Part 3 What is heat? What is temperature?

Activity No	Activity Name	Lesson type	Activity Description
3.1	What is heat?	Engage & Explain Digital Medium	Students are introduced to a range of phenomena that relate to the concept of heat. They then watch a video about Rumford's discovery that heat was a form of energy that could be generated through friction. Students explore their own ideas and formulate their own hypotheses as they progress through the activity.
3.2	Keeping your drink warm	Engage & Explain Hands-on Medium	Students explore different ways of keeping a hot drink warm, and relate these to conduction & convection.
3.3	Water is hard to heat	Explore, Explain & Elaborate Hands-on Long	Students explore the relationships between heat, temperature, volume and heat capacity, particularly of water.
3.4	Feeling hot and cold	Explore & Explain Hands-on & Digital Medium	Students will learn about the importance of conduction in how hot or cold surfaces feel.
3.5	Heating water with light	Explain Digital Medium	Student will conduct a laboratory experiment to determine whether the colour of a surface affects the heating effect of light.
3.6	Solar energy	Explore, Explain, Elaborate & Evaluate Hands-on & Digital Long	Students design and test a solar oven for heating water. They will follow a basic plan to design a solar collector that will collect and focus as much light on a container of water to maximise heating.

3.7	**What is sunlight?**	Explore & Explain	Students will use a light box to visualise the spectrum of light. ***Notebook*** questions draw together their ideas about light and colour.	
		Hands-on & Digital		
		Medium		
3.8	**Cyclones**	Explain & Elaborate	Students explore digital resources and apply knowledge to explain how the sun's energy drives a cyclone.	Optional
		Digital		
		Medium		