of us caught up in patterns of consumerism can learn a different way to relate to the Earth and to each other. Through exploring this area, young people realise that the viewpoints we listen to and the mindsets we hold can deeply affect the way we feel and can cause us to behave very differently.

SHORT EXPLANATION OF THE CLIMATE CURRICULUM

Key Ideas: Feelings and Behaviours

This leads on to the eighth and final area: that of Feelings and Behaviours. We have already discussed the importance of recognising children's (and adults') emotions in relation to learning about the climate crisis and the importance of fostering a sense of hope. Negative feelings can set off a cycle in which we despair, and feel that there is no point doing anything. Perhaps we hide our heads in the sand because the feelings of despair are too painful and we avoid them by not thinking about any of it if we can possibly help it. On the other hand, positive feelings can set off an opposite cycle in which we are motivated to take action and then we begin to see the changes all around us. And this cycle can also start from the point of action. As Greta Thunberg said: 'Once we start to act, hope is everywhere'. If we can help our children (and ourselves as educators) to nurture this positive cycle within themselves, we will indeed be giving them and our world's future, the best gift that education can hope for.

Introducing key terms

By the end of Year 2	By the end of Year 4	By the end of Year 6
Weather and Climate	Climate change Atmosphere Greenhouse effect Greenhouse Gas emissions Carbon emissions Carbon dioxide Fossil fuels Renewable energy	Carbon footprint Climate emergency Tipping points Intergovernmental Panel on Climate Change Ecosystems Climate justice Carbon sinks Biodiversity Permaculture

CASE STUDIES

This section covers the case studies of our schools in the project partner countries for the implementation of the climate curriculum in conjunction with the course topics in the school curriculum.

The subject and course distributions regarding the learning outcomes of the climate curriculum in our project partner schools were decided by the group teachers' meetings.

During our project, thirty-six different lesson plans were prepared by our classroom teachers in each of our schools, and lesson practices were carried out for the learning outcomes of the curriculum. Our teachers applied the lesson plans inside and outside the school according to the characteristics of the lessons.

In our guide, some of the pedagogical methods, tools and materials used in the learning activities carried out by our teachers are included and offered to the use of our potential beneficiaries who want to implement the climate curriculum in their schools.

Quotes from children

“I promise to save energy by turning off taps and radiators and also by being a vegetarian”

Climate Curriculum Learning Output:Pupils know that trees help to cool the world down. Year -1

Overview :This objective has come from the Big Ideas Document under ‘Scientific Background’ It is an objective that should be taught by the End of Year 2. In this instance it was taken as a Year 1 lesson.

Year 1 Long Term Curriculum Plan.



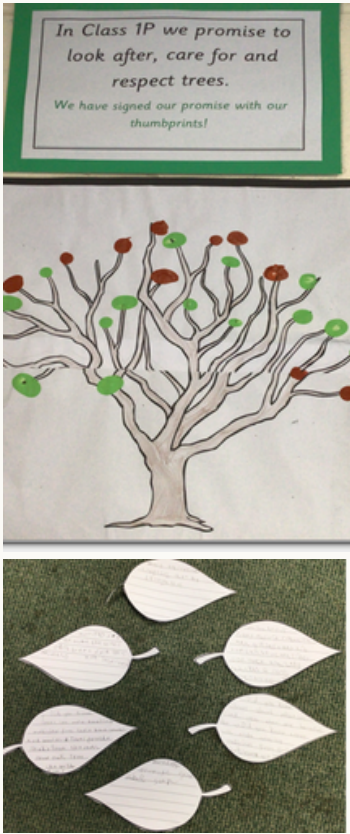
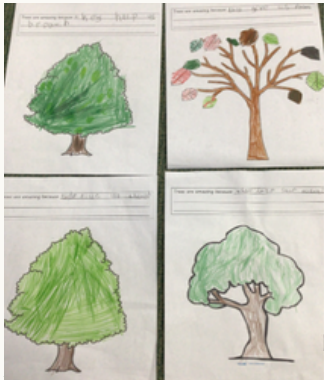
Topic Title	This is me
Lesson	Geography
Topic Summary	<p>Where is Leeds?Where in the world is Leeds? Looking at four countries in UK. We will compare Leeds to towns and villages surrounding.What makes Leeds a city? We will identify and use the language of house ,farm,city ,shop. We will focus an ourselves-which school do I go to ?Where do I live? What is the weather like? Investigating places-Leeds in the UK Using maps and atlases,Looking at human features including town ,village,farm,house,office and shop</p>
Climate curriculum Learning Outcomes	<ul style="list-style-type: none"> • Pupils understand to distinction between "weather" and "Climate" • Pupils know that trees help to cool the world down.
Experiences	Church visit and local walks
Lesson	Science
Topic Title	Our Changing World -plants using sense

This is our Long Term Plan for Year 1 in the Autumn Term.

The objective has been embedded into the Science Curriculum which links into our Plants topic

Challenges to combining subjects to objectives	Personal recount of strategies used in project.
This objective lends well to science and outdoor learning.	It is very important to instil a love for the world and nature in early education. The children will feel more passionate about the need to look after the world and the effects of climate change if they have had this early experience.

LESSON CASE STUDY EVIDENCE

<p><i>Lesson Plan Document</i></p> <p><i>Trees Lesson</i></p>	<p><i>Slides/Resources used in the lessons</i></p> <p>https://docs.google.com/presentation/d/1uGL8qj8Mww5O_aEpzks8vYqLLJ3p1eAr/edit#slide=id.p1</p>	<p><i>Pictures of Children working in lesson</i></p> 
<p>Pictures of children completing learning task/activity</p> 	<p><i>Pictures of Completed work with children</i></p> 	<p>Feedback or quotes from children and teachers about the lessons and learning.</p>  <p>they help us to breathe 'They give animals homes and even give us medicine'</p>

Next Step/What comes next?

This lesson will be repeated and added to our whole school long term plan. A trip to the local woodland will be planned alongside it and the children will study trees in different seasons as part of their science learning. The children are keen to engage in more outdoor learning and a tree planting morning has been arranged as a parent event.

Case Study Template – Whole School Climate Learning Assessment Case Study

Overview

Assessment questions were formed by the Erasmus team from the long term plan objectives for each school term (Aut/Spr/Sum).

A case study to investigate the implementation and effectiveness of Climate learning assessment in school across Y1 to Y6.

Classroom assessments were carried out in two different formats in-line with the changing assessment policy across the rest of the school during the project.

1. Firstly, the assessments were carried out with a pre- and post- assessment grid and completed in class groups as a discussion task. The answers were filled in digitally by the class teacher and returned to the climate team in school via saving the files on the network.

CC4CA Climate Audits.pptx

1. Secondly, the assessments were carried out using the website quizzing application ‘Kahoot!’ - which was developed as an assessing tool in school with foundation subjects. Therefore, the children were used to the assessment format and able to complete the task successfully. (See the Assessment Code document to see the QR codes to allow the children to access the quizzes)
Climate Audit Spring 2023 Assessment Codes.docx

Outcomes were varied from both formats of assessment.

Strengths

The pre/post assessment showed the depth and breadth of knowledge of the children in class (as all answers were recorded by the class teacher), where the Kahoot assessment tool gave formative information for each individual pupil - giving scores and correct answers for each question.

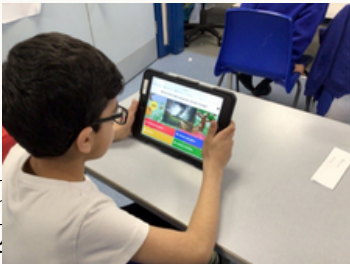
Limitations

The pre/post grids would be completed as a class, therefore showing the ideas from the whole group rather than individuals - this would limit the assessments of LA and quieter pupils, whereas the Kahoot assessments are a multiple-choice quiz - meaning children may land on the correct answer by guessing, limited the true representation of the knowledge learned in class. Kahoot quizzes were also not completed by the younger year groups (Y1/Y2) as the year groups were not familiar or had used the Kahoot before in school.

Challenges to combining subjects to objectives	Personal recount of strategies used in project
<p>Challenges to link to objectives did not present due to the nature of the task - however, the challenges that were encountered when using the assessment ‘grids’ meant that planning was not informed about any gaps or misconceptions. This lack of guidance from the grids did not ensure progress for all pupils in the class. Kahoot (although used for a limited amount of time) has shown to give the teacher these assessment gaps and would be able to influence future planning for a complete cover of the knowledge..</p>	<p>Trying to make the assessments in-line with the other school foundation subject assessments has allowed for an easier transition of a new assessment in school. The documents have been easily shared across email, but getting them completed and returned has proven tricky - with constant reminders and chasing certain staff has occurred.</p>

LESSON CASE STUDY EVIDENCE

Pictures of children completing learning task/activity



Pictures of Completed work with children



Feedback or quotes from children and teachers about the lessons and learning.

“That quiz was really easy”
RL 2023

“The kids really enjoyed completing the quiz, they were all trying to get the high score and realised they needed to read the question carefully to get the most points” Teacher of Y4, 2023

“I think I only missed one question about carbon footprints - and I can't really remember anything about that” - SR, 2023.

Next Step/What comes next? - (See Reports document in Kahoot Folder) [Reports - Kahoot!.pdf](#)

Review of the completed questions on the Kahoot will identify gaps in the children's knowledge - which will identify needs in the teacher's planning. This would be addressed in future lesson plans to include some learning about the misconception or gaps in the children's knowledge.

Repetition of the same assessment would allow the teacher/leader to identify the retention of the climate learning.

Summer Kahoot assessments would introduce a new set of questions for the learning completed in the summer term at school - the objectives are identified from the LTP of the school with the embedded objectives.

CASE STUDY 1- APLERBECKER GRUNDSCHULE, GERMANY

Objective: The children recognize the difference in CO2 emissions when 28 children are taken to school by car separately in contrast to 28 children coming to school in one bus.

Year 3 Long Term Curriculum Plan.

Topic Title	Calculating how much CO2 emissions are produced by 28 cars in contrast to one bus
Lessons	science, history, arts, maths
Topic Summary	<ol style="list-style-type: none"> 1) Questions to elicit prior knowledge: <ul style="list-style-type: none"> o Which types of vehicles do you already know? o Which parts of vehicles do you already know? 2) History lesson: Having a look at the history of vehicles 3) Taking a closer look at the components of a car and agreeing on technical terms (e.g. axis, wheels, ...) 4) Collecting construction material for an own upcycled car 5) Arts lessons: Upcycling – building the cars 6) Inspection: Are the cars ready to go? 7) Improvement of the cars 8) Arts lesson: Painting on the schoolyard – 28 cars in contrast to one bus 9) Maths lesson: Calculating how much CO2 emissions are produced by 28 cars in contrast to one bus 10) Conclusion – thinking about consequences
Climate curriculum Learning Outcomes	<ul style="list-style-type: none"> • Pupils can identify a range of impacts of present climate change on the environment and people locally and across the world. • Pupils can name some of the things that they and others do that are responsible for climate change. • Pupils begin to explore alternatives to these activities which are less harmful. • Pupils understand that you can measure how much impact an activity has and know that different lifestyles have a greater or lesser impact. • Pupils can identify actions that they can take personally to reduce emissions. • Pupils can identify actions that can be taken at the level of their school.

LESSON CASE STUDY EVIDENCE

Challenges:

- Children noticed that different cars produce different amounts of CO₂ and wondered how to calculate with these different numbers and how to find out about different CO₂ emissions

Strategies to cope with the challenges:

- We agreed to do some research on the internet in order to find a mean to calculate with

The lesson:

- 1) Introduction to the topic – silent stimulus: collecting thoughts
- 2) Question: What do vehicles have to do with the topic of climate change?
- 3) Finding a mean to calculate with (research on the internet: CO₂ emissions of car/ bus)
- 4) Calculation and comparison of the solutions
- 5) Talking about the solutions and thinking about consequences – especially for the children and their way to school.
- 6) What happens to the world if we don't start acting now?

pictures



Quotes:

“I'm shocked about our solutions – what a big number.” “I have to talk to my mum. Maybe she can buy a scooter for me instead of taking me to school by car.”

“I'm glad I come to school by bus every day.”

“When I grow up, I want to invent environmentally friendly cars.”

“What can we as children do now to make a difference?”

Next step:

Generate ideas of what can be done now to make a change. Result: one week of everybody (children + staff) coming to school in an environmentally friendly way

Link to school's climate action:

Implementation of a regular walk-to-school-week!


CASE STUDY 2- APLERBECKER GRUNDSCHULE, GERMANY

Objective: The children know about different weather phenomena and understand the connection between climate change and the weather, e.g. extreme weather situations. (year 2: children's age 7-8 years)

Year 2 Long Term Curriculum Plan.

<p>Topic Title</p>	<p>Training interdisciplinary competencies (using media, designing posters and giving presentations)</p>
<p>Lesson</p>	<p>science</p>
<p>Topic Summary</p>	<p>1) Questions to elicit prior knowledge: What do you already know about the weather? o What would you like to know about it? (collecting questions) 2) Giving a brief overview of different weather phenomena (e.g.: storm, thunder, rain, ...) 3) Designing a poster as an example all together + teacher giving the presentation -> dividing the class up into smaller groups 4) Group work: each group working on their expert topic (internet research, reading texts, creating a poster, preparing a presentation) 5) The groups give their presentations. 6) Watching a (german) documentary for children about climate change (https://www.youtube.com/watch?v=4i7-h-ySBNI) Coming back to the documentary – discussion. 7) Conclusion</p>
<p>Climate curriculum Learning Outcomes</p>	<ul style="list-style-type: none"> • Pupils understand the impacts of our changing climate on some animals, plants and environments both in our locality and elsewhere. • Pupils understand that air pollution makes the world hotter. • Pupils know that some impacts of our changing climate are happening now and others will happen in the future. - Pupils can name some actions which would have a positive • Impact on the climate and some ways in which we can stop having a negative impact.

LESSON CASE STUDY EVIDENCE

<p>Challenges:</p> <ul style="list-style-type: none">- Children had problems to understand the difference between climate change and weather.- A lot of technical terms for some children. <p>Strategies to cope with the challenges:</p> <ul style="list-style-type: none">- Visualizing terms on the wall- Repetition of the words at the beginning of every lesson.- Breaking down the difference between climate change and weather to its essence.	<p>The lesson:</p> <ol style="list-style-type: none">1) Introduction to the topic – watching the video (mentioned above)2) Questions: What is climate change? What is the difference between climate and weather? What impact does the climate change have on the weather? What can we do to slow down climate change? – time to exchange thoughts and ideas.3) Considering what we are doing that is negatively impacting climate change. Thinking about possible consequences for us and about what we could do to slow climate change down.	<p>pictures</p> 
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Quotes:

“Are you really sure that people are responsible for extreme weather phenomena? How can we be responsible for a flood?” “When I come home I will teach my family about what we have learned.”

“What can we do now to make a difference?”

Next step:

Going on generating ideas of what can be done now to make a change. Planning to pick up the topic next school year and to go more into depth.

Objective: We wanted to find out if we could implement a peer learning initiative in our school to promote the teaching and learning involved in aspects of the CC4CA Erasmus plus project.

Year all classes Long Term Curriculum Plan.

Topic Title	Peer learning in Climate Change Education
Lesson	Science/Literacy/Art
Topic Summary	<p>We have implemented aspects of peer education in our school in previous years e.g., in buddy reading systems and in aspects of Global Citizenship Education e.g., learning around Fair Trade and in other initiatives by NGOs. It was envisaged that this particular initiative would be:</p> <ul style="list-style-type: none"> • Peer led • Peer organised • Sustainable • Improve all learner`s knowledge of the climate curriculum. • Be rewarding for peer teachers and peer learners.
Climate curriculum Learning Outcomes	<ul style="list-style-type: none"> • Pupils can name some human actions which are damaging the Earth • Pupils understand the speed at which climate change is happening • Pupils understand the need for action now

LESSON CASE STUDY EVIDENCE

The process

Data gathering

Initial meetings were set up with the sixth-class students and the three second class so they would be familiar with each other and would feel comfortable in speaking with them.

*Sixth class asked all the students of the three second classes to write down (in twolthree words) or in pictures what they understood by the term “**CLIMATE CHANGE**”*

They gathered the pictures and words and then analysed them. The results were as follows.

65/72 drew pictures of types of weather, rain, snow, hail, sunny, cloudy etc.

2/72 drew pictures of polar bears on ice caps.

5/72 drew pictures of before and after weather, rain followed by sunshine, rainbow after rain.

Those who wrote words followed the patterns above with the vast majority displaying a lack of knowledge about what climate change was.

Sixth class concluded that “They actually know very little about climate change”.



What knowledge do second class need about climate change?

After a lot of discussion about the amount of scientific knowledge that second class would need, and a lot of agreement and disagreement, we recorded emerging ideas and eliminated them as we moved on with our discourse. It was decided to distil all the ideas around what they would need to know into four basic ideas/concepts.

The earth is overheating rapidly. Carbon dioxide and methane are damaging the atmosphere. Climate change affects everyone everywhere.

We need to act fast.

How will we present these key ideas to second class?

Some wanted to do PowerPoints, but it was felt that this might be rather time consuming.

Others wanted to use picture books to tell a story. Others wanted to use a combination of YouTube videos which they liked and face to face teaching of the ideas.

We finally decided on the idea of a four-page booklet with a picture to explain each of the ideas in an informative and colourful way.

Each member of the class then produced a simple four-page book with these key ideas on it. They then designed a cover for it. We then arranged mutually agreeable times to engage in sharing these books with members of the three second classes in the school.

They engaged in discussion and explanation with the second class and second class had their responses recorded by their teachers.

Evaluation of the project

The peer learning initiative was deemed to be an overall success. Following the sharing of the climate change books, second class were asked to record what climate change meant. Their pictures and words showed a much greater awareness of the realities of climate change and depicted what we can do to “help the Earth” The picture books produced by sixth class impacted their thinking and affected them in their knowledge and depiction of climate change. This is what they recorded in their pictures.

37/72 drew pictures of a world on fire, a very dry world with smoke coming out of it.

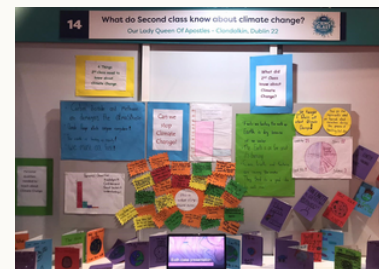
14/72 drew pictures of various forms of transport with smoke rising from them.

16/72 drew pictures of a world with polar bears and ice melting on the top and smoke arising from the bottom.

5/72 drew pictures of people recycling, separating rubbish, cycling instead of driving, walking instead of driving.

Taking a bus instead of driving.

The project was deemed to be a success.



Further dissemination

Sixth class presented this project at ESB Science Blast in the RDS on 28th February 2023 with the title.

“What do second class know about climate change? They were judged on this submission and were successful and awarded a trophy.

They also presented it as a submission for the Irish Aid Our World awards on the 4th of April and have made it through to the finals on 7th June. They titled this submission “Education for future generations” and included a letter to future generations with their climate change books.

Recommendations

That this project be continued and rolled out every year during Climate Action week

That the project be extended to include

- Fifth class to first class
- Fourth class to senior infants
- Third class to junior infants
- That samples of the books are produced on high quality paper and laminated for future use.

Objective: Can we use the creative arts to teach children about climate activism and climate justice?
Can we teach children to write poetry which will inspire action for climate justice?

Year 6 Long Term Curriculum Plan.

Topic Title	Poetry for Climate Change Education
Lesson	English/Poetry writing/Art
Topic Summary	<p>How can poetry the oldest form of literature responds to the current climatic crises and provoke activism to deal with them? (Adeline Johns-Putra, 2016)</p> <p>This project was based on a personal disposition towards poetry as a pedagogy for teaching and learning about global justice issues. It is a pedagogy I have used for many years and one which I have found to be engaging with children. It is also a means by which empathy can be explored and children can see things from other perspectives.</p> <p>It had also been explored to a lesser extent in 2021/22 with a fourth class and they had achieved some success with it.</p> <p>In the context of the CC4CA project, it was a means by which children could explore other mindsets and perspectives.</p>
Climate curriculum Learning Outcomes	<ul style="list-style-type: none"> • Pupils can describe their own feelings and the feelings of others about climate change • Pupils can feel empowered to take action for climate change • Pupils can raise awareness about climate change and climate action • Pupils can envisage solutions and articulate these

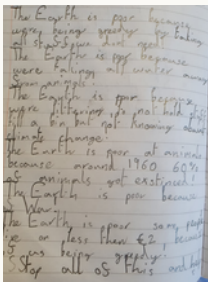
LESSON CASE STUDY EVIDENCE

Who will implement the project?

Having engaged with poets through Poetry Ireland and through resources made available by them, it was decided to explore this project with fourth class. The class teacher would teach a series of lessons on poetry using as diverse voices as possible as well as exploring Irish poets.

Diarmuid Fitzgerald, poet and author of “The Singing Hollow” came to the school to do a workshop with my class.

Following this, children were frequently given the choice to write a poem rather than a story or prose on a given topic as part of our literacy programme.



Progress of the project

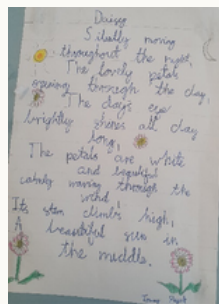
Having implemented the initial stages of the project successfully and with children becoming increasingly confident and competent in their poetry writing skills, it was decided to tailor their writing more specifically to themes suggested by the learning outcomes of the CC4CA.

We explored a number of themes.

- Human activity being the main cause of climate change.
- The urgency of the need for action.
- The destruction of the Earth including deforestation and pollution of the seas.
- Imagining a world where there was no inequality.

Each child wrote, edited, drafted, and redrafted a poem for publication by a local publisher of educational materials. They also did illustrations for their poetry.

These poems were also entered into the Irish Aid Our World awards and their entries appeared in the first edition of Irish Aid Our World Goal Getters magazine.



Evaluation of the project

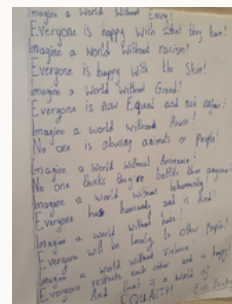
The project was deemed to be a great success with the children's work being lauded by teachers and other educators at a variety of events during the course of this project.

We collaborated with “Fighting Words”, a group ‘which encourages creativity and writing as a powerful means of self-expression’, and they published the children's work in a book called “ Climatry”

It is also hoped that their work might be published by independent publishers pending funding from the Department of Education (Education for Sustainable Development) and that the messages contained in the poems will be used to raise awareness about climate change, climate justice and climate action.

As a means of creatively and innovatively engaging with the climate curriculum, our poetry writing can be considered a successful and engaging methodology.

It is envisaged that it will be continued in the future and will be further developed as a methodology.



Quotations about the children's poetry which was published in a book called “Climatry” and presented to educators and other stakeholders at an event in Aras Chrónáin (Intercultural Centre, Clondalkin) on the 21/06/2023

The book (of poetry) is a wonderful achievement, testament to the importance and validity of incorporating climate education within multiple aspects of the Primary curriculum. A

testament to Paula Galvin and her inspirational pupils.

Excellent insight by young people into the issues around climate change

A great presentation which clearly explained the need for a climate curriculum

Poetry is a powerful tool to engage young people in a creative and expressive and will help to engender a spirit of activism in our young people

The children are our future. The children are so much more aware of the need to act on climate change. The future is in their hands. They are so passionate that they are leaders in teaching the older and younger generations about the impacts of climate change.



Objective: Pupils understand that burning coal, oil and gas has an impact on the climate and have a basic understanding of the scientific processes involved. Y3

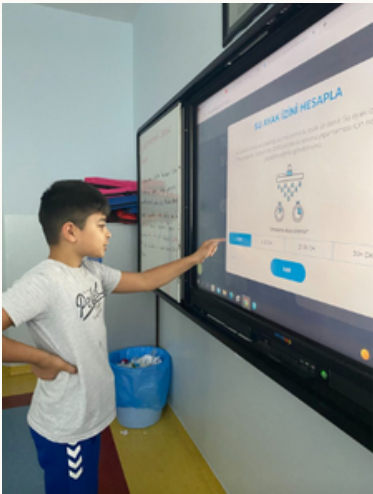
Year 3 Long Term Curriculum Plan.

Topic Title	Greenhouse Gasses
Lesson	Environment and Nature
Topic Summary	<p>The study aims to teach students what carbon footprint is, what affects their carbon footprint and how to calculate and reduce it relying on the former teachings about greenhouse gasses.</p> <ul style="list-style-type: none"> • The objective has been embedded into the Science Curriculum which links into our “What is CO2?” topic. • Climate change is highly affected by greenhouse gases and the consequences of carbon footprint. These are the main topics worked in this subject. • In this part, pupils are aimed to be educated why it is important to reduce greenhouse gas emissions. • Pupils can measure how much impact an activity has and know that different lifestyles have a greater or lesser impact. • Localization of these activities is implicated.
Climate curriculum Learning Outcomes	<ul style="list-style-type: none"> • Pupils understand that burning coal, oil and gas has an impact on the climate and have a basic understanding of the scientific processes involved

LESSON CASE STUDY EVIDENCE

Students are measuring their carbon footprints.

carbonfootprint.com - Carbon Footprint Calculator



Slides/Resources used in the lessons.

Peer Education 3.pptx

Peer Education 4.pptx



Students are measuring their carbon footprints and water footprints.

carbonfootprint.com - Carbon Footprint Calculator

<https://www.yarininsuyu.com/su-ayak-izini-hesapla>

Next Step/What comes next?

Pupils will put an extra effort to reduce their carbon footprints as they know its negative effects to our planet.

They are going to try to reduce their CO₂ emissions by quitting some activities and habits in their lives in order to reduce the greenhouse effect.

Long as they keep what they were doing before they were educated, globing warming will increase and there will be no future for the next generations.

So, they aim to found a school club for protecting and improving the earth's atmosphere.



Overview – This objective has come from the Big Ideas Document under ‘Case Studies’ It is an objective that should be taught by the End of Year 6. It can be taught from the 4-5th grades to 6th grade.



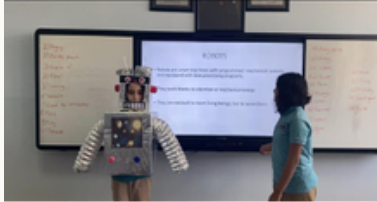
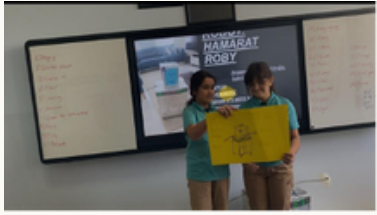
Year 6 Long Term Curriculum Plan

Students will be able to comprehend and talk about 3Rs, mention the changes they can do in their daily lives and the importance of 3Rs using the English language.

- The objective has been embedded into the English Curriculum which links into our “Big Problems” topic.

Topic Title	Global Warming
Lesson	English
Topic Summary	Students will be able to comprehend and talk about 3Rs, mention the changes they can do in their daily lives and the importance of 3Rs using the English language. Y6
Climate curriculum Learning Outcomes	<ul style="list-style-type: none"> • Pupils understand that burning coal, oil and gas has an impact on the climate and have a basic understanding of the scientific processes involved

LESSON CASE STUDY EVIDENCE

<p><i>Lesson Plan Document</i> <i>Zero Waste exhibition</i></p> 	<p>Slides/Resources used in the lessons.</p> <p><u>Planning Template</u> <u>Y6.docx-</u> <u>EmbeddedFile.pptx</u> <u>Zero Waste fashion show</u></p> 	<p>Here is an example of demonstrations and presentations in the classroom. (Y6)</p> <p>Arrange an interview with the local people about the effects of the climate change.</p> <p>Write a letter to the municipality about taking legal actions for people acting irresponsibly.</p> <p>Be a part of a plan that contributes to climate strike.</p> <p>Consulting each other to ease the anxiety of each other with the help of their experiences on climate change.</p>  
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Next Step/What comes next?

Pupils will apply the learnings to their lives' different parts and give priority to use recyclable products.

As the educated pupils are upper graders, they will be able to be a huge impact on the lower graders at school in terms of their behaviours towards the topic of "recycle, reuse and reduce".

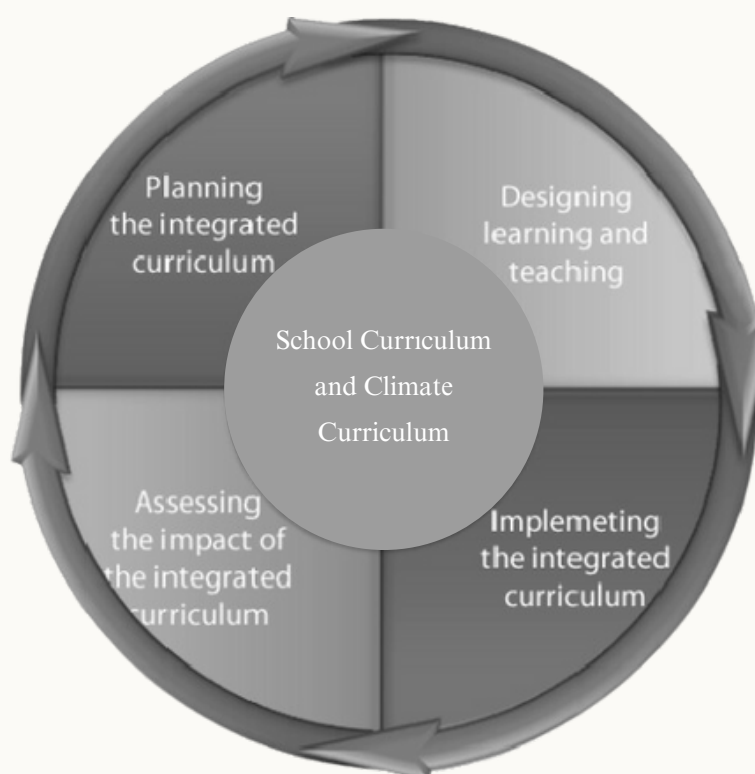
Pupils are expected to separate their garbage at home in advance so that in a possible future, they can adapt to the policy of waste disposal and recycling as in some European countries. In other words, the "Consumption and Climate Justice" part in the planning templates is came into force.

How to approach integrating teaching climate change in your curriculum across school/ into your teaching

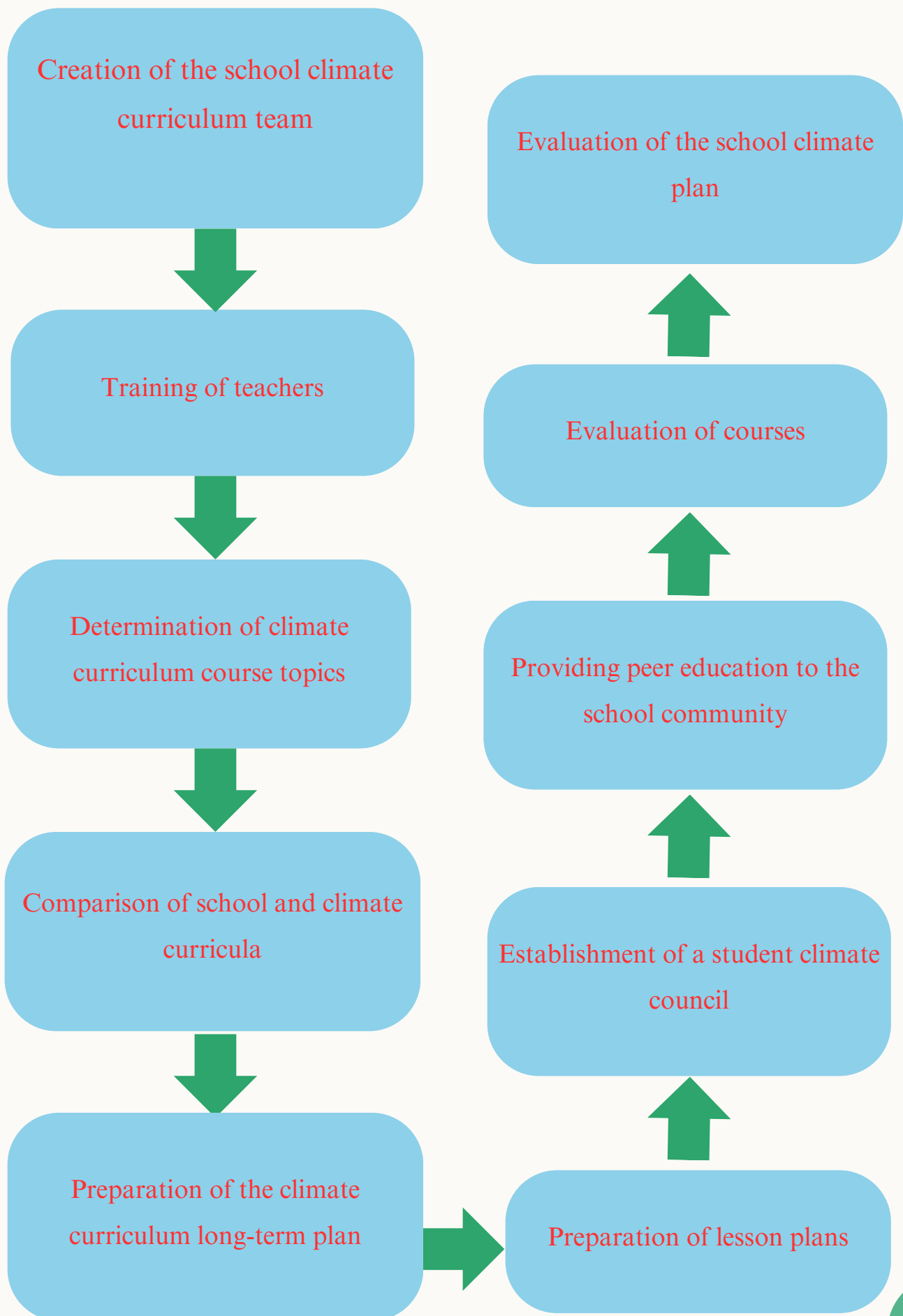
The learning outcomes in the Climate Curriculum for Climate Action were designed to be integrated across the whole school. The advantage of doing it this way is that they build progressively so that, when implemented as a whole school by the time the pupils reach the later years, teachers do not have to ‘start from scratch’ and can and there is certainly for planning lessons. Use it to answer any basic questions you may have; find resources and activities to help you organize a lesson or lead an activity with students; and build your confidence that you can teach about climate change!

Different ways of integrating learning outcomes into the curriculum can be used, some schools may only include subjects as part of the lessons, while others may choose to integrate both lessons and extracurricular activities.

Therefore, in order to integrate the curriculum, a better climate curriculum integration can be achieved by ensuring the participation of every environment and all stakeholders of education in education, instead of determining only the school as an educational environment and the teacher and the students as participants.



CLIMATE CURRICULUM SCHOOL IMPLEMENTING MAP



REFLECTIONS ON OUR JOURNEY + OUR STRATEGIES

'The following Top Tips have been collected from discussions between the teachers involved in the project and are based on their experience in creating and delivering programmes to teach about climate change / climate action.'

Dos

- Start somewhere!
- Have a strong message from Senior Leadership Team to engage all staff
- Have a clear message about the aims and importance of the work
- Have demands from staff to properly implement work into lessons
- Review Long Term Plan- to see links into curriculum
- Prepare and share materials to get teachers started
- Start small
- Use assembly times
- Engage staff in short term 'bursts' of climate curriculum training
- Make links as much as you can. Touch base with climate change learning every day (It doesn't always need to be discreet lessons)
- Have a dedicated Climate Action Week and/or Climate Strike Day
- Keep yourself educated re: Climate Change
- Be aware of staff hesitancy/ scepticism
- Share experience and good practice
- Act like a role model
- Be passionate!
- Be generous with resources/ time/ advice
- Be encouraging!
- Raise awareness. Train the trainers to make teachers comfortable with the knowledge.
- Break down objectives so you are not overwhelmed. Make it clear for each year group.
- Ask for help.

Don'ts

- Overburden staff by asking too much of them
- Annoy the 'bejaysus' out of your staff
- Don't be afraid
- Get overwhelmed
- Assume knowledge
- Be scared of hard topics/ discussions
- Be afraid to start resourcing straight away
- Don't start nowhere!

REFLECTIONS ON OUR JOURNEY + OUR STRATEGIES

Best methodologies

- ‘Hands on’ activities
- Outdoor learning- promoting a sense of loving nature
- Make links wherever possible
- Freirean methodologies- transformative, emancipatory
- Less ‘writing’
- Make it fun!
- Peer learning- working with other groups or classes
- Interactive activities
- Repetition and modelling from teachers- with an explanation about why
- Link topics to the children’s reality- choose topics they are interested in
- Walk in forests to touch trees
- Work towards a certain goal (eg strike at the end of the week)
- Walking debate

Pupil actions

- Clean up school/ community
- Campaign for climate action, strike, national events
- Write/ email to local councillors, politicians, climate activists
- Involve parents in learning
- Conduct surveys/ present findings
- Peer Learning
- Raise awareness of CC4CA
- Engage parents/ grandparents
- Interview parents/ grandparents about views/ attitudes
- Climate Action week
- School Council discussions around climate action
- School ‘Eco monitors’ elected per class to regulate energy use in school (relatable)
- Walking debates/ written debates
- Ride a bike/walk to school



REFLECTIONS ON OUR JOURNEY + OUR STRATEGIES

Work with school community

- Give information for parents
- Ask parents for help (eg collecting rubbish for upcycling, working in the school garden..)
- Involve local politicians and journalists
- Use existing city programmes that address the topic
- Cooperate with kindergarten and secondary schools
- Visit zero waste shops, allotments
- Climate strike days- whole school in playground
- School ping system- alert parents
- Social media posts
- Link to school anniversaries/ events
- Have a climate page on the school website
- Include articles about the school's climate work in the newsletter
- Use parent assemblies. Give awards for 'Climate Champions'
- Green captains in each class
- Send learning packs home that give ideas of actions that families can take eg <https://www.youngclimatewarriors.org/>



Quotes from children

“We can make a change for our own future”

EXPLANATION OF THE TOOLKITS

Introduction to the Toolkits

These Toolkits has been developed as part of the ‘Climate Curriculum for Climate Action’ project. This was an Erasmus project collaborated on by four primary schools in four different countries: Moor Allerton Hall Primary School, Leeds, England; Our Lady Queen of the Apostles Primary School, Dublin, Ireland; Aplerbecker Grundshule, Dortmund, Germany and Private Akdeniz Yukselis Primary School , Antalya, Türkiye. The schools were joined in the project by two non-governmental organisations: Leeds Development Education Centre, Leeds, England and SERGED Association, Antalya, Türkiye.

The aim of the project was to collaborate on implementing a Climate Curriculum which would enable school pupils to gain the knowledge and understanding necessary for a world facing climate crisis, and also to equip them with the attitudes and skills to maintain their own mental and emotional wellbeing in the face of the crisis and also to make a positive contribution, both now within their own sphere of influence as children within their schools, families and communities, and also in their future lives.

These toolkits cover the learning methods and practices that emerged as a result of our partner schools applying the climate curriculum in their lessons throughout our project. Our toolkits are designed by the project team teachers for the use of primary school teachers, with examples that explain how to integrate the climate change curriculum into the primary education curriculum. Education is key to enabling students to take informed action and make choices that support a just and sustainable world; that's why education is a climate change solution and you are part of the solution! This toolkits can support you as a back pocket resource for planning lessons. Use it to answer any basic questions you may have; find resources and activities to help you organize a lesson or lead an activity with students; and build your confidence that you can teach about climate change!

You can access the toolkits developed by our schools in German and Turkish from the link below

<https://www.climatechange-education.org/toolkits>

HOW CPD TRAINING CAN HELP

CPD training will enhance teachers' skills regarding the role education can play in shaping a sustainable future and contribute to the development of the scientific and methodological skills needed to address climate and sustainability issues with students. Many of the teachers currently working in schools have not received any pedagogical training on global climate change issues. This situation causes difficulties in integrating the climate curriculum into the school curriculum and causes teachers to face difficulties in how and which subjects they should integrate into the curriculum. The realization of continuous professional development trainings through peer education in schools will accelerate and facilitate the integration of climate curriculum into school curriculum.

How can we realize the continuous professional development of school teachers?

- Climate education experts can be invited to our school.
- Cooperation can be made with non-governmental organizations working on climate education.
- Academics can be invited in cooperation with universities.
- climate curriculum project partners SerGED and LeedsDEC can support your teachers in their CPD training.
- Leeds DEC can provide Climate Curriculum CPD for your staff team (created in partnership with international UN climate academics from the University of Leeds) Please see their website <https://leedsdec.org.uk/training> ,<https://www.serged.org/akademi>
- Web-based teacher education tools developed by initiative groups such as international organizations and non-governmental organizations can be used.

During the project, teacher trainings were held in 4 countries by teachers who completed their Global Teacher academy training.



WHAT IS PEER EDUCATION ?

what is peer education ?

Peer Education is a school-based education program that aims to provide students with the knowledge and skills they and their peers need on climate change.

How does Peer education work?

Peer Education can be implemented in your school in 4 simple steps

Step 1

School students work with school teachers to complete a range of educational tools covering key concepts, project structure and materials. peer education aims to build capacity in schools to carry out the project every year, by training school students to implement the project in their own schools.

Step 2

The trained school staff select and train older pupils, known as Peer Educators, using detailed training plan. Peer Educators are students typically related to topic aged from others upwards.

Step 3

Older pupils deliver the lessons to younger pupils, known as Peer Learners, using our detailed lesson plans.

Step 4

Embedding this crucial climate change knowledge within the curriculum can support a whole-school approach to climate change education and directly create a more learning opportunity for peer learners .

"From my own personal experience working in the programme, it has helped me gain an understanding of everyone's individual viewpoints, and helped me to explore new perspectives and ideas about Climate change."

- Peer Educator-

PEER EDUCATION

Peer education was implemented in in England, Germany and Türkiye during the project duration



Our Lady Queen of the Apostles
Primary School, Dublin, Ireland



Moor Allerton Hall Primary School,
Leeds, England



Aplerbecker Grundshule, Dortmund,
Germany



Private Akdeniz Yukselis Primary
School , Antalya, Türkiye

FAQs

1-What's the difference between climate change and global warming?

“Global warming” refers to the long-term warming of the planet.

“Climate change” encompasses global warming, but refers to the broader range of changes that are happening to our planet, including rising sea levels; shrinking mountain glaciers; accelerating ice melt in Greenland, Antarctica and the Arctic; and shifts in flower/plant blooming times.

2-What's the difference between weather and climate?

“Weather” refers to the more local changes in the climate we see around us, on short timescales from minutes to hours, to days to weeks. Examples are familiar – rain, snow, clouds, winds, thunderstorms, sleet, and hail.

“Climate” refers to longer-term averages (which may be regional or global) and can be thought of as the weather averaged over several decades.

3-What is the greenhouse effect?

The greenhouse effect is the way in which heat is trapped close to Earth's surface by “greenhouse gases.”

4-How does CO₂ increase Earth's temperature?

Carbon dioxide (CO₂) is a greenhouse gas. When energy from the Sun reaches the top of our atmosphere, most of it passes through to Earth's surface, where it is absorbed. Some of this energy is re-emitted, heading back towards space. At this stage, it interacts with molecules of CO₂ in a way that prevents some of it from escaping Earth's atmosphere. The trapped heat energy leads to increased average global surface air temperatures.

FAQs

5-What is a carbon footprint?

A carbon footprint is the amount of carbon dioxide that someone (or something) releases into the atmosphere. Calculating your own carbon footprint is a difficult task, but certain online calculators have simplified the process and can allow you to look at a rough estimate of how much carbon dioxide you pump into the atmosphere.

<https://footprint.wwf.org.uk/questionnaire>

6-What are the benefits of taking action now?

“The longer people wait to act on climate change, the more damaging its effects will become on the planet and people’s health. If people fail to take action soon, more drastic and costly measures to prevent greenhouse gases from exceeding dangerous levels could be needed later.

7-What can we do to stop climate change?

There are lots of things you, your friends, and your family can do each day to reduce greenhouse gas emissions. A major way that greenhouse gases get into the atmosphere is when people burn coal, oil, and natural gas for energy. Here are some simple steps you can take to use less energy:

- Turn off the lights when you leave a room.
- Turn off your computer and other electronic devices when you're not using them.
- Drive less. Instead, walk, ride your bike, or use public transportation if you can.
- Use less water.
- Create less waste.
- Recycle used paper, cans, bottles, and other materials.

Our Team



Hannah Langdana (LeedsDEC) is a qualified teacher and Global Learning trainer. She has worked for 15 years for York and Leeds DEC's and as a Global Learning Schools Officer at the Dept of International Relations, Leeds City Council. Her roles have included running GL schools programmes (specialising particularly in Active Citizenship) developing classroom teaching resources, writing and delivering CPD courses, writing blogs and public speaking.



Adam Ranson (LeedsDEC) is a Global Learning trainer/ advisor. A qualified teacher, he has worked in formal sector and development education since 1985, coordinated Hull and Leeds DEC's, written many Global Learning resources, managed successive curriculum development/ linking projects and delivered training in the UK - and with partners in Europe, Africa, South & East Asia and Latin America. He has also managed research and evaluation programmes, worked locally and internationally in partnership with other education centres, and with many BME & diaspora organisations, and taken part in education policy work.



Hulusi KARATAŞ (SerGED) is a teacher and the president of the SerGED association. He has been teaching since 1998 and has been the president of the association since 2020. He is proud to be a member of the CC4CA Team and to be part of the Erasmus+ school education project for the implementation of the climate change curriculum and believes that the products of this project will support meeting the pedagogical needs of primary school teachers.

Our Team



Aslıhan KARATAŞ (SerGED) is a Year 1 class teacher. She is a member of SerGED Association. She has been teaching for many years and holds experience around how children best learn in the classroom. She has been able to teach across all years of primary school level. She is interested in teaching of environmental and climate change education with her students.

She feels very proud to be part of the team and has enjoyed spending time with colleagues in different countries – discussing the very important issues around climate change.



Lesley McKay is the headteacher of Moor Allerton Hall Primary School. She has been the headteacher for 12 years and was a Key Stage 2 class teacher before becoming head. The school has grown from a 2-form school to a 3-form school with a cohort number heading towards 600 during her time at MAHPS.

She feels it is important for children to engage with the crucial topic of Climate Change as it plays a very large part in their future. Lesley is also very excited for the links being made with other schools in the other partner countries, and it is really wonderful to see a whole school approach to make the children, staff and families engage with the issues.



Henry Wareham is a Year 4 class teacher of Moor Allerton Hall Primary School. A qualified teacher for 5 years, he has worked in year 3, 4 and 5 (ages 7–10). He is passionate about climate change having worked in the environmental science sector and receiving a degree in Geological Sciences from the University of Leeds.

Henry is excited to be a part of the CC4CA team and hopes that the hard work in the project will benefit many generations to come.

Our Team



Paula Galvin (Our Lady Queen of the Apostles N.S) is currently teaching 4th class and worked in the area of global citizenship education, human rights education and sustainability for many years. She completed her M.Ed in HRCE (Human Rights and Citizenship Education) in 2013. She has won many awards in this area and is a passionate advocate for global justice issues. She spearheaded the campaign to make Clondalkin a Fairtrade Town in 2013 and works with Friends of the Camac on cleaning the river. She lectures in GCE and is a member of the steering committee of Global Citizenship School. She thinks that CC4CA is a wonderful project and is delighted to be part of it.



Lisa Nehm (Aplerbecker Grundschule) is a Year 3 class teacher. She has been teaching at Aplerbecker Grundschule since 2016. She is excited to be a member of the CC4CA-Team and hopes that her work will make a change.



Lena Ehlen (Aplerbecker Grundschule) is a Year 4 class teacher. She has been teaching at Aplerbecker Grundschule since 2018. She is excited to be a member of the CC4CA-Team. Always riding her bike to school, she hopes to be a role model for her pupils.

Our Team



İzel KÜÇÜK (AYK Primary School) She is an accomplished English teacher at Private Akdeniz Yükseliş Schools. With a wealth of experience in teaching English to young learners, particularly secondary school students, İzel has demonstrated a remarkable ability to engage and inspire her students in their language learning journey.



SNilüfer KOCABIYIK (AYK Primary School) he is an experienced English teacher at Private Akdeniz Yükseliş Schools. Specializing in middle school education, Nilüfer holds the position of head of the English teachers department and oversees international projects for the school.



Alice Maher (Our Lady Queen of the Apostles N.S) is currently teaching 2nd class and has been working in Our Lady Queen of the Apostles since 2017. Having a strong interest in sustainability and protecting the planet she is excited to be involved with the CC4CA team.



Sally Parrini is a Year 1 class teacher of Moor Allerton Hall Primary School.. She has been teaching for many years and holds a wealth of experience around how children best learn in the classroom. She has been able to teach across all years of KS1 and KS2, leading to a position as a science coordinator in school. This has allowed Sally to use her science knowledge as part of the Erasmus project. A passionate runner, Sally likes to enjoy activities outside and therefore the environment. She feels very proud to be part of the team and has enjoyed spending time with colleagues in different countries – discussing the very important issues around climate change.

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