Organisation of content into year levels is advisory. Teachers will continue to make professional judgements about when to introduce content based on students' prior learning and achievement.

National Consistency in Curriculum Outcomes, Statements of Learning*

Middle Childhood: Science/Investigating – *Students investigate to answer questions about the natural and technological world, using reflection and analysis to prepare a plan; to collect, process and interpret data; to communicate conclusions; and to evaluate their plan, procedures and findings.*

Developmental progression of sequenced investigating skills:

During this phase students should be taught to develop the following skills of Investigating, across the four conceptual outcomes: Earth and Beyond, Energy and Change, Life and Living, Natural and Processed Materials.

- Safety, responsibility and a caring manner are essential when conducting investigations.
- When using animals, refer to *Guidelines for the care and use of animals in Western Australian schools and agricultural and TAFEWA colleges* and complete relevant documentation.

Year 4	Year 5	Year 6	Year 7
Planning: Preparing for an investigation			
• to individually reflect on current understandings of a topic *(eg group brainstorming, shared concept maps)*	• to individually reflect on current understandings of a topic *(eg KWL chart)*	• to individually reflect on current understandings of a topic *(eg using graphic organisers for brainstorming, concept maps)*	• to individually reflect on current understandings of a topic *(eg devising own brainstorms, concept maps)*
• to gather information about a topic to be investigated	• to gather information about a topic to be investigated	• to gather information about a topic to be investigated from a range of sources	• to gather information about a topic to be investigated from a range of sources
• to use ICT for investigating	• how to search, select and organise information and/or data using ICT* (ICT)	• to search, select and organise information and/or data using ICT *(eg use the internet to search a topic)*	• to use ICT as a learning tool to support the investigation process* (ICT) *(eg use spreadsheets to display data in charts)*
• to use teacher generated questions that can be investigated *(eg What are we trying to find out?)*	• to identify questions that can be investigated* (Science)	• to identify questions that can be investigated* (Science)	• to formulate, clarify and refine a question that forms the basis of an investigation* (Science) *(eg What are we going to investigate?)*

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**National Consistency in Curriculum Outcomes, Statements of Learning*

Developmental progression of sequenced investigating skills:

Year 4	Year 5	Year 6	Year 7
Planning: Preparing for an investigation (continued)			
• to predict the outcomes of an investigation *(eg What do we think will happen and why?)*	• to predict the outcomes of an investigation based on prior experience and knowledge* (Science) *(eg What do we think will happen and why?)*	• to predict the outcomes of an investigation based on prior experience and knowledge *(eg What do we think will happen and why?)*	• to consider the topic, and make predictions suitable for investigating* (Science) *(eg What do we think will happen and why?)*
• to follow the required steps for planning and using the equipment *(eg What are we going to do? What do we need to do it?)*	• to follow the required steps for planning and discuss what equipment to use *(eg What are we going to do?)*	• to follow the required steps for planning and discuss what needs to be done, what equipment to use and how to use the equipment *(eg What are we going to do? What do we need to do it?)*	• to plan and devise what needs to be done, what equipment to use and how to use the equipment *(eg What are we going to do? What do we need to do it?)*
• identify aspects of an investigation that make comparisons fair (*eg What things can influence the investigation?)*	• to identify aspects of an investigation that make comparisons fair* (Science) *(eg What things can influence the investigation?)*	• to identify variables that can influence an investigation and plan for controlling all but one of the variables	• to plan a fair test or comparison, involving changing only one variable (independent variable) and observing or measuring the effect (dependent variable) while keeping other factors the same* (Science) *(eg How will we make it a fair test?)*
		• suggest ways of defining the properties to be tested?	• suggest ways of defining the properties to be tested (defining operationally) *(eg What does "best" mean when investigating paper planes? Is it time in the air or the distance travelled?)*
Conducting: Collect and record information relevant to the investigation			
• use appropriate equipment provided by the teacher	• use appropriate equipment	• use appropriate equipment	• select and use appropriate equipment* (Science/ICT)

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**National Consistency in Curriculum Outcomes, Statements of Learning*

Developmental progression of sequenced investigating skills:

Year 4	Year 5	Year 6	Year 7
Conducting: Collect and record information relevant to the investigation (continued)			
• to identify the need for careful observations and descriptions	• to make careful observations and descriptions* (Science)	• to observe, describe, check and repeat observations where appropriate	• explain the purpose of using repeat trials* (Science)
• to observe, describe and measure with reasonable accuracy	• to observe, describe and measure with reasonable accuracy	• to observe, describe and measure with reasonable accuracy and confirm estimations during investigations	• to observe, describe and measure with reasonable accuracy and confirm estimations during investigations
• collect and record data using a variety of forms such as diagrams, tables and science journals *(eg diagrams to be labelled with a title and depicting the main features)*	• collect and record data using a variety of forms such as diagrams, tables, written work, science journals, graphs, tallies and models* (Science) *(eg diagrams to be labelled with a title and depicting the main features)*	• collect and record data using a variety of forms such as diagrams, tables, written work, science journals, graphs and tallies *(eg diagrams to be labelled with a title and depicting the main features)*	• collect and record data using a variety of forms such as diagrams, tables, written work, science journals, graphs and tallies, and to use appropriate scientific terminology* (Science/ICT) *(eg diagrams to be labelled with a title and depicting the main features)*
Processing data: How to process and translate information to find patterns and draw conclusions			
• strategies for organising information *(eg group, list, tallies, drawings)*	• strategies for organising information *(eg sort, group, list, tables, drawings, ICT)*	• strategies for organising information *(eg sort, group, list, tables, drawings, ICT, Venn diagrams)*	• strategies for organising information *(eg sort, group, list, tables, tallies, drawings)*
• to sort and arrange events, facts and ideas in sequence	• to sort and arrange events, facts and ideas in sequence	• to sort and arrange events, facts and ideas in sequence	• to sort and arrange events, facts and ideas in sequence
• to construct graphs to record findings (conventions exist for creating and labelling graphs and tables: all graphs and tables must have a title and labelled axes which may be horizontal or vertical including the units of measurement)	• to construct graphs and tables to record findings (conventions exist for creating and labelling graphs and tables: all graphs and tables must have a title and labelled axes which may be horizontal or vertical including the units of measurement)	• to construct graphs and tables to record findings (conventions exist for creating and labelling graphs and tables: all graphs and tables must have a title and labelled axes which may be horizontal or vertical including the units of measurement)	• to construct graphs and tables to record findings (conventions exist for creating and labelling graphs and tables: all graphs and tables must have a title and labelled axes which may be horizontal or vertical including the units of measurement)

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**National Consistency in Curriculum Outcomes, Statements of Learning*

Developmental progression of sequenced investigating skills:			
Year 4	**Year 5**	**Year 6**	**Year 7**
Processing data: How to process and translate information to find patterns and draw conclusions (continued)			
	• to extract and interpret data presented in tables and graphs	• to extract and interpret data presented in tables and graphs	• to extract and interpret data presented in tables and graphs
• to describe events	• to describe events, features or patterns	• to identify and describe events, features or common patterns	• to identify and describe events, features or common patterns
• suggest reasonable explanations of observations	• suggest reasonable explanations of observations	• suggest reasonable explanations of observations	• suggest reasonable explanations of observations
• to use teacher-directed formats for recording	• to use teacher-guided formats for recording	• to use teacher-guided formats for recording	• to use teacher-guided formats for recording
• to represent ideas and create imaginative responses to problems and tasks using ICT *(eg What happened? Did the results match the initial investigative question?)*	• to make reasonable explanations, to represent ideas and create imaginative responses to problems and tasks using ICT* (ICT) *(eg What happened? Did the results match the initial investigative question?)*	• to make reasonable explanations, to represent ideas and create imaginative responses to problems and tasks using ICT *(eg What happened? Did the results match the initial investigative question?)*	• to make reasonable explanations, to represent ideas and create imaginative responses to problems and tasks using ICT* (ICT) *(eg What happened? Did the results match the initial investigative question?)*
• to communicate findings in a variety of forms *(eg oral reports, graphs)*	• to communicate findings in a variety of forms* (Science/ICT) *(eg oral reports, graphs, models, digital media, written, ICT, timelines)*	• to communicate findings in a variety of forms *(eg oral reports, graphs, models, digital media, written, ICT, timelines)*	• to communicate findings in a variety of forms* (Science/ICT) *(eg oral reports, graphs, models, digital media, written, ICT, timelines)*
Evaluating: Reflect on an investigation, evaluate the process and generate further ideas			
• identify any difficulties and successes experienced *(eg What did we find difficult? What could be changed next time?)*	• to identify any difficulties and successes experienced* (Science) *(eg What did we find difficult? What could be changed next time?)*	• to identify any difficulties and successes experienced *(eg What did we find difficult? What could be changed next time?)*	• to identify any difficulties and successes experienced* (Science) *(eg What did we find difficult? What could be changed next time?)*

Developmental progression of sequenced investigating skills:			
Year 4	**Year 5**	**Year 6**	**Year 7**
Evaluating: Reflect on an investigation, evaluate the process and generate further ideas (continued)			
	• evaluate if the results of an investigation were what was expected *(eg Was this what we expected?)*	• evaluate if the results of an investigation were what was expected *(eg Was this what we expected?)* • to revise an investigation and determine what could be changed to make the test fair *(eg Why did it happen? What difficulties did we experience with the investigation? How could we improve the investigation?)* • information learnt from an investigation can be used to pose further questions, or form a new investigation *(eg What could we find out next?)*	• evaluate if the results of an investigation were what was expected *(eg Was this what we expected?)* • to revise an investigation and determine what could be changed to make the test fair* (Science) *(eg Why did it happen? What difficulties did we experience with the investigation? How could we improve the investigation?)* • information learnt from an investigation can be used to pose further questions, or form a new investigation *(eg What could we find out next?)*