Climate Action Toolkit - December 2024

Summary

Climate Action Toolkit is a cross-disciplinary primary school programme designed to boost teacher confidence in delivering climate change education. By offering a structured scheme of work that integrates Arts, Humanities, and STEM subjects, alongside free, downloadable resources and hands-on activities, the Toolkit equips teachers to inspire pupils in Years 5–6 to tackle key challenges around climate change.

Since our last report, all resources have been completed including curriculum-linked academic content, tried and tested practical classroom application, including feedback from teachers, and the design honed in collaboration with an intern from Cambridge Zero.

These are available on our project website hosted by Churchill College, and have been directly shared with teachers in 28 schools. Final design refinements are under way, after which the Toolkit will be shared via the Royal Geographical Society's platform for broader reach.

Looking ahead, we aim to continue promoting the *Climate Action Toolkit* into the new year, with the goal of expanding its uptake across more schools and sustaining it as a high-quality, enduring resource. Subject to further funding, our next steps will involve additional testing for long-term resilience, along with continued efforts to spark interest in climate-related topics among younger learners.

Impact of project

Teacher Engagement & Professional Development

- Over 75 teachers contributed to online discussions, providing insights that shaped resource development to better meet classroom needs.
- Climate Action Toolkit resources have been shared in teacher CPD at Gloucestershire primary Teach Meet, drawing strong interest.
- Cambridge University geography outreach session to KS3 pupils have incorporated CAT resources, illustrating its adaptability for higher key stages

Initial Tests & Expanded Piloting

- Two schools in Cambridgeshire and Birmingham piloted resources with 90 pupils and 6 teachers. While promising, initial feedback indicated the need for further refinements to ensure clarity and suitability of materials.
- We originally planned for 20 schools to pilot the resources, but high enthusiasm from teachers prompted us to expand. Now, 32 schools across the UK have the CAT resources to use with their Y5–6 pupils.
- These schools range from 100-650 pupils and include regions such as the South West, East of England, West Midlands, and Yorkshire & the Humber.

Legacy

- All CAT resources are available via the Churchill College website.
- Built a strong network for disseminating resources
- Cambridge Zero is using CAT insights in discussions with OCR for secondary curriculum redesign, thus highlighting the project's broader impact beyond primary education.
- Given the programme's success, we intend to host resources through the Royal Geographical Society for wider dissemination, ensuring CAT remains a lasting, high-quality resource for climate-focused teaching.

Engagement with Teachers: Attitudes to Primary Climate Education

A survey of 75 teachers revealed a strong demand for climate change education, with 85% wanting more classroom time on the topic. Yet, many reported uncertainty and low confidence, calling for better training and easy-to-use resources. As one teacher noted, *"We need teacher training and teacher inspiration. We also need the heads to set climate change education as a priority."*

Over 50% of respondents felt the National Curriculum covers climate change *"not well at all,"* and 45% rated current resources as poor or very poor. While most viewed it as linked primarily to geography, science, and PSHE, a minority recognised its broader relevance across multiple subjects. Teachers emphasised forward-looking, hopeful themes and an approach that empowers pupils without inciting "climate anxiety." One teacher summed it up: *"Resources need to be frank and honest, but not make young children have climate anxiety. I am so pleased that this project is happening."*

The Toolkit resources

Each lesson is linked to aspects of the curriculum to make it easy for teachers to see where this fits alongside their other lessons.

Lesson (title and overview)	Images of resources
Net Zero Aim: Pupils learn how greenhouse gases contribute to climate change and explore strategies to balance emissions (sources) with natural absorption (sinks). **Highlighted Activities:** • Sorting CO_2 "source" and "sink" cards • "Net Zero Balance" game to compare different emissions scenarios • True/False quiz to correct misconceptions about climate change	

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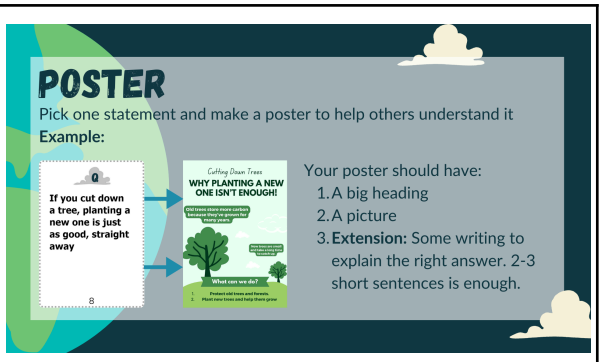
<td> 
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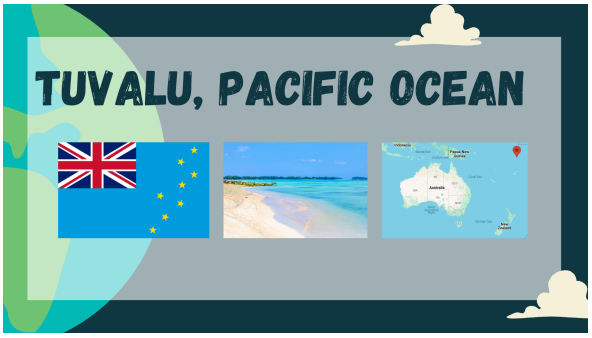
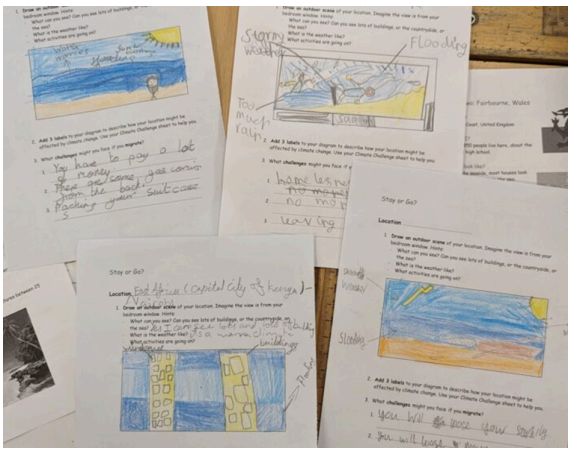
<td>Stay or Go

Aim: Pupils explore how climate change can impacts people’s lives and homes and can drive migration decisions. To practice decision-making, empathy, and critical thinking.

Highlighted Activities:

● “Climate Whiteboard Game” gaining/losing money based on adaptation choices
● Group work on real locations in Wales, Tuvalu and Nairobe, deciding whether to stay or migrate</td>
<td> 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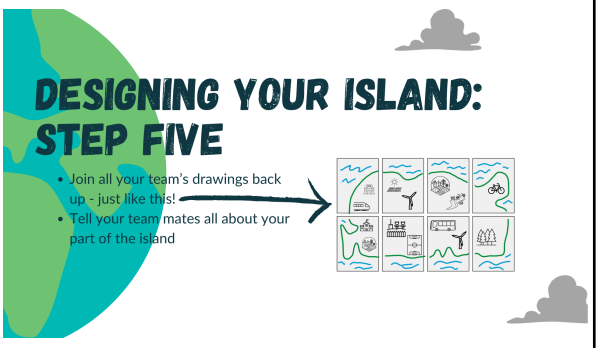
<td>Hopeful climate futures

Aim: Pupils imagine a sustainable future, discussing lifestyle adaptations that reduce harm to the planet while maintaining quality of life.

Highlighted Activities:
● Spotting sustainable features on a fantasy island
● Designing a “sustainable island” in groups
● Assuming special “expert” roles, to explore different aspects of sustainable living including energy, food, transport.</td>
<td> 
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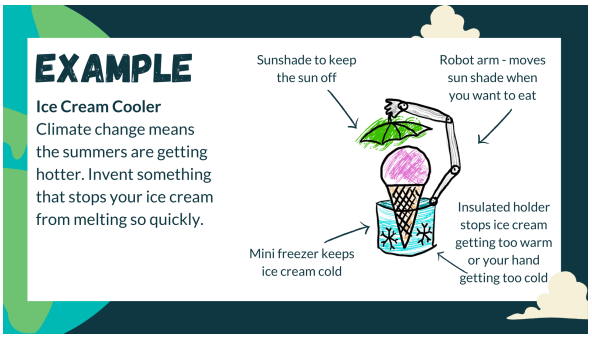
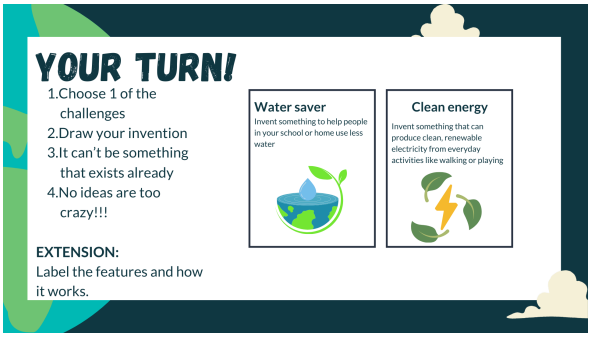
Making the Future
Aim: Pupils discover that most things in our lives were invented to solve problems, and get creative to explore how new inventions can address climate issues.

Highlighted Activities:

- “Everyday Inventions” bingo, identifying items we take for granted
- “Would You Rather?” game to consider which invention to keep if only one existed
- Sketching and sharing climate-focused inventions



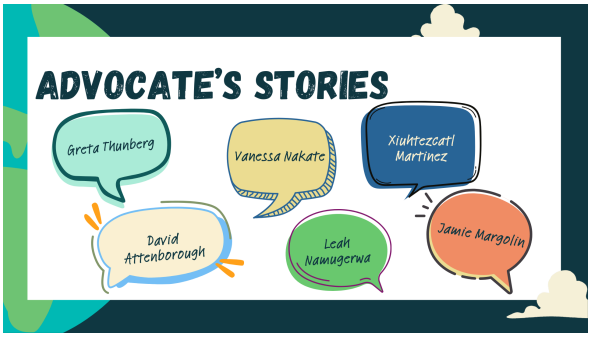


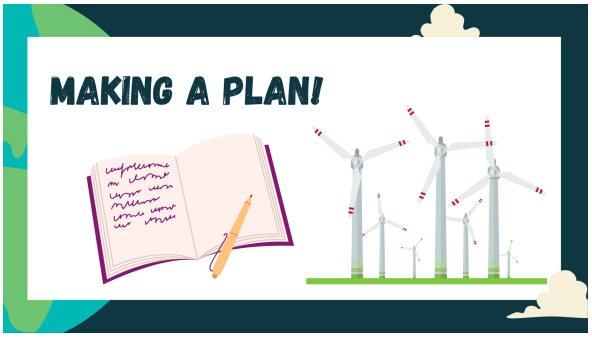
Advocacy

Aim: They explore multiple perspectives on climate change, practicing advocacy and debate, and develop critical thinking and persuasive communication. They also gain empathy and a sense of agency to address global challenges.

Highlighted Activities:

- Storytelling about key climate advocates using fact sheets
- Debate on climate problems/solutions assuming roles (advocates, citizens, policy-makers) to debate policy decisions.
- Action Plans: Pupils identify specific climate actions they can take personally, with their families, and at school or in the community





Challenges and Learnings

We initially struggled to balance resource levels for diverse primary classrooms, especially for EAL and less-academic learners. By arranging observations in Birmingham and at the University Primary School and meeting with individual teachers to discuss activities, we refined materials and ensured resources became more accessible and engaging.

Working with multiple PhD students also brought challenges around commitment and consistency; however, the best performers produced excellent resources, and their fresh perspectives greatly enriched the Toolkit.

Looking ahead, we plan to refine our selection process with interviews and structure future resource development around intensive workshops and timetabled deliverables. This approach will give each PhD developer clearer roles, opportunities to pilot their own content, and the support needed to respond effectively to feedback. We believe these adaptations will preserve the creativity and energy that PhD students bring, while ensuring a higher, more consistent standard across all resources. Further detail on our learnings from these experiences can be found in our interim report from July 2024.

Budget and spending

Type	Description	WPIF funding £	Spending £	Notes
Programme development	*Project Management & development (15% FTE day per week). **1/2 met by Churchill*	7500	8000	*Minimal increase in project management costs due to the additional oversight required when some PhD student developers defaulted on their work. This ensured the project remained on track and that resource quality was maintained.*
	*Postgraduate developers (5 days * 5 students @£13.68 ph, standard graduate payment)*	2394	1750	*Some PhD developers defaulted on their work, resulting in a slightly lower overall budget requirement for this aspect of resource development. This reduction occurred because fewer developer payments were ultimately disbursed.*
	Resource creation and testing (includes online tool subscriptions, printing, theme-specific resource purchases and student intern based at CZ)	1750	1879	
Resource Testing in schools	*Includes travel/accomodation for project team and PhD facilitators to schools to test.*	1700	1355	
Evaluation	*Teacher support & resource/CPD hosting*	567	45	*We were able to correspond with teachers largely online at their request, which significantly reduced the costs of in-person meetings. In addition, we secured a venue for the focus group at minimal charge, further lowering our overall expenditure in this area.*
Dissemination & Legacy	*Designer to finalise resources (estimate based on previous work, scaled for project size)*	2000	4000	*For professional design work, led by Cambridge Zero, ahead of hosting the materials on the RGS platform, ensuring the resources maintain a high standard and lasting impact. We initially underestimated these costs by comparing them to a smaller-scale project, only to find that this wider initiative required more extensive design.*
	Develop and host MOOC for teacher CPD on platform e.g. futurelearn	1000	0	*Rather than creating a separate MOOC, we invested in comprehensive lesson plans housed on a single platform. This ensures consistency in style and makes resources more accessible, avoiding the need to split content across multiple sites.*
Totals		**16911**	**17028**	

A portion of the budget has been reserved for final design work before the materials are hosted on the RGS website, covering any additional edits or refinements that may arise.

Due to unforeseen challenges with some resource developers, project management costs have increased, requiring a larger share of the budget to support the extra time and effort needed to complete and refine the resources. Consequently, the allocation for resource developers has been reduced to reflect the fact that not all contributors fulfilled their roles.

We hope to secure funding to continue this project and support travel to further follow-up with the schools highlighted in our pilot. This would enable us to broaden the project's impact, sustain strong engagement, and gather additional insights to ensure a lasting legacy for the programme.

Schools Engaged

This section details the schools engaged in different capacities with CAT. We hope to continue to work with these schools, supporting pupils and further promoting CAT as a legacy of this successful project.

School	Postcode	Region	Notes
Saint Bernard's Catholic Primary School, Birmingham	B13 9QE	West Midlands	Initial resource testing
University Primary School, Cambridge	CB3 0QZ	East of England	
Meridian Trust, (4 school clusters, including Histon and Ely)	PE28 5TQ	East of England	In contact for potential research project observation to follow-up the success of this project
Hardwick & Cambourne Community Primary School	CB23 7RE	East of England	
Shireland Hall Primary Academy	B664PW	West Midlands	All Received CAT digital resources in pilot
Wychall Primary School	B31 3EH	West Midlands	
The Blue Coat School Birmingham	B17 0HR	West Midlands	
St Nicholas Catholic primary School	B73 5US	West Midlands	
Stoke Park Primary	BS7 9BY	South West	
Blackwood Primary	B94 3PH	West Midlands	
Pannal School	HG3 1LH	Yorkshire and the Humber	
Springfield Primary Academy	B13 9NY	West Midlands	
North Rigton CE Primary	Ls17 0dw	Yorkshire and the Humber	
Blockley C of E Primary School	GL56 9BY	South West	

St Peter's Church of England Primary School, North Yorkshire	HG1 1JA	Yorkshire and the Humber	
Kennett Primary School	CB8 7QQ	East of England	
Skipton parish Church of England Primary School	bd232es	Yorkshire and the Humber	
ASQUITH PRIMARY SCHOOL LEEDS	Ls27 9qy	Yorkshire and the Humber	
Chilwell Croft Academy	B19 2QH	West Midlands	
St Andrew's C of E Primary, Soham	CB7 5AA	East of England	
Buckden CE Academy	PE280AJ	East of England	
Our Lady of Victories	SW15 1AW	London	
Buckden C.E. Primary Academy	PE19 5TT	East of England	
Dunston Hill Community Primary	NE11 9NX	North East	
Crosshall Junior School	PE19 7GG	East of England	
4 primary schools in a Trust	PE29 6JA	East of England	
Birdwell School	BS41 9AZ	South West	
Robert Arkenstall Primary	CB6 3UA	East of England	
Weatheralls Primary School	CB7 5BH	East of England	
Trumpington Park Primary School	CB2 9EG	East of England	
St. Anthony's RC Primary	B376LW	West Midlands	

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Isaac Newton Trust