Australian Curriculum V9.0 Alignment • Year 5 • Communicating matters

**Year 5**

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| **Science understanding core concept:** The physical properties of substances are determined by their structure at a range of scales. |
| **Sub-strand** | **Content descriptor** | **AC code** | **Achievement Standard** | **How the sequence addresses this content** |
| SHE: Nature and development of science | Examine why advances in science are often the result of collaboration or build on the work of others. | AC9S5H01 | Describe examples of collaboration leading to advances in science, and scientific knowledge that has changed over time. | Build on their previous work identifying the properties of gases by investigating to consider if these properties can be changed, and if temperature affects them. (Lesson 5) |
| SHE: Use and influence of science | Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions. | AC9S5H02 | Identify examples where scientific knowledge informs the actions of individuals and communities. | Explore real-life examples by identifying what happens when heating and cooling gases. (Lesson 5) |
| SU: Chemical sciences | Explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles. | AC9S5U04 | Relate the particulate arrangement of solids, liquids and gases to their observable properties. | Investigate to explore and name the properties of solids, liquids and gases. (Lessons 2, 3, 4 and 5)Role-play particles arrangements in solids, liquids and gases (Lesson 6), and consider what the arrangement of particles looks like in substances such as oobleck, sponges and soft drink. (Lessons 7, 8) |
| SI: Questioning and predicting | Pose investigable questions to identify patterns and test relationships and make reasoned predictions. | AC9S5I01 | Plan safe investigations to identify patterns and relationships and make reasoned predictions.   | Plan exploratory and fair-test investigation (Lessons 2, 3, 4, 5), with reference to safety (Lesson 5). They make predictions about the outcomes of investigations. (Lessons 2, 3, 4, 5) |
|  SI: Planning and conducting  | Plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place. | AC9S5I02 | Identify risks associated with investigations and key intercultural considerations when planning field work. They identify variables to be changed and measured. | Plan and conduct a fair-test investigation to answer the question “What happens to air at different temperatures”, with reference to appropriate safety measures. (Lesson 5) |
| SI: Planning and conducting | Use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate. | AC9S5I03 | Use equipment to generate data with appropriate precision. | Observe and record the results of scientific investigations in using data tables, measurements, labelled diagrams, photographs and video. (Lessons 2, 3, 4, 5) |
| SI: Processing, modelling and analysing | Construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships. | AC9S5I04 | Construct representations to organise data and information and describe patterns, trends and relationships. | Record the results of scientific investigations in using data tables, measurements, labelled diagrams, photographs and video. (Lessons 2, 3, 4, 5)Develop models of the arrangement of particles in solids, liquids and gases through role-play and labelled diagrams and use them to articulate their thinking. (Lessons 6, 7, 8) |
| SI: Evaluating | Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions. | AC9S5I05 | Compare their methods and findings to those of others, identify possible sources of error in their investigation, pose questions for further investigation and draw reasoned conclusions. | Share, compare and question findings of investigations, participating in discussion to reach consensus. (Lessons 2, 3, 4, 5, 6) |
| SI: Communicating | Write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate. | AC9S5I06 | Use language features that reflect their purpose and audience when communicating their ideas and findings. | Represent their understanding of the particle model through labelled diagrams. (Lesson 6)Use representation and modelling to articulate their thinking (Lessons 1, 6, 7, 8)Compose texts in multiple modalities to communicate science ideas. (Lessons 7, 8) |