Energy Heroes

Maths – Radiator foils

Key Question	How can we make the most of our radiators?
Success Criteria	UKS2 I can describe, sketch and draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons. I can investigate area and perimeter. Drawing to scale
	LKS2 I can investigate area and perimeter. Measuring
	KS1 Measuring Naming 2D shapes
Resources	Tape measures pencils PVA glue foils scissors

Whole class teaching:
Introduce the lesson using the PowerPoint, discussing the aim of the project and the aims for the session.
Starter, to be created by the teacher, depending on age and ability of pupils. Some suggestions; naming 2D shapes, identifying 2D shapes from parts or from descriptions, identifying best unit of measurement for different objects, or converting measurements, e.g. cm to m, mm to m etc.

Paired talk: Pairs discuss a selection of words from the vocabulary slide and share understanding of definitions. Then read through questions and write down their answers on a white board. Discuss answers with another pair, then regroup to share to whole class.

Safety:
All read through the next slide of questions, discussing their responses, including keeping safe. If the radiator is hot they will need to find a way of measuring without directly touching the surface.

Group activities: Pupils work in small groups to measure different radiators. They then transfer these measurements to the foils (paper patterns could be used to avoid mistakes) and cut the pieces to fit. Fouls must then be glued behind the radiators.

Extension: Some children could work in a group with an adult. Some children could record estimates for area and perimeter of radiators in different rooms and go to the locations to measure them, returning to class to cut the foils.

Plenary:

- How do you think the foils will affect the temperature of the classroom?
- How will this affect the schools use of energy?
- **Why is this important in terms of climate change?**

How does this relate to global warming?
Ask the children to discuss how this experiment relates to global warming.

Key questions:
What is the insulating layer that protects us by absorbing some of the sun's damaging ultraviolet rays?
What is the insulator that is keeping too much heat from the sun in our atmosphere?