Mood Rings – Syllabus

ALL GRADES – SCIENCE INQUIRY SKILLS

QUESTIONING AND PREDICTING: Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge.
PLANNING AND CONDUCTING: Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed. Measure and control variables, select equipment appropriate to the task and collect data with accuracy.
PROCESSING AND ANALYSING DATA AND INFORMATION: Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate. Summarise data, from students' own investigations and use scientific understanding to identify relationships and draw conclusions based on evidence. The students learn how to use develop a method that is safe, and follow that method to achieve reliable results. Students will use digital technology to record their results and produce the graph
EVALUATING: Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements.
COMMUNICATING: Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate.

YEAR 8

Properties of the different states of matter can be explained in terms of the motion and arrangement of particles
Chemical change involves substances reacting to form new substances

- identifying the differences between chemical and physical changes

Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems

- investigating different forms of energy in terms of the effects they cause, such as gravitational potential causing objects to fall and heat energy transferred between materials that have a different temperature
- recognising that heat energy is often produced as a by-product of energy transfer, such as brakes on a car and light globes

YEAR 9

Energy transfer through different mediums can be explained using wave and particle models

- discussing the wave and particle models and how they are useful for understanding aspects of phenomena
- exploring the properties of waves, and situations where energy is transferred in the form of waves, such as sound and light

	Demonstrated inquiry	Prescribed inquiry	Structured inquiry	Guided inquiry	Open inquiry
Questions	No question	Provided question	Sharpened question	Learner selects	Learner poses questions
Plans	No planning	Provided procedure	Discussion with teacher	Guided during planning	Learner determines plans
Conducts	Teacher conducts	Conducting and recording method told	Sharpened plan and conduct	Guided during conducting and recording	Learner conducts and records
Analyse	Teacher analyses	Analysis method told	Discussed analysis	Guided analysis	Learner analyses data studying trends
Problem Solve	No problem solving	Teacher provides reasoning and links	Discussed reasoning and conclusion	Guided reasoning and formulating conclusion	Learner reasons to formulate conclusions
Communicate	No conclusion	Teacher writes conclusion	Student writes	Guided justification and findings	Learner justifies findings and conclusions