



Exploring Creative Skills in Key Stages 3 and 4

Dialogue and Collaboration in Science...

Dialogue, questioning, communication and collaborating in both verbal and embodied ways.

- Use scientific vocabulary to pose and respond to questions to find and solve problems.
- Work individually, collaboratively and part of a community to expand their knowledge about the world.
- Negotiate differences and respond appropriately.

For Example:

When writing a method for a scientific investigation.

When measuring height and shoe size to plot a graph of continuous and discontinuous variation.

When choosing the best method to separate mixtures.

Honing and Developing an Idea in Science...

Develop creative ideas, incorporating self-reflection, development of techniques and understanding of the rules and persistence.

- Analyse, evaluate and consider alternatives to develop and improve ideas.
- Understand rules and consequences being persistent and tolerant.
- Reflect on the results from scientific investigations to develop techniques.

For Example:

When using preliminary investigations.

When using variables to design valid investigation throughout KS3.

When planning and evaluating conclusions.

Empowered Action in Science...

Foreground pupils' own agency in creative actions, the ability to take risks and question accepted ideas, be immersed and the act on ideas.

- Take ownership and act on their ideas.
- With support take creative risks and make mistakes to develop ideas.
- Be self-motivated and immersed in an activity.

For Example:

When realising plans for scientific investigations throughout KS3.

When investigating the best mix of chemicals to use to design a handwarmer.

When taking regular measurements of temperature when investigating the melting point of a substance.



Being Imaginative and Playful in Science...

Use imagination, improvise playfully, and generate and try out possibilities with the ability to go beyond an understanding of 'what is' to consider 'what might be.'

- Use their imagination to go beyond with curiosity.
- Consider possibilities within a context.
- Purposefully play with possibilities and try new things out.

For Example:

What an organism might look like in different environments and what adaptations it might have.

When investigating the speed of a toy car travelling down a ramp.

When investigating the speed of different playdough shapes in wallpaper paste.



Generating Ideas that Matter in Science...

Combine innovation with critical attention to the consequences of ideas, the ethical impact of actions and understanding diverse values.

- Explore, generate and combine ideas that are new to them.
- Consider ethical consequences.
- Understand diverse values and how they matter differently.

For Example:

When planning scientific investigations involving insulating a model house to reduce sound pollution.

When evaluating renewable and non-renewable electricity generation.

When evaluating methods of contraception.

