Chemical Sciences – Year 1 – Term 3 – Changing Materials

Australian Curriculum Achievement Standard - ***Students describe objects and events that they encounter in their everyday lives and describe changes to things in their local environment.***

Science Understanding

- Every day materials can be changed in a variety of ways.

Science Inquiry Skills

- Pose and respond to questions, make predictions about familiar objects and events.
- Participate in guided investigations to explore and answer questions, compare observations with predictions.
- Manipulate objects and make observations of what happens using our senses.
- Explore different ways of solving science questions through guided discussion.
- Sort information and classify objects based on easily observable characteristics with guidance.
- Use informal measurements to collect and record observations, using digital technologies as appropriate.
- Use a range of methods to sort, record and share information - drawings and provided tables.
- Jointly construct simple column graphs and picture graphs to represent class investigations.

Science as a Human Endeavour

- Science involves observing, asking questions about, and describing changes in, objects and events.
- Jointly constructing questions about the events and features of the local environment with teacher guidance.
- Recognising that descriptions of what we observe are used by people to help identify change.

Learning Intentions	Exploring through Inquiry	Success Criteria
CHANGES FROM HEATING & COOLING Students observe a melted icy pole.	Students observe the change and discuss what may have happened for the icy pole to melt.	Formative Assessment - explain the reasons for the change, predict the time taken to change, can it be reversed?
Students experience the properties of cooked spaghetti.	Read a descriptive poem about spaghetti and investigate the properties of some cooked spaghetti.	Create an annotated drawing using the cooked spaghetti and use words to describe the properties of cooked spaghetti.
Students explore the properties of uncooked spaghetti and build a tower capable of holding a large marble	Students experiment with strong shapes to create towers using uncooked spaghetti and marshmallows that are able to hold a large marble	Able to design a tower capable of holding a large marble using uncooked spaghetti and marshmallows.
Students investigate whether melting chocolate is a reversible change and whether white chocolate is different to milk chocolate in its ability to change back to the same substance.	Students observe and compare the time taken to melt white & milk chocolate & whether there is any difference in both types of chocolate when cooled.	Able to draw conclusions about the comparison of white and milk chocolate and determine whether melted chocolate can revert back to a solid.
INQUIRY - MANIPULATING MATERIALS Students explore the meaning of the words bend, stretch, and twist, as they investigate what happens to different materials when these pressures are applied.	Students predict what happens to a range of materials they are investigating and how they could manipulate different materials to change their shape.	Makes plausible predictions about changing everyday materials. Observes when an object changes shape as a result of manipulation, records observations of changes.
STEM ACTIVITY Students research, discuss and record different methods of cleaning up an oil spill in water.	Students design a method to clean an oil spill that they have made on different materials. They must use the same method for salt water and fresh water and for each object.	Able to design a method with teacher assistance to clean an oil spill, observe how it may affect different materials, how it may happen in a real world situation and record observations.