

Macrocosm /Microcosm

Science and Visual Arts



L3

The Carpet was full of life, but it did not know it was alive. It could be, but it could not think. It did not even know what it was.

**Terry Pratchett,
The Carpet People**

This is an interesting activity that utilises story-telling and visualisation to connect kids to the idea of the ecosystems that surround us.

It involves learning around photography, drawing, science and descriptive-imaginative writing so gives several and varied opportunities for formative and summative assessment.

It's also quite a bit of fun and gets kids to take their learning outside!

Method

① Setting the scene

Read two chapters of 'The Carpet People' by Terry Pratchett to the class without giving them any preamble about the location/setting (might be good to wrap the book in paper as the title is a bit of a clue!).

Set them up with the challenge of being the first to identify the fact that the story is set in a carpet in a house.

If the students show an interest in the story, make it this term's 'reading to book'.

② Concepts

Discuss and scaffold the idea of ecosystems with the students. From the Biosphere itself right down to the microbes that live in water.

Brainstorm various small ecosystems that the students have seen — if you have a fish tank in the room, identify that as an ecosystem that needs certain conditions so that the inhabitants are healthy.

③ Fieldwork

Take the students outside into the wider environment and have them pair up to find ecosystems in the school. This may need a bit of scaffolding.

Once they have found one, give them an opportunity to photograph the environment starting with a wide view, getting gradually closer and ending with the smallest view that the photo-device is capable of. See examples...

Fungi

(A)



(B)



(C)



(D)



Compost

(A)



(B)



(C)



(D)



Lawn-garden

(A)



(B)



(C)



(D)



④ Ecological empathy!

Visual Arts — Have the students include themselves in the space by:

- Drawing themselves into one of the photos.
- Using photo editing software to put a photo of themselves into the picture.
- Using collage to incorporate themselves or the idea of themselves into the photo.

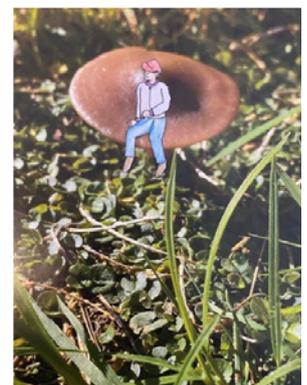
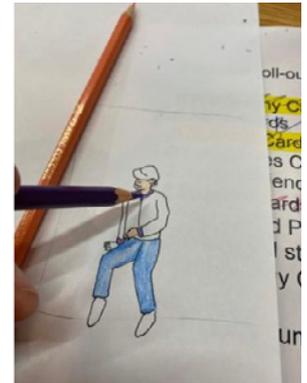
Science — Use visualisation to get the students to consider what would surround them if they were small enough to be in that ecosystem.

- What plants surround them?
(Research opportunity)
- What creatures surround them?
(Research opportunity)
- What challenges and dangers would they potentially face?
- What does the environment;
Look like?
Sound like?
Feel like?
Sound like?
Taste like?
- Talk around the idea of what a day in that place would be like.

English — Students craft a piece of creative writing around the idea of “A Day in the Life of Me in the Compost Heap” (for instance)

- Edited and crafted.
- Published and shared.

Pictures that the students created of themselves in the ecosystems can serve as the illustrations to accompany the text.



Equipment & Materials

Paper

Eraser

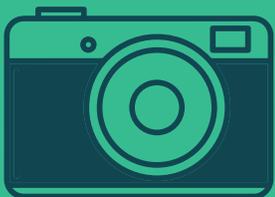
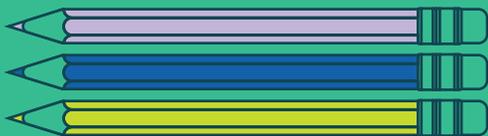
Pencil sharpener

Scissors

Quality coloured pencils —
strong and vibrant colours

Camera

Computer/Printer (optional)



Curriculum links

Science — Living world

Life processes

Recognise that there are life processes common to all living things and that these occur in different ways.

Ecology

Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.

English

Processes and strategies

- uses a developing understanding of the connections between oral, written, and visual language when creating texts
- creates a range of texts by integrating sources of information and processing strategies with developing confidence
- seeks feedback and makes changes to texts to improve clarity, meaning, and effect
- is reflective about the production of own texts: monitors and self-evaluates progress, articulating learning with growing confidence.

Purposes and audiences

Show a developing understanding of how to shape texts for different purposes and audiences.

- constructs texts that show a growing awareness of purpose and audience through careful choice of content, language, and text form
- conveys and sustains personal voice where appropriate.

Visual Arts

Developing practical knowledge

Explore some art-making conventions, applying knowledge of elements and selected principles through the use of materials and processes.

Developing ideas

Develop and revisit visual ideas, in response to a variety of motivations, observation, and imagination, supported by the study of artists' works.

Communicating and interpreting

Describe the ideas their own and others' objects and images communicate.