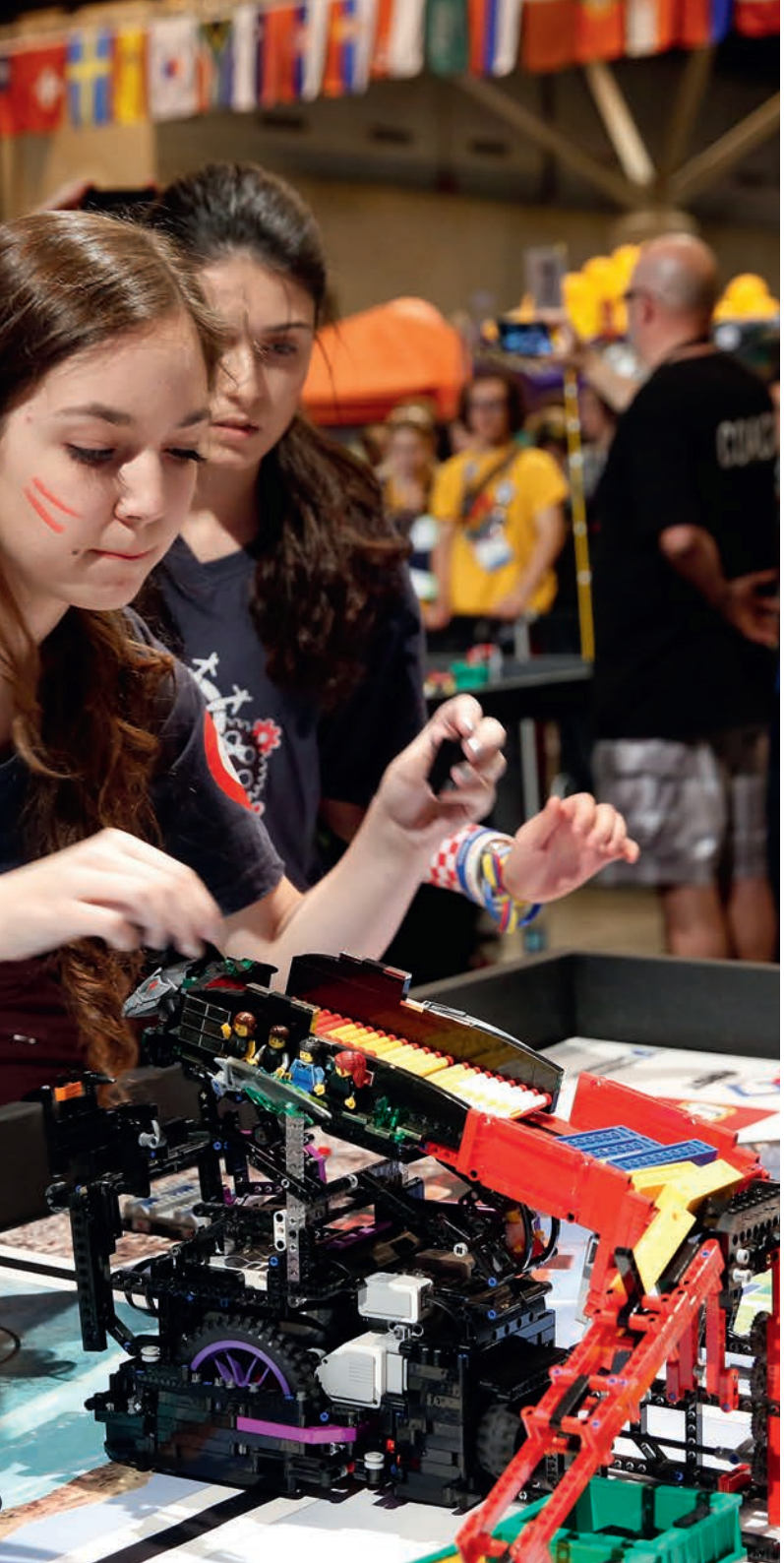

education

FIRST® LEGO® League
Australian Curriculum Links

FIRST® AUSTRALIA

FLL® Australian Curriculum Links

FIRST® LEGO® League provides a practical and engaging way to involve students in a variety of subject areas as they work collaboratively to solve problems with real-world connections. Student learning is self-directed and hands-on with plenty of scope for differentiation as teachers adapt the level of scaffolding and assessment items (diagnostic, formative and summative) to suit their classes and reporting needs. The tables below identify some of the General Capabilities and Subject Area Content Descriptions from the Australian Curriculum for years 5 to 9 which teachers may wish to address and/or assess as part of their FLL preparations, with activity and assessment examples included.

General Capabilities - Literacy

Level 4 ***Typically by the end of Year 6***	**Level 5** ***Typically by the end of Year 8***	**Level 6** ***Typically by the end of Year 10***
Comprehending texts through listening, reading and viewing		
Navigate, read and view learning area texts		
Navigate, read and view subject-specific texts with some challenging features and a range of graphic representations.	Navigate, read and view a variety of challenging subject-specific texts with a wide range of graphic representations.	Navigate, read and view a wide range of more demanding subject-specific texts with an extensive range of graphic representations.
• *Prepare research summaries for the project from a variety of sources to share with the team.*		
Listen and respond to learning area texts		
Listen to detailed spoken instructions for undertaking learning tasks, listen to spoken and audio texts, including audio-visual texts, and respond to and interpret information and opinions presented.	Listen to extended spoken and audio texts, including audio-visual texts, respond to and interpret stated and implied meanings, and evaluate information and ideas.	Listen to a range of extended spoken and audio texts, including audio-visual texts, and respond to, interpret and evaluate ideas, information and opinions.
• *Attend expert presentations as part of the project research phase.* • *Interview experts as part of project research and solution development phases.*		
Interpret and analyse learning area texts		
Interpret and analyse information and ideas, comparing texts on similar topics or themes using comprehension strategies.	Interpret and evaluate information, identify main ideas and supporting evidence, and analyse different perspectives using comprehension strategies.	Interpret and evaluate information within and between texts, comparing and contrasting information using comprehension strategies.
• *Synthesise information from research and expert interviews.*		

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Composing texts through speaking, writing and creating		
Compose spoken, written, visual and multimodal learning area texts		
Compose and edit learning area texts.	Compose and edit longer sustained learning area texts.	Compose and edit longer and more complex learning area texts.
• *Compose emails, letters, flyers, posters, etc to share project knowledge.* • *Create and maintain a robot design log or executive design summary.*		
Use language to interact with others		
Use pair, group and class discussions and informal debates as learning tools to explore ideas and relationships, test possibilities, compare solutions and to prepare for creating texts.	Use pair, group and class discussions and formal and informal debates as learning tools to explore ideas, text possibilities, compare solutions, rehearse ideas and arguments in preparation for creating texts.	Use pair, group and class discussions and formal and informal debates as learning tools to explore ideas, compare solutions, evaluate information and ideas, refine opinions and arguments in preparation for creating texts.
• *Team and sub-team discussions and/or debates relating to project solutions and/or robot design solutions.*		
Deliver presentations		
Plan, research, rehearse and deliver presentations on learning area topics, selecting appropriate content and visual and multimodal elements to suit different audiences.	Plan, research, rehearse and deliver presentations on learning area topics, sequencing selected content and multimodal elements for accuracy and their impact on the audience.	Plan, research, rehearse and deliver presentations on more complex issues and learning area topics, combining visual and multimodal elements creatively to present ideas and information and support opinions and engage and persuade an audience.
• *Project presentation.* • *Robot Design presentation.*		

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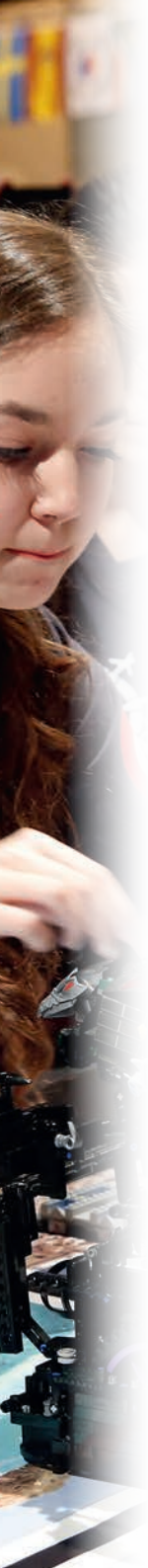
General Capabilities – Information and Communication Technology (ICT) Capability

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Investigating with ICT		
Define and plan information searches		
Use a range of ICT to identify and represent patterns in sets of information and to pose questions to guide searching for, or generating, further information.	Use a range of ICT to analyse information in terms of implicit patterns and structures as a base to plan an information search or generation.	Select and use a range of ICT independently and collaboratively, analyse information to frame questions and plan search strategies or data generation.
• *Identify a specific problem within the overall theme on which to focus the project.*		
Locate, generate and access data and information		
Locate, retrieve or generate information using search engines and simple search functions and classify information in meaningful ways.	Locate, retrieve or generate information using search facilities and organise information in meaningful ways.	Use advanced search tools and techniques or simulations and digital models to locate or generate precise data and information that supports the development of new understandings.
• *Research the overall theme, identified problem and possible solutions as part of the project phase.*		
Select and evaluate data and information		
Assess the suitability of data or information using a range of appropriate given criteria.	Assess the suitability of data or information using appropriate own criteria.	Develop and use criteria systematically to evaluate the quality, suitability and credibility of located data or information and sources.
• *Only information relevant to the chosen project topic is reported back to the team.*		
Communicating with ICT		
Collaborate, share and exchange		
Select and use appropriate ICT tools safely to share and exchange information and to safely collaborate with others.	Select and use appropriate ICT tools safely to lead groups in sharing and exchanging information, and taking part in online projects or active collaborations with appropriate global audiences.	Select and use a range of ICT tools efficiently and safely to share and exchange information, and to collaboratively and purposefully construct knowledge.
• *Use shared documents or workspaces to collate and share information within the team.* • *Use online platforms to access experts.*		
Understand computer mediated communications		
Understand that particular forms of computer mediated communications and tools are suited to synchronous or asynchronous and one-to-one or group communications.	Understand that there are various methods of collaboration through computer mediated communications that vary in form and control.	Understand that computer mediated communications have advantages and disadvantages in supporting active participation in a community of practice and the management of collaboration on digital materials
• *Use shared documents or workspaces to collate and share information within the team.* • *Use online platforms to access experts.*		

• *Use ICT platforms to share project information with others.*

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Managing and operating ICT		
Select and use hardware and software		
Select from, and safely operate, a range of devices to undertake specific tasks and use basic troubleshooting procedures to resolve routine malfunctions.	Independently select and operate a range of devices by adjusting relevant software functions to suit specific tasks, and independently use common troubleshooting procedures to resolve routing malfunctions.	Justify the selection of, and optimise the operation of, a selected range of devices and software functions to complete specific tasks, for different purposes and in different social contexts.
• *Use computers and/or tablets to collate information, create documentation and program the robot.* • *Create basic troubleshooting documents for the computer/tablet and robot as team reference material.*		
Manage digital data		
Manage and maintain data on different storage mediums – locally and on networks.	Manage and maintain data for groups of users using a variety of methods and systems.	Manage and maintain data securely in a variety of storage mediums and formats.
• *Determine a team strategy for the storage, sharing and backup of data relating to the project, robot design and robot programming.* • *Agree on file naming and saving procedures for the team.*		



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General Capabilities – Critical and Creative Thinking

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Inquiring – identifying, exploring and organising information and ideas		
Pose questions		
Pose questions to clarify and interpret information and probe for causes and consequences.	Pose questions to probe assumptions and investigate complex issues.	Pose questions to critically analyse complex issues and abstract ideas.
• *Prepare questions for experts.* • *Team brainstorming and sharing sessions for both project and robot design.*		
Identify and clarify information and ideas		
Identify and clarify relevant information and prioritise ideas.	Clarify information and ideas from texts and images when exploring challenging issues.	Clarify complex information and ideas drawn from a range of sources.
• *Prepare summaries of researched topics.*		
Organise and process information		
Analyse, condense and combine relevant information from multiple sources.	Critically analyse information and evidence according to criteria such as validity and relevance.	Critically analyse independently sourced information to determine bias and reliability.
• *Prepare summaries of researched topics.*		
Generating ideas, possibilities and actions		
Imagine possibilities and connect ideas		
Combine ideas in a variety of ways and from a range of sources to create new possibilities.	Draw parallels between known and new ideas to create new ways of achieving goals.	Create and connect complex ideas using imagery, analogies and symbolism.
• *Develop an innovative solution to the identified problem as part of the project.* • *Develop a robot game strategy as a team.*		
Consider alternatives		
Identify situations where current approaches do not work, challenge existing ideas and generate alternative solutions.	Generate alternatives and innovative solutions, and adapt ideas, including when information is limited or conflicting.	Speculate on creative options to modify ideas when circumstances change.
• *Choose a specific problem relevant to the team for the project.* • *Develop an innovative solution to the identified problem as part of the project.* • *Develop and continually improve the robot game strategy.*		
Seek solutions and put ideas into action		
Assess and test options to identify the most effective solution to put ideas into action.	Predict possibilities, and identify and test consequences when seeking solutions and putting ideas into action.	Assess risks and explain contingencies, taking account of a range of perspectives, when seeking solutions and putting complex ideas into action.
• *Evaluate proposed project solution, performing scientific tests where possible and consulting experts.* • *Test and continually improve robot game strategy.*		

FLL® Australian Curriculum Links

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Reflecting on thinking and processes		
Think about thinking (metacognition)		
Reflect on assumptions made, consider reasonable criticism and adjust their thinking if necessary.	Assess assumptions in their thinking and invite alternative opinions.	Give reasons to support their thinking, and address opposing viewpoints and possible weaknesses in their own positions.
• *Share project innovative solution with experts.* • *Work as a team to continually improve robot game strategy, sharing ideas and providing feedback.*		
Reflect on processes		
Identify and justify the thinking behind choices they have made.	Evaluate and justify the reasons behind choosing a particular problem-solving strategy.	Balance rational and irrational components of a complex or ambiguous problem to evaluate evidence.
• *Present project innovative solution to stakeholders and experts.* • *Present and justify robot design ideas to team members.*		
Transfer knowledge into new contexts		
Apply knowledge gained from one context to another unrelated context and identify new meaning.	Justify reasons for decisions when transferring information to similar and different contexts.	Identify, plan and justify transference of knowledge to new contexts.
• *Transfer knowledge from explicit teaching to solve problems in project or robot game.*		

FLL® Australian Curriculum Links

General Capabilities – Personal and Social Capability

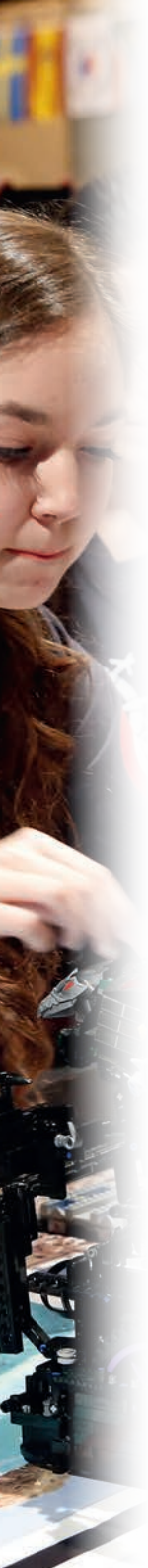
Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Self-awareness		
Recognise emotions		
Explain how the appropriateness of emotional responses influences behaviour.	Examine influences on and consequences of their emotional responses in learning, social and work-related contexts.	Reflect critically on their emotional responses to challenging situations in a wide range of learning, social and work-related contexts.
• *Review the functioning of the team, particularly after each team building activity.* • *Consider the Core Values that make up Gracious Professionalism® - Inclusion, Respect and Coopertition®.*		
Recognise personal qualities and achievements		
Describe the influence that personal qualities and strengths have on their learning outcomes.	Make a realistic assessment of their abilities and achievements, and prioritise areas for improvement.	Assess their strengths and challenges and devise personally appropriate strategies to achieve future success.
• *Prepare an application to be part of the team.* • *Complete a reflection.* • *Core Value – "What we discover is more important than what we win."*		
Understand themselves as learners		
Identify preferred learning styles and work habits.	Identify and choose a range of learning strategies appropriate to specific tasks and describe work practices that assist their learning.	Evaluate the effectiveness of commonly used learning strategies and work practices and refine these as required.
• *Set team rules.* • *Establish goals for each team meeting and agree responsibilities.*		
Develop reflective practice		
Monitor their progress, seeking and responding to feedback from teachers to assist them in consolidating strengths, addressing weaknesses and fulfilling their potential.	Predict the outcomes of personal and academic challenges by drawing on previous problem solving and decision making strategies and feedback from peers and teachers.	Reflect on feedback from peers, teachers and other adults, to analyse personal characteristics and skill set that contribute to or limit their personal and social capability.
• *Complete reflection.* • *Establish goals for each team meeting and agree responsibilities.*		

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Self-management		
Express emotions appropriately		
Explain the influence of emotions on behaviour, learning and relationships.	Forecast the consequences of expressing emotions inappropriately and devise measures to regulate behaviour.	Consider control and justify their emotional responses, in expressing their opinions, beliefs, values, questions and choice.
• *Review the functioning of the team, particularly after each team building activity.* • *Set team rules.*		
Develop self-discipline and set goals		
Analyse factors that influence ability to self-regulate; devise and apply strategies to monitor own behaviour and set realistic learning goals.	Select, use and analyse strategies that assist in regulating behaviour and achieving personal and learning goals.	Critically analyse self-discipline strategies and personal goals and consider their application in social and work-related contexts.
• *Set team rules.* • *Establish goals for each team meeting and agree responsibilities.* • *Complete student reflections*		
Work independently and show initiative		
Assess the value of working independently, and taking initiative to do so where appropriate.	Critique their effectiveness in working independently by identifying enablers and barriers to achieving goals.	Establish personal priorities, manage resources effectively and demonstrate initiative to achieve personal goals and learning outcomes.
• *Establish goals for each team meeting and agree responsibilities.* • *Complete student reflections.*		
Become confident, resilient and adaptable		
Devise strategies and formulate plans to assist in the completion of challenging tasks and the maintenance of personal safety.	Assess, adapt and modify personal and safety strategies and plans, and revisit tasks with renewed confidence.	Evaluate, rethink and refine approaches to tasks to take account of unexpected or difficult situations and safety considerations.
• *Establish goals for each team meeting and agree responsibilities.* • *Complete student reflections.*		

FLL® Australian Curriculum Links

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Social awareness		
Appreciate diverse perspectives		
Explain how means of communication differ within and between communities and identify the role these play in helping or hindering understanding of others.	Acknowledge the values, opinions and attitudes of different groups within society and compare to their own points of view.	Articulate their personal value system and analyse the effects of actions that repress social power and limit the expression of diverse views.
• *Set team rules.* • *Review the functioning of the team, particularly after each team building activity.*		
Contribute to civil society		
Identify a community need or problem and consider ways to take action to address it.	Analyse personal and social roles and responsibilities in planning and implementing ways of contributing to their communities.	Plan, implement and evaluate ways of contributing to civil society at local, national regional and global levels.
• *Review the functioning of the team, particularly after each team building activity.* • *Establish goals for each team meeting and agree responsibilities.*		
Understand relationships		
Identify the difference between positive and negative relationships and ways of managing these.	Identify indicators or possible problems in relationships in a range of social and work related situations.	Explain how relationships differ between peers, parents, teachers and other adults, and identify the skills needed to manage different types of relationships.
• *Review the functioning of the team, particularly after each team building activity.* • *Complete reflection.*		

Level 4 *Typically by the end of Year 6*	Level 5 *Typically by the end of Year 8*	Level 6 *Typically by the end of Year 10*
Social management		
Communicate effectively		
Identify and explain factors that influence effective communication in a variety of situations.	Analyse enablers of and barriers to effective verbal, nonverbal and digital communication.	Formulate plans for effective communication (verbal, nonverbal, digital) to complete complex tasks.
• *Review the functioning of the team, particularly after each team building activity.*		
Work collaboratively		
Contribute to groups and teams, suggesting improvements in methods used for group investigations and projects.	Assess the extent to which individual roles and responsibilities enhance group cohesion and the achievement of personal and group objectives.	Critique their ability to devise and enact strategies for working in diverse teams, drawing on the skills and contributions of team members to complete complex tasks.
• *Review the functioning of the team, particularly after each team building activity.*		
Make decisions		
Identify factors that influence decision making and consider the usefulness of these in making their own decisions.	Assess individual and group decision-making processes in challenging situations.	Develop and apply criteria to evaluate the outcomes of individual and group decisions and analyse the consequences of their decision making.
• *Review the functioning of the team, particularly after each team building activity.* • *Set team rules.*		
Negotiate and resolve conflict		
Identify causes and effects of conflict, and practise different strategies to resolve conflict situations.	Assess the appropriateness of various conflict resolution strategies in a range of social and work-related situations.	Generate, apply and evaluate strategies such as active listening, mediation and negotiation to prevent and resolve interpersonal problems and conflicts.
• *Review the functioning of the team, particularly after each team building activity (role play may be particularly useful).*		
Develop leadership skills		
Initiate or help organise group activities that address a common need.	Plan school and community projects, applying effective problem-solving and team-building strategies, and making the most of available resources to achieve goals.	Propose, implement and monitor strategies to address needs prioritised at local, national, regional and global levels, and communicate these widely.
• *Establish goals for each team meeting and agree responsibilities.* • *Complete student reflections.*		



FLL® Australian Curriculum Links

Design & Technologies

Years 5- 6	Years 7-8	Years 9-10
Knowledge & Understanding		
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 (ACTDEK019)	Investigate the ways in which products, services and environments evolve locally, regionally and globally and how competing factors including social, ethical and sustainability considerations are prioritised in the development of technologies and designed solutions for preferred futures (ACTDEK029)	Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved (ACTDEK040)
• *Review existing solutions to identified project issue.* • *Identify stakeholders and factors to consider in designing a solution to the identified project issue.* • *Interview experts regarding project topic and potential solutions.*		
Processes & Production Skills		
Critique needs and opportunities for designing and investigate materials, components, tools, equipment and processes to achieve intended design solutions (ACTDEP024)	Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035)	Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas (ACTDEP048)
• *Experimentation and problem solving to develop viable solutions to the identified project issue and to complete assigned robot game missions.*		
Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)	Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)	Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049)
• *Basic scientific, economic and technological literacies incorporated in presentation of Project and Robot Design.*		
Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)	Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)	Work flexibly to effectively and safely test, select, justify and use appropriate technologies and processes to make designed solutions (ACTDEP050)
• *Creating models and prototypes to demonstrate innovative solutions to project issue.* • *Consider components used in robot design to achieve robot game strategy.*		
Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions (ACTDEP027)	Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability (ACTDEP038)	Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051)
• *Create rubrics against which to assess project ideas and possible robot design solutions.*		
Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)	Use project management processes when working individually and collaboratively to coordinate production of designed solutions (ACTDEP039)	Develop project plans using digital technologies to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes (ACTDEP052)

- *Time management and project organisation to accomplish goals in an 8-week period.*

Digital Technologies

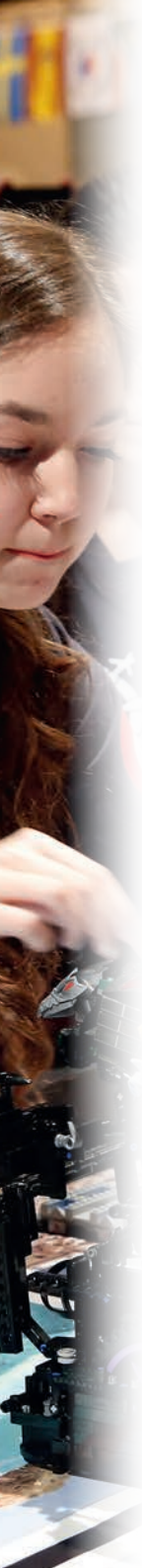
Years 5- 6	Years 7-8	Years 9-10
Processes & Production Skills		
Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)	Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)	Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases (ACTDIP040)
• *Creating and improving strategies to complete assigned robot game missions.*		
Implement digital solutions as simple visual programs involving branching, iteration (repetition) and user input (ACTDIP020)	Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)	Implement modular programs, applying selected algorithms and data structures including using an object-oriented programming language (ACTDIP041)
• *Experimenting and problem solving to implement robot game strategy.* • *Annotate programs to identify the purpose of each component.*		

FLL® Australian Curriculum Links

English

Year 5	Year 6	Year 7	Year 8	Year 9
Interacting with Others				
Clarify understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a point of view (ACELY1699)	Participate in and contribute to discussions, clarifying an interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions (ACELY1709)	Identify and discuss main ideas, concepts and points of view in spoken texts to evaluate qualities, for example the strength of an argument or the lyrical power of a poetic rendition (ACELY1719)	Interpret the stated and implied meanings in spoken texts, and use evidence to support or challenge different perspectives (ACELY1730)	Listen to spoken texts constructed for different purposes, for example to entertain and to persuade, and analyse how language features of these texts position listeners to respond in particular ways (ACELY1740)
• *A variety of research methods and resources undertaken collaboratively*				
User interaction skills, for example paraphrasing, questioning and interpreting non-verbal cues and choose vocabulary and vocal effects appropriate for different audiences and purposes (ACELY1796)	Use interaction skills, varying conventions of spoken interactions such as voice volume, tone, pitch and pace according to group size, formality of interaction and needs and expertise of audience (ACELY1816)	Use interaction skills when discussing and presenting ideas and information, selecting body language, voice qualities and other elements (for example music and sound) to add interest and meaning (ACELY1804)	Use interaction skills or identified purposes, using voice and language conventions to suit different situations, selecting vocabulary, modulating voice and using elements such as music, images and sound for specific effects (ACELY1808)	Use interaction skills to present and discuss an idea and to influence and engage an audience by selecting persuasive language, varying voice tone, pitch, and pace, and using elements such as music and sound effects (ACELY1811)
• *Sharing experiences and skills with the wider community.*				
Plan, rehearse and deliver presentations for defined audiences and purposes incorporating accurate and sequences content and multimodal elements (ACELY1700)	Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for defined audiences and purposes, making appropriate choices for modality and emphasis (ACELY1710)	Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements to promote a point of view or enable a new way of seeing (ACELY1720)	Plan, rehearse and deliver presentations, selecting and sequencing content, including multimodal elements, to reflect a diversity of viewpoints (ACELY1731)	Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for aesthetic and playful purposes (ACELY1741)
• *A variety of presentation methods and skills for sharing the project.*				

Year 5	Year 6	Year 7	Year 8	Year 9
Language				
Language for Interaction				
Understand that patterns of language interaction vary across social contexts and types of texts and that they help signal social roles and relationships (ACELA1501)	Understand that strategies for interactions become more complex and demanding as levels of formality and social distance increase (ACELA1516)	Understand how language is used to evaluate texts and how evaluations about a text can be substantiated by reference to text and other sources (ACELA1782)	Understand how rhetorical devices are used to persuade and how different layers of meaning are developed through the use of metaphor, irony and parody (ACELA1542)	Investigate how evaluation can be expressed directly and indirectly using devices, for example allusion, evocative vocabulary and metaphor (ACELA1552)
• *Working in teams and sharing experiences with multiple audiences requires effective communication, collaboration and interpersonal skills.*				



FLL® Australian Curriculum Links

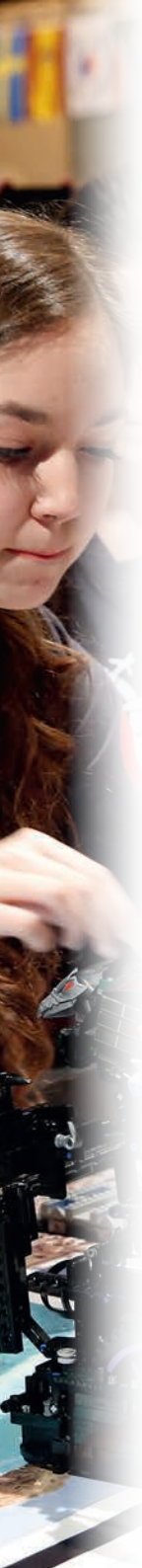
Science

Year 5	Year 6	Year 7	Year 8	Year 9
Science Inquiry Skills				
Planning and conducting				
Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086)	Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS103)	Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (ACSIS125)	Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (ACSIS140)	Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (ACSIS165)
• *Use scientific process for problem solving in relation to project innovative solution and robot game strategy.*				
Communicating				
Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS093)	Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS110)	Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS133)	Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS148)	Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (ACSIS174)
• *Present project and robot design process.*				

FLL® Australian Curriculum Links

Health and Physical Education

Year 5 & 6	Year 7 & 8	Year 9 & 10
Communicating and interacting for health and wellbeing		
Practice skills to establish and manage relationships (ACPPS055)	Investigate the benefits of relationships and examine their impact on their own and others' health and wellbeing (ACPPS074)	Investigate how empathy and ethical decision making contribute to respectful relationships (ACPPS093)
• *Participate in team building activities and review the impacts of different behaviours on other team members.*		
Examine the influence of emotional responses on behaviour and relationships (ACPPS056)	Analyse factors that influence emotions, and develop strategies to demonstrate empathy and sensitivity (ACPPS075)	Evaluate situations and propose appropriate emotional responses and then reflect on possible outcomes of different responses (ACPPS094)
• *Participate in team building activities and review the impacts of different behaviours on other team members.* • *Set team rules.*		
Learning through movement		
Participate positively in groups and teams by encouraging others and negotiating roles and responsibilities (ACPMP067)	Practise and apply personal and social skills when undertaking a range of roles in physical activities (ACPMP086)	Devise, implement and refine strategies demonstrating leadership and collaboration skills when working in groups or teams (ACPMP105)
• *Review the Core Values and how these are being applied by team members.* • *Set goals and responsibilities for each team meeting (and any homework).*		
Apply critical and creative thinking processes to generate and assess solutions to movement challenges (ACPMP068)	Evaluate and justify reasons for decisions and choices of action when solving movement challenges (ACPMP087)	Transfer understanding from previous movement experiences to create solutions to movement challenges (ACPMP106)
• *Participate in movement based team building activities and review the effectiveness of team decisions and actions.*		
Demonstrate ethical behaviour and fair play that aligns with the rules when participating in a range of physical activities (ACPMP069)	Modify rules and scoring systems to allow for fair play, safety and inclusive participation (ACPMP088)	Reflect on how fair play and ethical behaviour can influence the outcomes of movement activities (ACPMP107)
• *Participate in team challenges, identifying the rules and how these could be altered to better reflect the Core Values (particularly inclusion).*		



FLL® Australian Curriculum Links

Human and Social Sciences

Year 5	Year 6	Year 7
Inquiry and Skills		
Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges (ACHASSI094)	Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges (ACHASSI122)	Construct significant questions and propositions to guide investigations about people, events, developments, places, systems and challenges (ACHASSI152)
• *Brainstorm possible project topics based on the FLL theme.*		
Locate and collect relevant information and data from primary sources and secondary sources (ACHASSI095)	Locate and collect relevant information and data from primary sources and secondary sources (ACHASSI123)	Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources (ACHASSI153)
• *Research the project topic using a variety of appropriate sources.*		
Examine different viewpoints on actions, events, issues and phenomena in the past and present (ACHASSI099)	Examine different viewpoints on actions, events, issues and phenomena in the past and present (ACHASSI127)	Analyse primary sources and secondary sources to identify values and perspectives on people, actions, events, issues and phenomena, past and present (ACHASSI157)
• *Identify stakeholders relevant to the selected project topic.*		
Work in groups to generate responses to issues and challenges (ACHASSI102	)Work in groups to generate responses to issues and challenges (ACHASSI130)	Collaborate to generate alternatives in response to an issue or challenge, and compare the potential costs and benefits of each (ACHASSI160)
• *Work as a team to create an innovative solution to the project topic.*		
Use criteria to make decisions and judgements and consider advantages and disadvantages of preferring one decision over others (ACHASSI103)	Use criteria to make decisions and judgements and consider advantages and disadvantages of preferring one decision over others (ACHASSI131)	Develop and use criteria to make informed decisions and judgements (ACHASSI161)
• *Develop a rubric to evaluate possible project solutions.*		
Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict probable effects (ACHASSI104)	Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict probable effects (ACHASSI132)	Reflect on learning to propose personal and/or collective action in response to an issue or challenge, taking into account different perspectives, and describe the expected effects (ACHASSI162)
• *Develop an innovative solution to the project issue.* • *Share the project with experts, stakeholders and other interested parties.*		
Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, digital and non-digital representations and discipline-specific terms and conventions (ACHASSI105)	Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, digital and non-digital representations and discipline-specific terms and conventions (ACHASSI133)	Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, citations, graphic representations and discipline specific terms, conventions and concepts (ACHASSI163)
• *Share the project with experts, stakeholders and other interested parties.*		

FLL® Australian Curriculum Links

- *Create a comprehensive project presentation.*