Science Learning Grid: Material World

Outcomes:

ST3-6MW-S explains the effect of heat on the properties and behaviour of materials

ST3-7MW-T explains how the properties of materials determines their use for a range of purposes

ST3-1WS-S plans and conducts scientific investigations to answer testable questions, and collects and summarises data to communicate conclusions

ST3-2DP-T plans and uses materials, tools and equipment to develop solutions for a need or opportunity

Writing	Knowing	Understanding	Applying	Analysing	Creating	Evaluating
Verbal I enjoy reading, writing & speaking	Make a list of 20 things in your house, being a range of solids, liquids, gases.	Research and write down 3 scientific facts about 1 gas, 1 liquid and 1 solid from your list.	With a diffuser, spray or scented candle found in your house, read and record all ingredients in this item.	Investigate how steam is created, observing your parent's kettle when THEY use it. Record this.	Create a story where one day you woke to realise every solid you touch turns to liquid. Explain how hard life would be with no Solid objects that you use daily!	Create an argument for the importance of water in our lives. What are all the things we use it for?
Mathematical I enjoy working with numbers & Science	Classify your above list into liquids, solids and gases.	Research the number of liquids in your fridge, how are they different from each other? (Texture, Ingredients, colour etc).	Construct a simple map of your bedroom from an aerial view, only using 2D shapes to represent all solids.	Choose 3 solids in your kitchen, measure and record all dimensions with a basic diagram.	Using tin foil or playdough, create a 'scaled-down' model of 3 solid items in your house.	Complete a ranking system of the 10 most essential solid items in your house. #1 is most important, #10 is least important. Justify each choice.
Visual/Spatial I enjoy drawing & visualising	Draw one liquid, solid and gas from your above list.	Viewing from directly above, sketch several of your items from this angle.	Create a labelled diagram of an interesting solid item in your house.	Visualise yourself in a wet rainforest. Draw what you see, include lots of colour /detail.	Create a flip-book of an ice cube melting. Each page is slightly different, the more pages, the better!	Draw what your idea of Australia would look like if we didn't have rain for 10 years.

Kinaesthetic I enjoy doing hands-on activities	Game – Play charades with a sibling, parent or friend, acting out several of your items in the list.	Help your parent with mopping an inside floor, take note of the evaporation process and question how they would speed this up.	Place an ice cube/frozen water in a cup on a plate in the sun, check and record every 15 minutes on what is occurring to its solid state.	Perform the same experiment to the left, but with the ice cube/plate in your fridge. Checking every hour, compare both results and record this.	What liquids are used to wash dishes in the kitchen? Perform this every night for one week and take note of how particular liquids react to create foamy bubbles.	Look online or speak to a parent on their knowledge of a cultural "rain dance", develop your own routine dance to perform on the next cloudy day.
Musical I enjoy listening to music	Learn and sing a song about the rain. Ask your parent or the internet for ideas.		Create percussion rhythms to accompany your song. Clap, stomp and tap to the beat.		Create a list of rhyming words to accompany your list of 20 items. Use these to create a rhyming poem..	
Intrapersonal I enjoy working by myself	Write a diary entry on what you already know about liquids, solids and gases. How do we tell them apart?	When you take a bath or shower, observe the steam from the hot water, where does it travel and why? Write your observations.	You discovered a close planet with a water source. What do you say to NASA? Develop a conversation script.	Analyse the importance of solids, liquids and gases in our lives. Write a few sentences to explain.	Create a dance or a roll-play of ice slowly changing into water as it melts away.	Justify whether Australia or Beijing has higher air-pollution? Write down what you think increases this.