 Working Scientifically

2012 Science and Technology K-6 Syllabus:

Students identify and ask questions about their world. They plan and conduct a range of first-hand investigations in which they use and apply the skills and processes of Working Scientifically. Through applying the processes of Working Scientifically, students use scientific inquiry to develop their knowledge of science and understanding about the Natural Environment and the Made Environment. They evaluate the processes and the quality of findings, evidence and conclusions. In their investigations students will often draw on processes and design ideas developed through Working Technologically.

Students:

* question and predict
* plan and conduct investigations
* process and analyse data and information
* communicate

Science and Technology K–6 Syllabus 2012
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2017 Science and Technology K-6 Syllabus:

The skills of Working Scientifically are at the core of inquiry and are developed by conducting practical investigations and research in Science and Technology. When investigating, opportunities are to be provided for students to engage with all of the Working Scientifically skills.

Students develop an understanding that the Working Scientifically processes are applied in every scientific investigation in a way that is determined by the task. Through regular involvement in applying these skills in a variety of situations, students develop an understanding that the Working Scientifically processes are more than a series of predictable steps that confirm what we know.

Working Scientifically challenges students to imagine and pose questions, develop processes that can be used to solve problems and, explain observations and phenomena. These scientific processes are informed by the unexpected. An unexpected result, or no observable change, does not necessarily indicate that an investigation was unsuccessful, but rather can be used to direct further questioning and scientific investigation.

An investigation is a scientific process of answering a question, exploring an idea or solving a problem that includes practical activities, such as planning a course of action using fair testing and replication, collection and interpretation of data, reaching a conclusion and communicating findings.

Working Scientifically Skills:

* questioning and predicting
* planning and conducting investigations
* processing and analysing data
* communicating

[Science and Technology Syllabus K–6 Syllabus 2017](http://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/science/science-and-technology-k-6-new-syllabus)
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| Stage | Outcome 2012  | 2012 Science and Technology K-6 Syllabus | Outcome 2017  | 2017 Science and Technology K-6 Syllabus | What is different? |
| --- | --- | --- | --- | --- | --- |
| Early stage 1 | Ste-4WS | explores their immediate surroundings by questioning, observing using their sense and communicating to share their observations and ideas | STe-1WS-S | observes, questions and collects data to communicate ideas |  |
| Stage 1 | St1-4WS | investigates questions and predictions by collecting and recoding data, sharing and reflecting on their experiences and comparing what they and others know | ST1-1WS-S | observes, questions and collects data to communicate ideas |  |
| Stage 2 | St2-4WS | investigates their questions and predictions by analysing collected data suggesting explanations for their finds and communicating and reflecting on the processes undertaken | ST2-1WS-S | questions, plans and conducts scientific investigations, collects and summarises data and communicates using scientific representations |  |
| Stage 3 | St3-4WS | investigates by posing questions, including testable questions, making predictions and gathering data to draw evidence-based conclusions and develop explanations | ST3-1WS-S | plans and conducts scientific investigations to answer testable questions, and collects and summarises data to communicate conclusions |  |