TEACHING FOR CREATIVITY IN DT, SCIENCE AND PSHE FOR YEAR 1

UNIT OF WORK EXEMPLAR

Gemma Williams
Orchard Infant School

How to read this document

This document contains three main components

- A description of the Creativity Collaborative programme context and our framework of teaching for creativity
- The key unit information provides an overview next
- Finally, the full unit description gives detailed information

UNIVERSITY OF WINCHESTER
UNIVERSITY OF WINCHESTER ACADEMY TRUST
CREATIVITY COLLABORATIVES
Supported using public funding by ARTS COUNCIL ENGLAND
LOTTERY FUNDED
Freelands Foundation

Context: UWinAT Creativity Collaborative

Creativity Collaboratives is an action research programme, funded by Arts Council England and the Freelands Foundation, that aims to build networks of schools to test a range of innovative practices in teaching for creativity, with the explicit intention that learning is shared to facilitate system-wide change. The University of Winchester, the University of Winchester Academy Trust, and a network of Hampshire Infant, Junior and Primary schools became one of the eight national funded collaboratives, coming together with the key ambition of fostering pupils' creativity in subjects drawn from across the curriculum. Overall, our collaborative aims to enrich children's life chances by developing them into confident and creative problem-solvers, engaging them through authentic, meaningful problems, embedded in their schools and lives.

The focus on creativity as a key skill in education is increasing (James et al., 2019), reflecting its value within wider society. Indeed, according to the 2023 'Future of Jobs Report' (World Economic Forum, 2023) creative thinking is the skill showing the greatest increase in importance for employers (p. 38) and after analytical thinking, is the second most frequently cited skill that is 'core' for the workplace (p. 39). Our collaborative has focused on:

- Understanding and addressing the barriers and enablers of creative thinking
- Developing leadership for creativity in schools
- Developing new approaches to teaching for creativity across the curriculum
- Building children's and teachers' knowledge and understanding of creativity
- Developing children's and teachers' sense of themselves as creative and their ability to be creative in subjects across the school curriculum..

The Creativity Navigator: A Framework of Teaching for Creativity

To support our planning and implementation of teaching for creativity, we use a planning tool called the Creativity Navigator (see back cover). This was co-developed in our Creativity Collaborative and draws on a wide range of models, theories and frameworks of creativity. The Navigator emphasises that creativity can be a planned for process, that follows a typical sequence of explore – ideate – evaluate, but that this sequence can be varied and cycled around many times whilst working through a creative process. The process starts with the question 'where next?' emphasising the importance of metacognitive planning and monitoring throughout a creative process.

In a classroom context, a creative process can be operationalised through a set of learning behaviours. These behaviours can be grouped under creative 'habits' each of which can be used to support the creative process. For instance, a think-pair-share learning behaviour could support children to collaborate on gathering relevant information as they explore at the beginning of a creative learning task. The same collaborative habit could later be used to support the evaluate stage of the creative process through getting constructive feedback from peers on each other's creative work and how it might be improved further.

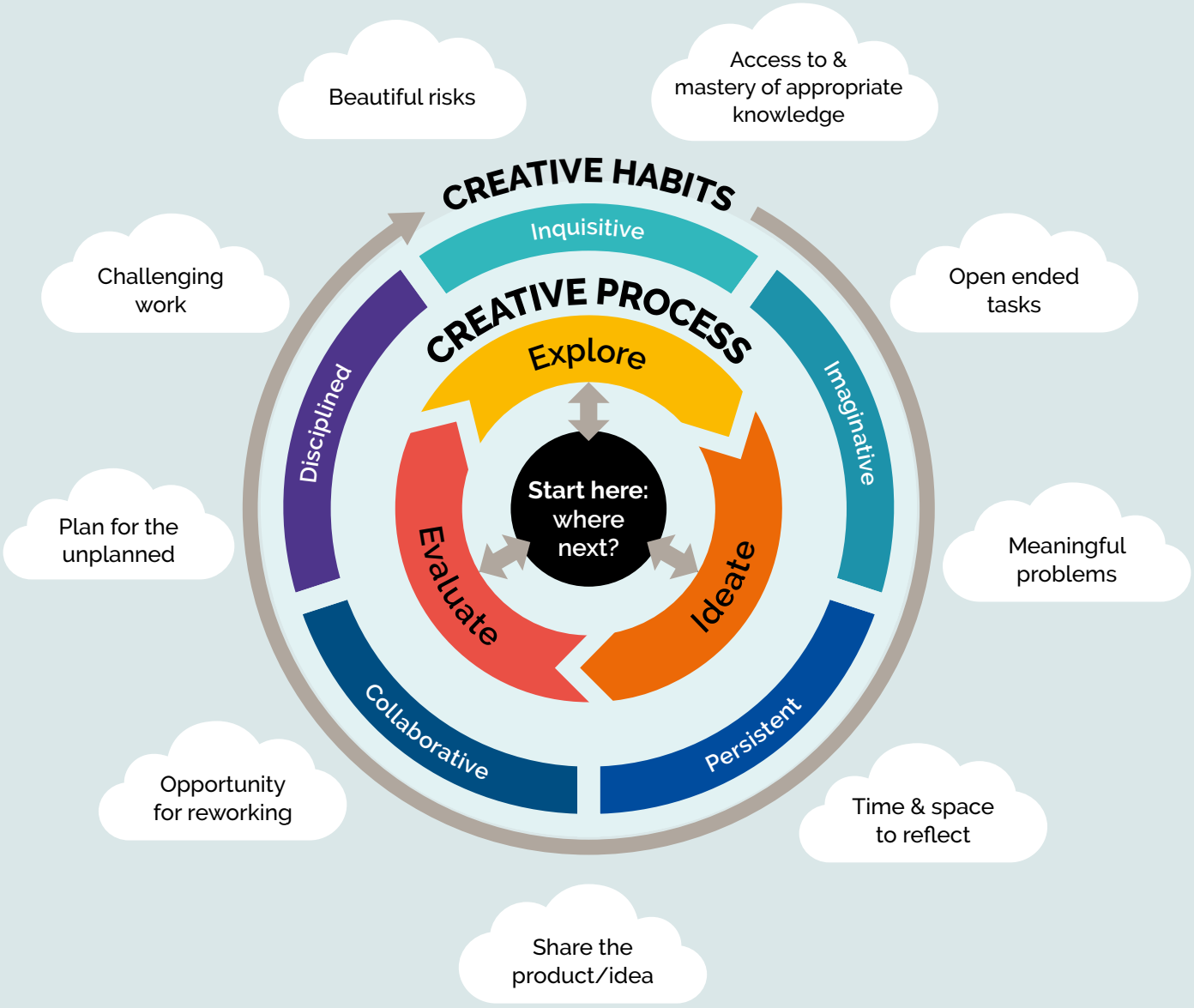
The final aspect of our Creativity Navigator focuses on the types of climate and task design that can support creativity to flourish in the classroom. For instance, tasks need to be personally meaningful, challenging, and open-ended, with children having some autonomy over aspect(s) of their learning. The classroom climate needs to provide psychological safety for children to take risks, make mistakes, learn from them and rework.

TO CITE THE CREATIVITY NAVIGATOR PLEASE USE:

Sowden, P.T., Warren, F., Seymour, M. Martin, C., Kauer, A. Spencer, E., Mansfield, S., Waite, J. (2025). A Creativity Navigator to Guide Teaching for Creativity: Implementation and Teacher Impacts in a Creativity Collaborative of Schools. *Journal of Creative Behavior*, 59(2), e70005. **https://doi.org/10.1002/jocb.70005**

To refer to this resource please cite: Williams, G. (2025). Save our Seas: A Case Example of Teaching for Creativity in Year 1 Design and Technology, Science and PSHE. Orchard Infant School, Dibden Purlieu, Southampton, UK: UWinAT Creativity Collaborative.

CREATIVITY NAVIGATOR



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KEY UNIT INFORMATION

Save our Seas

INTENDED FOR:
Year 1/ KS1

SUBJECT FOCUS:
DT, Science and PSHE

UNIT DURATION & FORMAT:
4 week unit

LEARNING OBJECTIVES/OUTCOMES:

1. **Learning objectives/outcomes:**
   - **a.** To design, make, and evaluate an upcycled plastic product for the classroom that is appealing, purposeful, and functional.
   - **b.** To explore the properties of plastic and understand that it never fully decomposes, recognising its impact on our society.
   - **c.** To learn about the 3 R's: Reduce, Reuse, and Recycle and how they can be used as strategies to help tackle plastic pollution.
2. **Creative Outcome:**
   To engage with the creative process of exploring, ideating, and evaluating to design and create unique and novel upcycled products that are useful for our classroom.

Get ready for an exciting adventure as the children tackle plastic pollution head-on! It all begins when their teacher shares 'treasures' from a weekend trip to the beach. But wait… not everything belongs there! Among the shells and seaweed are plastic bottles and crisp packets. Intrigued and concerned, the children will watch eye-opening videos showing how animals around the world, and even in our local area, are harmed by plastic pollution. Inspired to make a difference, the children will become creative problem-solvers, using their scientific skills and imagination to design and build amazing upcycled products for our school. The children were fully engaged in the process, and their scientific knowledge and DT skills soared! They explored the properties of plastic, learned DT joining techniques, and developed a deep PSHE understanding about caring for our planet. The experience left such a lasting impact that they continue to talk about it months later. Along the way, they discovered the 3 R's—reduce, reuse, recycle—and took on the mission to save our seas! Who knew making a difference could be so fun?

STEPS FOR SUCCESS:

1. **Build Strong Foundations:** Ensure the children have the knowledge and skills they need in DT before unleashing their creativity. Begin with focused sessions exploring and practicing joining techniques, encouraging them to experiment and refine their skills. Avoid rushing this crucial exploration stage, as it lays the groundwork for their success.
2. **Evaluate for Inspiration:** Allow time for the children to evaluate existing plastic products in the classroom. Guide them to consider what makes a product purposeful, functional, and appealing. This step will deepen their understanding of design principles and inspire thoughtful ideas for their own creations.
3. **Collaborate and create together:** Encourage the children to work collaboratively, sharing their ideas and combining their strengths. Support them in fusing their creative concepts to design innovative upcycled products that are both purposeful and impactful. Emphasise teamwork and collective problem-solving throughout the process.

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FULL UNIT DESCRIPTION

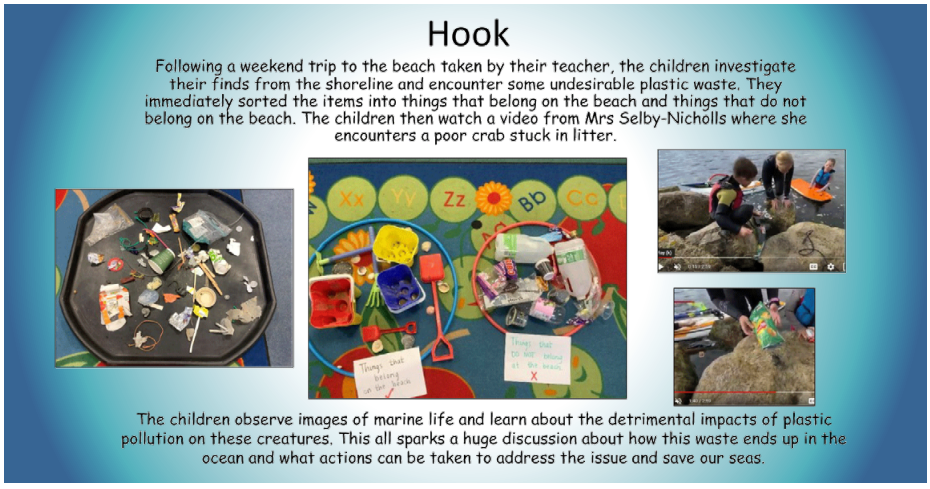
Save our Seas

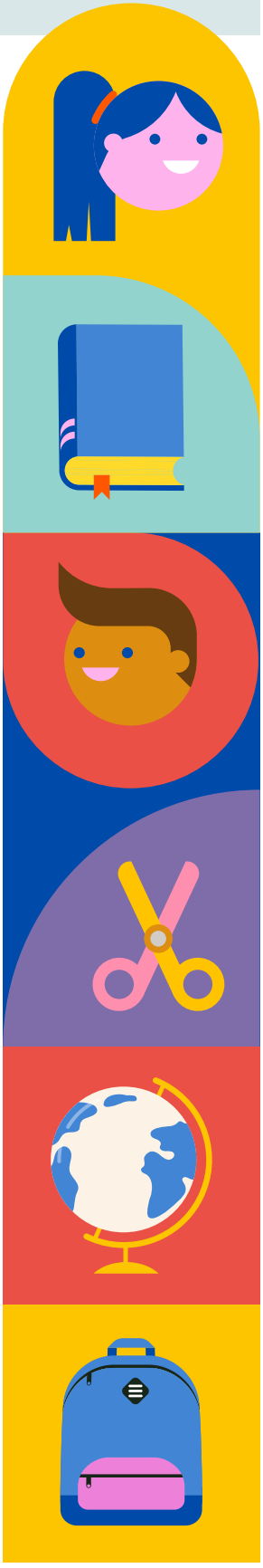
Introduction

This inspiring 4-week unit of work, titled *Save our Seas*, is an integrated project combining DT, Science, elements of PSHE, and English at its heart. The learning intentions for Science focused on helping the children understand the properties of plastic, its man-made origins, and how it takes years—if ever—to fully decompose. Through powerful video footage, the children saw first-hand how plastic pollution is devastating our world, contaminating our seas, and harming our oceans, wildlife, and ultimately, us. This knowledge led them to learn about the 3 R's—reduce, reuse, recycle—which sparked a sense of purpose and triggered the DT aspect of the project.

Motivated to make a difference, the children decided they wanted to save our seas and have a positive impact on our planet. In Design and Technology, they used their creativity and problem-solving skills to design, make, and evaluate innovative upcycled products, such as a pen-lid holder or a clock for maths. These creations gave the children an immense sense of pride as they realized they were helping to reuse plastic and prevent it from polluting our oceans. Alongside this, the children explored the story Somebody Swallowed Stanley, delving into the impacts of plastic pollution on marine life. They creatively engaged in a Talk for Writing style performance, writing riddle-style poems about the sea creatures affected by plastic. Their performances were powerful and emotional, helping them express the urgency of protecting our seas.

This brand-new project was carefully planned using the creative process of explore, ideate, and evaluate. The results were extraordinary—not only did the children acquire a deep understanding of the issue, but they also developed an embedded sense of responsibility for protecting our planet. The ultimate aim is that they grow up remembering just how precious our Earth is and knowing it is our shared responsibility to care for it.





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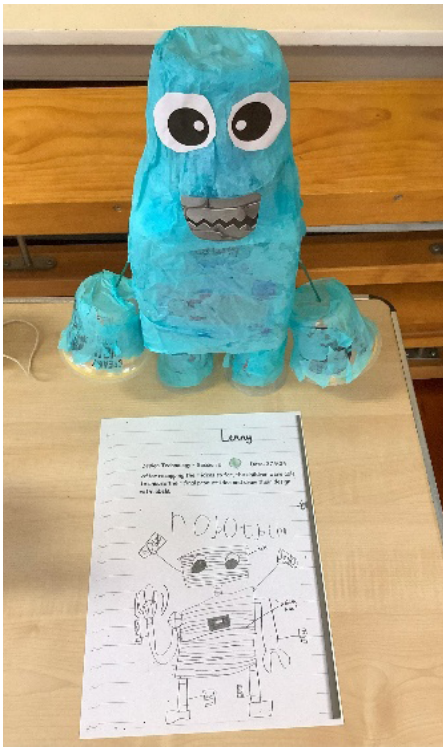
Explore Stage

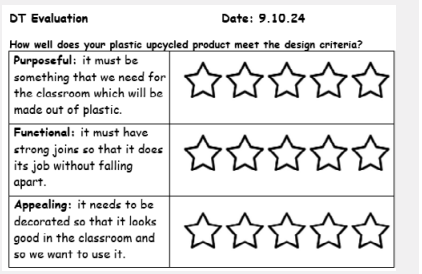
In the explore stage of the Save our Seas project, the children began by investigating the root of the plastic pollution problem. It all started when their teacher shared 'treasures' collected from a weekend trip to the beach—plastic bottles, crisp packets, and other plastic materials that clearly didn't belong there. The children were puzzled and began exploring why these items were on the beach in the first place. This led to a deeper exploration of the properties of plastic. They learned that plastic is a man-made material that never truly decomposes, taking around 500 years to break down, which was both shocking and eye-opening for the children.

As they delved further into the issue, the children explored the 3 R's—reduce, reuse, recycle—and began to understand their importance in tackling plastic pollution. At the same time, in Design and Technology, the children started to explore joining techniques—essential skills they would need for the next stage of the project: upcycling plastic and creating new, functional products for the classroom. This hands-on learning experience helped them connect their scientific knowledge with their creative skills, setting the stage for the exciting and impactful work ahead.



Ideate Stage

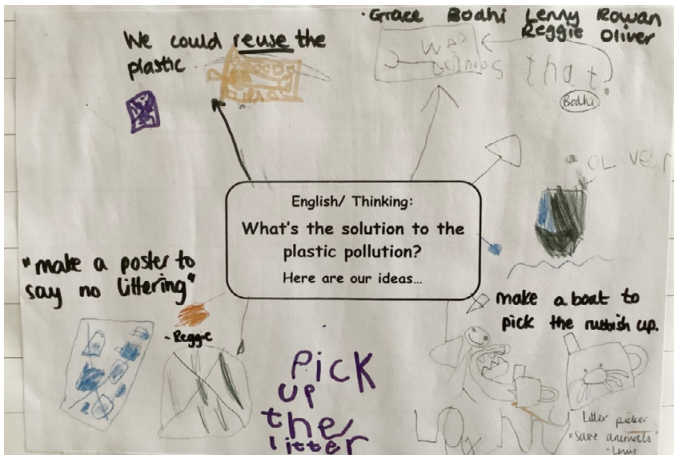
The ideate stage was where the children's creativity and imagination truly soared! Armed with all the knowledge they had gained in Science and Design and Technology, they were ready for the challenge: to reduce plastic pollution by upcycling existing plastic materials. The excitement was palpable as the children began brainstorming ideas for their upcycled products. The possibilities were endless—what could a plastic bottle become? What could a plastic bag transform into? As the children looked around their classroom, they realised that nearly everything was made from plastic, sparking even more ideas. They eagerly sketched their designs, bouncing ideas off each other and refining their creations. The designs grew and changed as they collaborated, slowly fusing and morphing until they were proud of the results. Together, they developed a design criteria to ensure that their creations would be both purposeful and functional. The children worked tirelessly, applying joining techniques, using hand drills and hole punches to bring their products to life. They showed resilience, teamwork, imagination, and discipline as they crafted their masterpieces. The atmosphere was electric with creativity, and it was clear that this stage was where the magic of the project truly came to life.

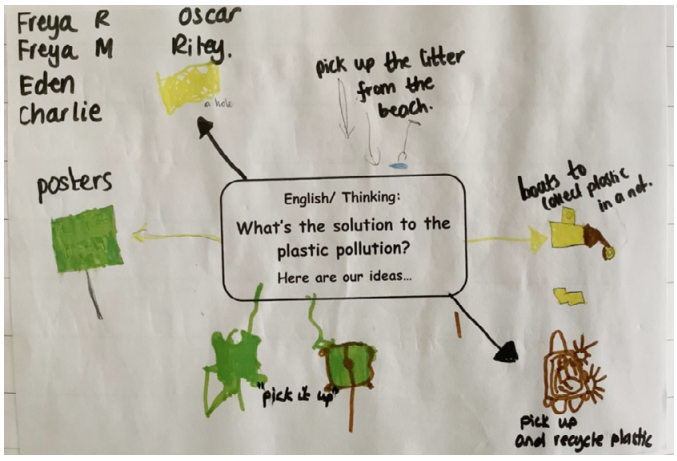


DT Evaluation Date: 9.10.24

How well does your plastic upcycled product meet the design criteria?

Purposeful: it must be something that we need for the classroom which will be made out of plastic.	☆☆☆☆☆
Functional: it must have strong joins so that it does its job without falling apart.	☆☆☆☆☆
Appealing: it needs to be decorated so that it looks good in the classroom and so we want to use it.	☆☆☆☆☆





Evaluate Stage

In the evaluate stage, the children stepped back and took a moment to reflect on their final products. It was time to consider how useful their creations really were. Did they meet the design criteria they had set? How creative and novel were the ideas? Most importantly, had they achieved their mission to reuse and upcycle plastic, preventing it from ending up in our oceans? Their reflections were thoughtful and insightful, as they carefully assessed whether their upcycled products truly fulfilled their purpose.

The children continued to evaluate and refine their designs, making adjustments and improvements where necessary. They also took time to reflect on the entire creative process and the habits they had developed along the way. They realised that although each product was different, all were equally amazing in their own unique way. Every child proudly explained how they had been imaginative, disciplined, and resilient throughout the project, bringing their vision to life while achieving their mission to reduce plastic pollution.

Some of the incredible products included a plastic bag that became a vibrant kite, a plastic bottle transformed into a pen-lid or glue-lid holder, and other creations like clocks, plant pots, and book covers to hold their pollution posters. The children's creativity knew no bounds, and their ability to turn waste into something useful and beautiful was nothing short of inspiring. Through this project, they not only learned important design and scientific skills but also developed a deep sense of responsibility and pride in their ability to make a positive impact on the world.

> **"The engagement was exceptional. Other adults walking into the classroom commented on how absorbed the children were."**

Challenges

The only challenge of this brand-new project was adjusting to its pace, as it hadn't been taught before. Sometimes, we needed to step back and allow time for the unexpected, whether that meant giving the children more time to explore, ideate, or develop specific DT skills. As we were learning alongside the children, we found ourselves adapting the timetable to better suit their needs. Being in the Autumn term of Year 1, they needed a little more time than anticipated to complete their projects. Despite these challenges, we remained flexible, reflecting and adjusting as we went along. We'll use this experience to refine our planning for next year.

Impact on learning

The impact of planning the Save Our Seas project, using the creative process, has been outstanding. The children learned the value of different ideas, realising that while 30 upcycled pencil pots might not be exciting, 30 unique upcycled products were truly inspiring. They developed essential DT skills around joining techniques and deepened their scientific understanding of materials, applying this knowledge to bring their creative visions to life. The impact on their learning was incredible, with every child independently upcycling their own project.

The engagement was exceptional. Other adults walking into the classroom commented on how absorbed the children were, so immersed in their work that they didn't even notice the visitors. Every child was on task, showcasing their knowledge beautifully, and what was most special is that our children with SEND were equally engaged and contributing just as much as their peers.

The long-term impact is what stands out most to me. The purposeful learning within this project made the children feel empowered to make a difference. While the project's scale may have been small, the sense of responsibility they developed to care for the planet was immense. Through this project, they learned that if they can think creatively and come up with a variety of solutions to tackle plastic pollution, our future might very well be in safe hands. By engaging with the creative process and teaching in this way, we're in the process of shaping a generation of creative thinkers who can confidently face and solve the challenges of tomorrow.

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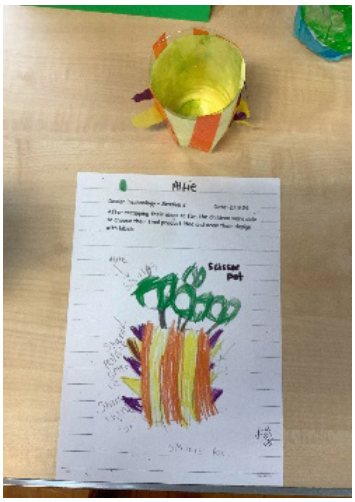
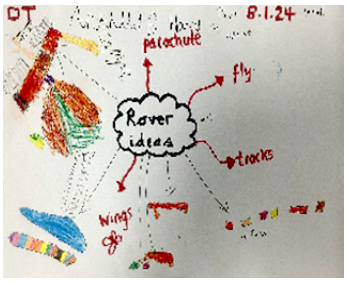
Supporting evidence of impact

The children were incredibly proud of their learning journey and the work they had produced. At the outcome of the project, they invited their parents in for a special presentation. Each child had documented a video explaining the damaging impact of plastic pollution on our seas and planet, a moment that proved deeply emotional for many parents. Some were moved to tears as they spoke about how their child had become eco-conscious, constantly talking about ways to make the world a better place. One particular parent commented: "This is what school should be all about, preparing the next generation to take care of our planet. Thank you, that was a wonderful video and it reduced me to tears".

The children shared their excitement about their upcycled products and how they would be used in the classroom, proud to see their creations come to life. Even other staff members at the school were amazed by the depth of understanding the five-year-olds had about plastic pollution and the ways to tackle it. It was truly inspiring to see how such young children had not only grasped the concepts but were already thinking about how they could make a positive impact on the planet.





FINAL REFLECTIONS:

Reflecting on this project, I am truly proud of the process and the impact it had on the children. It was wonderful to plan a unit of work from scratch that fully embraced the creative process and incorporated key habits of creativity. Teaching in such a creative way, especially to a class of 5-year-olds, demonstrated that every child has the capability to be a creative thinker. The more we spoke about creativity and the possibilities it holds, the more the children became aware of their own potential.

Teaching for creativity in this project gave the children the time and freedom to design products they considered functional and meaningful for our classroom. While the academic learning in science and DT was invaluable, I believe the real power of this project lay in the opportunity to explore and address a real-world issue—plastic pollution. By tackling this delicate subject, the children didn't just learn about the problem; they actively sought solutions and took ownership of their role in minimising it.

These are the kinds of skills that children will need to protect our future and our planet. By teaching in this creative, problem-solving way, we are equipping them with the tools to think critically and act responsibly. It was a truly inspiring experience to see the children engage so deeply with this mission, and I feel confident that the lessons learned in this project will stay with them as they continue to grow and make a difference in the world.

CONTACT US:

uwinatcreativitycollaborative@winchester.ac.uk
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