

Physics - Key Stage 3 - Energy

# Lesson 7: Radiation

Mrs Evans



# Independent practice: answer the questions

1. What process does the sun use to heat the Earth?
2. How is radiation different to conduction and convection?
3. What can we use to observe radiation?
4. What does emit mean?
5. What does absorb mean?



# Independent practice: complete the method

1. Boil the \_\_\_\_?\_\_\_\_, so the water is at 100°C
2. Fill each \_\_\_\_?\_\_\_\_ (1. matt \_\_\_\_?\_\_\_\_ and 2. shiny \_\_\_\_?\_\_\_\_) with 200 ml of water
3. Position the infrared \_\_\_\_?\_\_\_\_ 5 cm away from beaker 1
4. Record the \_\_\_\_?\_\_\_\_
5. Position the infrared thermometer 5 cm away from beaker 2
6. Record the temperature

Only use  
boiling water  
with adult  
supervision



# Analysing our results: calculating a mean

Surface type	Temperature (°C)			
	Attempt 1	Attempt 2	Attempt 3	Average (mean)
<b>Black matt</b>	59.0	61.6	58.7	
<b>Shiny silver</b>	34.5	36.2	33.0	

To find a mean: add up all your values and divide by the number of values you added



# Independent Practice:

## write a conclusion using the scaffold

The \_\_\_\_?\_\_\_\_ surface emitted more radiation.

I know this because \_\_\_\_ ? \_\_\_\_

The temperature for this surface was \_\_\_\_ ? \_\_\_\_ whereas the \_\_\_\_ ? \_\_\_\_ surface had a temperature of \_\_\_\_ ? \_\_\_\_

Surface type	Temperature (°C)
	Average (mean)
<b>Black matt</b>	<b>59.8</b>
<b>Shiny silver</b>	<b>34.6</b>



# **Independent Practice:** **Choose a beach volleyball** **uniform colour and explain** **your choice**

The uniform should be the colour \_\_\_\_ ? \_\_\_\_

because \_\_\_\_ ? \_\_\_\_

