



Experience overview

The WeDo 2.0 projects are developed with the Australian Curriculum: Science requirements for Year 2 to Year 6 in mind.

These practices represent the requirements of the Curriculum, in that students develop scientific knowledge and conceptual understanding, as well as practical skills. The practices are not to be seen as separate, rather as an interconnected set of expectations for students.

Cross-curricular themes are also important, and teachers are encouraged to explore the connections to other subject areas.

Elements of the Australian Curriculum: Technologies are interwoven throughout the document and are used within the WeDo 2.0 curriculum.

The Australian Curriculum: Science content includes the three strands of Science Understanding, Science as a Human Endeavour, and Science Inquiry Skills.

The three strands of the science curriculum provide students with understanding, knowledge, and skills that will help them to develop a scientific view of the world.

Science inquiry describes actions that students can engage with when learning and exploring science. These skills are integral to the Australian Curriculum Science content strands and are developed throughout the WeDo 2.0 curriculum:

1. Questioning and predicting
2. Planning and conducting
3. Processing and analysing data and information
4. Evaluating
5. Communicating

The science inquiry skills can be accessed online via the ACARA webpage or by using the Australian Curriculum app.

The WeDo 2.0 curriculum projects are built around the Australian Curriculum: Science and interconnected throughout the curriculum.



Develop science and engineering practices with WeDo 2.0

WeDo 2.0 projects will develop science and engineering practices. They provide opportunities for students to work with and develop ideas and knowledge, and to gain an understanding of the world around them.

The progression and difficulty level of the projects allows students to develop competency while exploring and learning about key science topics. The projects have been carefully chosen to cover a wide variety of topics and issues.

WeDo 2.0 projects develop eight science and engineering practices:

1. Question and predict.
2. Develop and use models.
3. Plan and conduct investigations.
4. Process and analyse data and information.
5. Use computational thinking.
6. Design prototypes.
7. Evaluate.
8. Communicate.

The guiding principle is that every student should engage in all of these practices across the projects in each year group.



Science and Engineering practices

The science and engineering practices serve as the common thread throughout the curriculum, and all requirements should, in essence, be taught through them. Science inquiry involves students identifying and asking questions; planning and carrying out investigations; processing, analysing and interpreting data; and communicating findings. Engineering practices such as using models and designing prototypes are also embedded in the WeDo 2.0 projects.

The following points identify the basic principles of these practices and give examples of how they are used in WeDo 2.0 projects.

1. Questioning and predicting.

This practice focuses on identifying problems, asking questions, proposing hypotheses, and predicting possible outcomes based on observational skills.

2. Develop and use models.

This practice focuses on students' prior experiences and the use of concrete events in modelling solutions to problems. It also includes improving models and new ideas related to a real-world problem and solution.

3. Planning and conducting investigations.

This practice is about students making decisions about how to carry out an investigation, incorporate possible problem-solving processes and formulate probable solution ideas.

4. Processing and analysing data and information.

The focus of this practice is to learn how to gather, represent and interpret data, document discoveries, and share ideas from the learning process.



Science and Engineering practices

5. Use mathematics and computational thinking.

The purpose of this practice is to realise the role of numbers in data-gathering processes. Students read and gather data about investigations, make charts, and draw diagrams resulting from the numerical data. They add simple data sets to come up with conclusions. They understand or create simple algorithms.

6. Design prototypes.

This practice is about ways they might go about constructing an explanation or designing a solution for a problem.

7. Evaluate.

Constructively sharing ideas based on evidence is an important feature of science and engineering. This practice is about how students consider the quality of available evidence, share their ideas, and demonstrate proof.

8. Communicate.

Teaching children about what real scientists do is key to this practice. The way in which they set up and complete investigations to gather information, how they evaluate their findings, and how they document, are all important elements. The focus is on students presenting information and ideas to others, and communicating their findings through appropriate representations and digital technologies.

▶ Important

The WeDo 2.0 projects will engage your students in all science and engineering practices.



Use the LEGO® bricks in a scientific context

LEGO® bricks have been used in three different ways in the WeDo 2.0 projects:

1. To model reality
2. To investigate
3. To design

These three ways will give you the opportunity to develop a different set of practices, as the outcome of the project is different in each case.

1. Use models

Students represent and describe their ideas using the bricks.

Students can build a model to gather evidence or provide a simulation. Although only representations of reality, models enhance understanding and explain natural phenomena.

When implementing a modelling project, encourage students to focus their creativity on representing the reality as accurately as possible. In doing so, they will need to identify and explain the limitations of their models.

Examples of modelling Guided Projects are:

- Frog's Metamorphosis
- Plants and Pollinators

2. Investigate

Planning and carrying out investigations is an ideal framework for a science project. Students' learning is enhanced by active engagement with the problem. Students are encouraged to make predictions, carry out tests, collect data, and draw conclusions.

When implementing an investigation project, you should encourage students to pay special attention to ensure fair testing. Ask them to search for cause and effect in their tests, ensuring they change only one variable at a time.

Examples of investigating Guided Projects are:

- Pulling
- Speed
- Robust Structures



Use the LEGO® bricks in an engineering context

3. Design

Students design solutions for a problem for which there is no single answer.

The problem may require students to design a combination of plans, models, simulations, programs, and presentations. Going through the design process will require students to constantly adjust and modify their solutions to meet criteria.

While designing a solution, it will be important to recognise that the idea of “failure” in engineering is a sign of growth in the cognitive process. Therefore, students may not reach a viable solution on their first attempt or within the provided time constraints. In that case, encourage them to reflect on their process and to identify what they have learnt.

When you implement a design project, encourage students to focus their creativity on designing multiple solutions. Ask them to select the prototype they think is the best according to the criteria you have set.

Examples of designing Guided Projects are:

- Prevent Flooding
- Drop and Rescue
- Sort to Recycle

Important

Documents produced by students following the completion of these three types of projects may contain different types of information.



Use LEGO® bricks in a computational thinking context

Computational thinking is a set of problem-solving skills that are applied to working with computers and other digital devices. In WeDo 2.0, computational thinking is handled in a developmentally appropriate manner through the use of icons and programming blocks.

Computational thinking characteristics include:

- Logical reasoning
- Looking for patterns
- Organising and analysing data
- Modelling and simulations
- Using computers to assist in testing models and ideas
- Using algorithms to sequence actions

Its application in science and engineering projects enables students to use powerful digital tools to carry out investigations and build and program models, which might otherwise be tricky to do. Students use programs to activate motors, lights, sounds, or displays, or to react to sounds, tilt, or movement to implement functionalities to their models or prototypes.





Visual overview of Guided Projects

1. Pulling

Investigate the effects of balanced and unbalanced forces on the movement of an object.

2. Speed

Investigate the factors that make a car accelerate to help predict future motion.

3. Robust Structures

Investigate the characteristics that make a building earthquake resistant, using an earthquake simulator constructed from LEGO® bricks.

4. Frog's Metamorphosis

Model a frog's metamorphosis using a LEGO representation, and identify the characteristics of the organism at each stage.

5. Plants and Pollinators

Model a LEGO representation of the relationship between a pollinator and flower during the reproduction phase.

6. Prevent Flooding

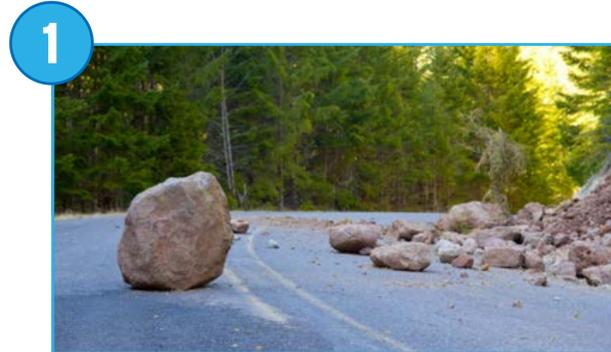
Design an automatic LEGO floodgate to control water according to various precipitation patterns.

7. Drop and Rescue

Design a device to reduce the impacts on humans, animals, and the environment after an area has been damaged by extreme weather.

8. Sort to Recycle

Design a device that uses the physical properties of objects, including their shape and size, to sort them.





Visual overview of Open Projects

9. Predator and Prey

Model a LEGO® representation of the behaviours of different predators and their prey.

10. Animal Expression

Model a LEGO representation of different communication methods used in the animal kingdom.

11. Extreme Habitats

Model a LEGO representation of how habitat influences the survival of certain species.

12. Space Exploration

Design a LEGO prototype of a rover that would be ideal for exploring distant planets.

13. Hazard Alarm

Design a LEGO prototype of a weather alarm device to reduce the impact of severe storms.

14. Cleaning the Ocean

Design a LEGO prototype to help people remove plastic waste from the ocean.

15. Wildlife Crossing

Design a LEGO prototype to allow an endangered species to safely cross a road or other hazardous area.

16. Moving Materials

Design a LEGO prototype of a device that can move specific objects in a safe and efficient way.





Curriculum Overview Science: Guided Projects

Guided Projects											
Project	Science Inquiry Skills					Science Understanding				Science as a Human Endeavour	
	■ Year 2 ■ Year 3 ■ Year 4 ■ Year 5 ■ Year 6										
	Questioning and predicting	Planning and conducting	Processing and analysing data and information	Evaluating	Communicating	Biological sciences	Chemical sciences	Earth and space sciences	Physical sciences	Nature and development of science	Use and influence of science
Pulling	■ ACSIS037 ■ ACSIS064	■ ACSIS038 ■ ACSIS065	■ ACSIS216	■ ACSIS041 ■ ACSIS069	■ ACSIS042 ■ ACSIS071				■ ACSSU033 ■ ACSSU076	■ ACSHE034 ■ ACSHE061	
Speed	■ ACSIS064	■ ACSIS065	■ ACSIS216	■ ACSIS069	■ ACSIS071				■ ACSSU076	■ ACSHE061	
Robust Structures	■ ACSIS232	■ ACSIS103	■ ACSIS221	■ ACSIS108	■ ACSIS110			■ ACSSU096		■ ACSHE098	■ ACSHE100
Frog's Metamorphosis	■ ACSIS053		■ ACSIS215 ■ ACSIS216	■ ACSIS041 ■ ACSIS058 ■ ACSIS069	■ ACSIS042 ■ ACSIS060 ■ ACSIS071	■ ACSSU030 ■ ACSSU044 ■ ACSSU072				■ ACSHE034 ■ ACSHE050 ■ ACSHE061	
Plants and Pollinators	■ ACSIS064				■ ACSIS071	■ ACSSU073				■ ACSHE061	
Prevent Flooding	■ ACSIS064 ■ ACSIS232	■ ACSIS103			■ ACSIS071 ■ ACSIS110			■ ACSSU075 ■ ACSSU096		■ ACSHE061 ■ ACSHE098	■ ACSHE062
Drop and Rescue		■ ACSIS103			■ ACSIS110			■ ACSSU096			■ ACSHE100
Sort to Recycle	■ ACSIS037 ■ ACSIS216	■ ACSIS038		■ ACSIS069	■ ACSIS042 ■ ACSIS071		■ ACSSU031 ■ ACSSU074			■ ACSHE034	■ ACSHE035 ■ ACSHE062

NB: Australian Curriculum: Technologies requirements are referenced in the teacher's notes for each project.



Curriculum Overview Science: Open Projects

Open Projects											
Project	Science Inquiry Skills					Science Understanding				Science as a Human Endeavour	
	■ Year 2 ■ Year 3 ■ Year 4 ■ Year 5 ■ Year 6										
	Questioning and predicting	Planning and conducting	Processing and analysing data and information	Evaluating	Communicating	Biological sciences	Chemical sciences	Earth and space sciences	Physical sciences	Nature and development of science	Use and influence of science
Predator and Prey		■ ACSIS065	■ ACSIS216	■ ACSIS069	■ ACSIS071	■ ACSSU073				■ ACSHE061	
Animal Expression	■ ACSIS053		■ ACSIS215	■ ACSIS058	■ ACSIS060	■ ACSSU044				■ ACSHE050	
Extreme Habitats				■ ACSIS091	■ ACSIS093	■ ACSSU043					
Space Exploration	■ ACSIS231	■ ACSIS086		■ ACSIS091	■ ACSIS093			■ ACSSU078		■ ACSHE081	■ ACSHE083
Hazard Alarm		■ ACSIS103	■ ACSIS221	■ ACSIS108	■ ACSIS110			■ ACSSU096		■ ACSHE098	■ ACSHE100
Cleaning the Ocean		■ ACSIS065		■ ACSIS069	■ ACSIS071		■ ACSSU074				■ ACSHE062
Wildlife Crossing		■ ACSIS065	■ ACSIS216	■ ACSIS069	■ ACSIS071	■ ACSSU073					■ ACSHE062
Moving Materials		■ ACSIS065		■ ACSIS069	■ ACSIS071				■ ACSSU076		■ ACSHE062

NB: Australian Curriculum: Technologies requirements are referenced in the teacher's notes for each project.



Curriculum Overview: Science – Year 2

Science Understanding	
Biological sciences	
ACSSU030	Living things grow, change, and have offspring similar to themselves
Chemical sciences	
ACSSU031	Different materials can be combined, including by mixing, for a particular purpose
Earth and space sciences	
ACSSU032	Earth's resources, including water, are used in a variety of ways
Physical sciences	
ACSSU033	A push or a pull affects how an object moves or changes shape
Science as a Human Endeavour	
Nature and development of science	
ACSHE034	Science involves asking questions about, and describing changes in, objects and events
Use and influence of science	
ACSHE035	People use science in their daily lives, including when caring for their environment and living things
Science Inquiry Skills	
Questioning and predicting	
AC SIS037	Pose and respond to questions, and make predictions about familiar objects and events
Planning and conducting	
AC SIS038	Participate in guided investigations to explore and answer questions
AC SIS039	Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate
Processing and analysing data and information	
AC SIS040	Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions
Evaluating	
AC SIS041	Compare observations with those of others
Communicating	
AC SIS042	Represent and communicate observations and ideas in a variety of ways

<http://www.australiancurriculum.edu.au/science>

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Curriculum Overview: Science – Year 3

Science Understanding	
Biological sciences	
ACSSU044	Living things can be grouped on the basis of observable features and can be distinguished from non-living things
Chemical sciences	
ACSSU046	A change of state between solid and liquid can be caused by adding or removing heat
Earth and space sciences	
ACSSU048	Earth's rotation on its axis causes regular changes, including night and day
Physical sciences	
ACSSU049	Heat can be produced in many ways and can move from one object to another
Science as a Human Endeavour	
Nature and development of science	
ACSHE050	Science involves making predictions and describing patterns and relationships
Use and influence of science	
ACSHE051	Science knowledge helps people to understand the effect of their actions
Science Inquiry Skills	
Questioning and predicting	
AC SIS053	With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge
Planning and conducting	
AC SIS054	With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment
AC SIS055	Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately
Processing and analysing data and information	
AC SIS057	Use a range of methods including tables and simple column graphs to represent data and to identify patterns and trends
AC SIS215	Compare results with predictions, suggesting possible reasons for findings
Evaluating	
AC SIS058	Reflect on the investigation, including whether a test was fair or not
Communicating	
AC SIS060	Represent and communicate observations, ideas and findings using formal and informal representations

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Curriculum Overview: Science – Year 4

Science Understanding	
Biological sciences	
ACSSU072	Living things have life cycles
ACSSU073	Living things depend on each other and the environment to survive
ACSSU074	Natural and processed materials have a range of physical properties; These properties can influence their use
Earth and space sciences	
ACSSU075	Earth's surface changes over time as a result of natural processes and human activity
Physical sciences	
ACSSU076	Forces can be exerted by one object on another through direct contact or from a distance
Science as a Human Endeavour	
Nature and development of science	
ACSHE061	Science involves making predictions and describing patterns and relationships
Use and influence of science	
ACSHE062	Science knowledge helps people to understand the effect of their actions
Science Inquiry Skills	
Questioning and predicting	
AC SIS064	With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge
Planning and conducting	
AC SIS065	With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment
AC SIS066	Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately
Processing and analysing data and information	
AC SIS068	Use a range of methods including tables and simple column graphs to represent data and to identify patterns and trends
AC SIS216	Compare results with predictions, suggesting possible reasons for findings
Evaluating	
AC SIS069	Reflect on the investigation; including whether a test was fair or not
Communicating	
AC SIS071	Represent and communicate observations, ideas, and findings using formal and informal representations

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Curriculum Overview: Science – Year 5

Science Understanding	
Biological sciences	
ACSSU043	Living things have structural features and adaptations that help them to survive in their environment
Chemical sciences	
ACSSU077	Solids, liquids, and gases have different observable properties and behave in different ways
Earth and space sciences	
ACSSU078	The Earth is part of a system of planets orbiting around a star (the sun)
Physical sciences	
ACSSU080	Light from a source forms shadows and can be absorbed, reflected, and refracted
Science as a Human Endeavour	
Nature and development of science	
ACSHE081	Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena, and reflects historical and cultural contributions
Use and influence of science	
ACSHE083	Scientific knowledge is used to solve problems and inform personal and community decisions
Science Inquiry Skills	
Questioning and predicting	
AC SIS231	With guidance, pose clarifying questions and make predictions about scientific investigations
Planning and conducting	
AC SIS086	Identify, plan, and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely while identifying potential risks
AC SIS087	Decide which variable should be changed and measured in fair tests and accurately observe, measure, and record data, using digital technologies as appropriate
Processing and analysing data and information	
AC SIS090	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns, or relationships in data using digital technologies as appropriate
AC SIS218	Compare data with predictions and use as evidence in developing explanations
Evaluating	
AC SIS091	Reflect on and suggest improvements to scientific investigations
Communicating	
AC SIS093	Communicate ideas, explanations, and processes using scientific representations in a variety of ways, including multi-modal texts

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Curriculum Overview: Science – Year 6

Science Understanding	
Biological sciences	
ACSSU094	The growth and survival of living things is affected by the physical conditions of their environment
Chemical sciences	
ACSSU095	Changes to materials can be reversible or irreversible
Earth and space sciences	
ACSSU096	Sudden geological changes or extreme weather conditions can affect Earth's surface
Physical sciences	
ACSSU097	Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources
Science as a Human Endeavour	
Nature and development of science	
ACSHE098	Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena, and reflects historical and cultural contributions
Use and influence of science	
ACSHE100	Scientific knowledge is used to solve problems and inform personal and community decisions
Science Inquiry Skills	
Questioning and predicting	
AC SIS232	With guidance, pose clarifying questions and make predictions about scientific investigations
Planning and conducting	
AC SIS103	Identify, plan, and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely while identifying potential risks
AC SIS104	Decide which variable should be changed and measured in fair tests and accurately observe, measure, and record data using digital technologies as appropriate
AC SIS105	Use equipment and materials safely, identifying potential risks
Processing and analysing data and information	
AC SIS107	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns, or relationships in data using digital technologies as appropriate
AC SIS221	Compare data with predictions and use as evidence in developing explanations
Evaluating	
AC SIS108	Reflect on and suggest improvements to scientific investigations
Communicating	
AC SIS110	Communicate ideas, explanations, and processes using scientific representations in a variety of ways, including multi-modal texts

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Curriculum Overview Design and Technologies: Guided Projects

■ Year F-2 ■ Year 3-4 ■ Year 5-6						
Project	Process and Production Skills				Knowledge and Understanding	
	<i>Investigating and defining</i>	<i>Producing and implementing</i>	<i>Evaluating</i>	<i>Collaborating and managing</i>	<i>Technologies contexts</i>	<i>Technologies and Society</i>
					Engineering principles and systems	Materials and technologies specialisation
Pulling	■ ACTDEP024	■ ACTDEP007 ■ ACTDEP016			■ ACTDEK002 ■ ACTDEK011 ■ ACTDEK020	
Speed	■ ACTDEP024	■ ACTDEP007 ■ ACTDEP016			■ ACTDEK002 ■ ACTDEK011 ■ ACTDEK020	
Robust Structures		■ ACTDEP016	■ ACTDEP017		■ ACTDEK011	■ ACTDEK010
Frog's Metamorphosis		■ ACTDEP007			■ ACTDEK002	
Plants and Pollinators	■ ACTDEP024	■ ACTDEP007			■ ACTDEK002 ■ ACTDEK020	
Prevent Flooding	■ ACTDEP024	■ ACTDEP016	■ ACTDEP017		■ ACTDEK011 ■ ACTDEK020	■ ACTDEK023 ■ ACTDEK019
Drop and Rescue	■ ACTDEP024	■ ACTDEP016	■ ACTDEP017		■ ACTDEK011	■ ACTDEK019
Sort to Recycle	■ ACTDEP014 ■ ACTDEP024	■ ACTDEP016	■ ACTDEP008 ■ ACTDEP017	■ ACTDEP009		■ ACTDEK004 ■ ACTDEK013 ■ ACTDEK023 ■ ACTDEK001 ■ ACTDEK010 ■ ACTDEK019



Curriculum Overview Digital Technologies: Guided Projects

■ Year F-2 ■ Year 3-4 ■ Year 5-6				
Project	Process and Production Skills			Knowledge and Understanding
	<i>Investigating and defining</i>	<i>Generating and designing</i>	<i>Producing and implementing</i>	<i>Digital Systems</i>
Pulling	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Speed	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Robust Structures	<ul style="list-style-type: none"> ■ ACTDIP004 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Frog's Metamorphosis	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Plants and Pollinators	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Prevent Flooding		<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK007 ■ ACTDIK014
Drop and Rescue		<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK007 ■ ACTDIK014
Sort to Recycle	<ul style="list-style-type: none"> ■ ACTDIP004 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014



Curriculum Overview Design and Technologies: Open Projects

■ Year F-2 ■ Year 3-4 ■ Year 5-6								
Project	Process and Production Skills					Knowledge and Understanding		
	Investigating and defining	Generating and designing	Producing and implementing	Evaluating	Collaborating and managing	Technologies contexts		Technologies and Society
						Engineering principles and systems	Materials and technologies specialisation	
Predator and Prey	■ ACTDEP024		■ ACTDEP007			■ ACTDEK002 ■ ACTDEK020		
Animal Expression	■ ACTDEP024		■ ACTDEP007			■ ACTDEK002 ■ ACTDEK020		
Extreme Habitats	■ ACTDEP024		■ ACTDEP007		■ ACTDEP009	■ ACTDEK002 ■ ACTDEK020		
Space Exploration	■ ACTDEP005 ■ ACTDEP014 ■ ACTDEP024	■ ACTDEP006 ■ ACTDEP015 ■ ACTDEP025	■ ACTDEP007 ■ ACTDEP016 ■ ACTDEP026	■ ACTDEP008 ■ ACTDEP017		■ ACTDEK002 ■ ACTDEK020	■ ACTDEK004 ■ ACTDEK013 ■ ACTDEK023	■ ACTDEK019
Hazard Alarm	■ ACTDEP005 ■ ACTDEP014 ■ ACTDEP024	■ ACTDEP006 ■ ACTDEP015 ■ ACTDEP025	■ ACTDEP007 ■ ACTDEP016 ■ ACTDEP026	■ ACTDEP008 ■ ACTDEP017	■ ACTDEP009	■ ACTDEK020	■ ACTDEK004 ■ ACTDEK013 ■ ACTDEK023	■ ACTDEK001 ■ ACTDEK010 ■ ACTDEK019
Cleaning the Oceans	■ ACTDEP005 ■ ACTDEP014 ■ ACTDEP024	■ ACTDEP006 ■ ACTDEP015 ■ ACTDEP025	■ ACTDEP007 ■ ACTDEP016 ■ ACTDEP026	■ ACTDEP008 ■ ACTDEP017			■ ACTDEK004 ■ ACTDEK013 ■ ACTDEK023	■ ACTDEK001 ■ ACTDEK010 ■ ACTDEK019
Wildlife Crossing	■ ACTDEP005 ■ ACTDEP014 ■ ACTDEP024	■ ACTDEP006 ■ ACTDEP015 ■ ACTDEP025	■ ACTDEP007 ■ ACTDEP016 ■ ACTDEP026	■ ACTDEP008 ■ ACTDEP017		■ ACTDEK020	■ ACTDEK004 ■ ACTDEK013	
Moving Materials	■ ACTDEP005 ■ ACTDEP014 ■ ACTDEP024	■ ACTDEP006 ■ ACTDEP015 ■ ACTDEP025	■ ACTDEP007 ■ ACTDEP016 ■ ACTDEP026	■ ACTDEP008 ■ ACTDEP017		■ ACTDEK002 ■ ACTDEK011 ■ ACTDEK020	■ ACTDEK004 ■ ACTDEK013 ■ ACTDEK023	■ ACTDEK001 ■ ACTDEK010



Curriculum Overview Digital Technologies: Open Projects

■ Year F-2 ■ Year 3-4 ■ Year 5-6					
Project	Process and Production Skills				Knowledge and Understanding
	<i>Investigating and defining</i>	<i>Generating and designing</i>	<i>Producing and implementing</i>	<i>Evaluating</i>	<i>Digital Systems</i>
Predator and Prey					<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Animal Expression					<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Extreme Habitats					<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Space Exploration	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 		<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Hazard Alarm	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 	<ul style="list-style-type: none"> ■ ACTDIP012 ■ ACTDIP021 	<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Cleaning the Oceans	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 		<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Wildlife Crossing	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 		<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014
Moving Materials	<ul style="list-style-type: none"> ■ ACTDIP004 ■ ACTDIP010 	<ul style="list-style-type: none"> ■ ACTDIP019 	<ul style="list-style-type: none"> ■ ACTDIP011 ■ ACTDIP020 		<ul style="list-style-type: none"> ■ ACTDIK001 ■ ACTDIK007 ■ ACTDIK014



Curriculum Overview: Design and Technologies – Years F-2

Knowledge and Understanding	
Technologies contexts	
<i>Engineering principles and systems</i>	
ACTDEK002	Explore how technologies use forces to create movement in products
<i>Materials and technologies specialisation</i>	
ACTDEK004	Explore the characteristics and properties of materials and components that are used to produce designed solutions
Technologies and Society	
ACTDEK001	Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs
Process and Production Skills	
Investigating and defining	
ACTDEP005	Explore needs or opportunities for designing, and the technologies needed to realise designed solutions
Generating and designing	
ACTDEP006	Generate, develop and record design ideas through describing, drawing and modelling
Producing and implementing	
ACTDEP007	Use materials, components, tools, equipment and techniques to safely make designed solutions
Evaluating	
ACTDEP008	Use personal preferences to evaluate the success of design ideas, processes and solutions including their care for environment
Collaborating and managing	
ACTDEP009	Sequence steps for making designed solutions and working collaboratively



Curriculum Overview: Design and Technologies – Years 3-4

Knowledge and Understanding	
Technologies contexts	
<i>Engineering principles and systems</i>	
ACTDEK011	Investigate how forces and the properties of materials affect the behaviour of a product or system
<i>Materials and technologies specialisation</i>	
ACTDEK013	Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes
Technologies and Society	
ACTDEK010	Recognise the role of people in design and technologies occupations and explore factors, including sustainability that impact on the design of products, services and environments to meet community needs
Process and Production Skills	
Investigating and defining	
ACTDEP014	Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to produce designed solutions
Producing and implementing	
ACTDEP016	Select and use materials, components, tools, equipment and techniques and use safe work practices to make designed solutions
Evaluating	
ACTDEP017	Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment



Curriculum Overview: Design and Technologies – Years 5-6

Knowledge and Understanding	
Technologies contexts	
<i>Engineering principles and systems</i>	
ACTDEK020	Investigate how electrical energy can control movement, sound or light in a designed product or system
<i>Materials and technologies specialisation</i>	
ACTDEK023	Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use
Technologies and Society	
ACTDEK019	Examine how people in design and technologies occupations address competing considerations, including sustainability in the design of products, services, and environments for current and future use
Process and Production Skills	
Investigating and defining	
ACTDEP024	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions
Generating and designing	
ACTDEP025	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques
Producing and implementing	
ACTDEP026	Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions



Curriculum Overview: Digital Technologies – Years F-2

Knowledge and Understanding	
Digital Systems	
ACTDIK001	Recognise and explore digital systems (hardware and software components) for a purpose
Process and Production Skills	
Creating digital solutions by:	
Investigating and defining	
ACTDIP004	Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems



Curriculum Overview: Digital Technologies – Years 3-4

Knowledge and Understanding	
Digital Systems	
ACTDIK007	Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data
Processes and production skills	
Creating digital solutions by:	
Investigating and defining	
ACTDIP010	Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them
Producing and implementing	
ACTDIP011	Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input
Evaluating	
ACTDIP012	Explain how student solutions and existing information systems meet common personal, school or community needs



Curriculum Overview: Digital Technologies – Years 5-6

Knowledge and Understanding	
Digital Systems	
ACTDIK014	Examine the main components of common digital systems and how they may connect together to form networks to transmit data
Processes and production skills	
Creating digital solutions by:	
Generating and designing	
ACTDIP019	Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition)
Producing and implementing	
ACTDIP020	Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input
Evaluating	
ACTDIP021	Explain how student solutions and existing information systems are sustainable and meet current and future local community needs