

FIRST® LEGO® League Explore Northern Ireland curriculum link grid

Key Stage 2	
Communication	
Children should be given opportunities to engage with and demonstrate the skill of communication and to transfer their knowledge about communication concepts and skills to real-life meaningful contexts across the curriculum.	
Talking and Listening	<ul style="list-style-type: none"> – listen to and take part in discussions, explanations, role-plays and presentations. – contribute comments, ask questions and respond to others' points of view. – communicate information, ideas, opinions, and imaginings, using an expanding vocabulary. – structure their talk and speak clearly so that ideas can be understood by others. – adapt ways of speaking to audience and situation. – use non-verbal methods to express ideas and engage with the listener.
Reading	<ul style="list-style-type: none"> – read a range of texts for information, ideas and enjoyment. – use a range of strategies to read with increasing independence. – find, select and use information from a range of sources. – understand and explore ideas, event and features in texts. – use evidence from texts to explain opinions.
Writing	<ul style="list-style-type: none"> – talk about, plan and edit work. – communicate information, feelings, imaginings and ideas in a clear and organised way. – develop, express and present ideas in a variety of forms and formats, using traditional and digital resources, for different audiences and purposes. – write with increasing accuracy and proficiency.

Language and Literacy		
Focus	Approach	Pupils should be enabled to
Talking and Listening	Children should be helped to develop the ability to listen and respond in a range of contexts, thinking about what has been said and the language used, and to speak coherently and confidently for a variety of purposes and audiences. They should also be given opportunities to develop their ability to communicate and capture the interest of listeners.	<ul style="list-style-type: none"> – share, respond to and evaluate ideas, arguments and points of view and use evidence or reason to justify opinions, actions or proposals. – formulate, give and respond to guidance, directions and instructions. – prepare and give a short oral presentation to a familiar group, showing an awareness of audience and including the use of multimedia presentations. – identify and ask appropriate questions to seek information, views and feelings. – talk with people in a variety of formal and informal situations.
Reading	Children should be given opportunities to read for different purposes, developing strategies for researching, understanding, managing and refining information from traditional and digital sources. They should be encouraged, through stimulating and fun activities, to read widely for enjoyment and information.	<ul style="list-style-type: none"> – <i>read, explore, understand and make use of a wide range of traditional and digital texts.</i> – <i>engage in sustained, independent and silent reading for enjoyment and information.</i> – <i>use traditional and digital sources to locate, select, evaluate and communicate information relevant for a particular task.</i> – <i>represent their understanding of texts in a range of ways, including visual, oral, dramatic and digital.</i> – <i>consider, interpret and discuss texts, exploring the ways in which language can be manipulated in order to affect the reader or engage attention.</i>
Writing	Children should develop the ability to manage and communicate information effectively in their writing in order to produce more demanding, imaginative and factual texts including those in digital format. They should, over time, use a wider range of vocabulary choice, sentence structures and punctuation in their writing for a range of audiences.	<ul style="list-style-type: none"> – discuss various features of layout in texts and apply these, as appropriate, within their own writing. – write for a variety of purposes and audiences, selecting, planning and using appropriate style and form. – use the skills of planning, revising and redrafting to improve their writing, including that which they have composed digitally. – express thoughts, feelings and opinions in imaginative and factual writing. – use a variety of stylistic features to create mood and effect. – create, organise, refine and present ideas using traditional and digital means, combining text, sound or graphics.

Mathematics and Numeracy

Throughout Key Stage 2, children should continue to use a wide variety of materials, games, tools and ICT resources to develop and consolidate their mathematical skills and concepts. They should communicate in oral, pictorial and written form. They should use and extend their mathematical language by discussing, describing, comparing and explaining all aspects of their mathematics, progressing from the use of informal personal language to effective use of appropriate mathematical language.

Focus	Experiences	Progression
Number	Understanding Number and Number Notation	<ul style="list-style-type: none"> – count, read, write and order whole numbers. – estimate and approximate to gain an indication of the size of a solution to a calculation or problem.
	Patterns, Relationships and Sequences in Number	<ul style="list-style-type: none"> – explore and predict patterns and sequences of whole numbers, follow and devise rules for generating sequences. – understand and use multiples and factors and the terms prime, square and cube, appreciate inverse operations.
	Operations and their Applications	<ul style="list-style-type: none"> – develop strategies to add and subtract mentally. – know the multiplication facts up to 10 x 10. – engage in a range of activities to develop understanding of the four operations of number.
Measures		<ul style="list-style-type: none"> – develop skills in estimation of length . – appreciate important ideas about measurement including the continuous nature of measurement and the need for appropriate accuracy. – calculate perimeter and the areas and volumes of simple shapes.
Shape and space	Exploration of Shape	<ul style="list-style-type: none"> – construct 3-D shapes, investigate the number of faces, edges and vertices on these shapes, name and describe common 3-D shapes, explore the relationship between 2-D and 3-D shapes.
	Position, Movement and Direction	<ul style="list-style-type: none"> – understand the notion of angle in the context of turning, recognise right angles, understand clockwise and anti-clockwise, know the eight points of the compass, use Logo to understand movement and turning, be introduced to a programming language and use it to create pictures and patterns and to generate shapes.

The World Around Us

At Key Stages 2, The World Around Us is presented as four inter-related strands that connect learning across geography, history and science and technology.

Strand	Pupils should be enabled to explore	Possible key questions
Interdependence	<ul style="list-style-type: none"> – how they and others interact in the world. – the effect of people on the natural and built environment over time. 	<ul style="list-style-type: none"> – How do living things interact with each other in the environment?
Place	<ul style="list-style-type: none"> – ways in which people, plants and animals depend on the features and materials in places and how they adapt to their environment. – features of, and variations in places, including physical, human, climatic, vegetation and animal life. 	<ul style="list-style-type: none"> – How have we changed over time? – What is in our world?
Movement and Energy	<ul style="list-style-type: none"> – the causes and effect of energy, forces and movement. 	<ul style="list-style-type: none"> – Why do things move? – How do things work? – Why do people and animals move? – Where do things move?
Change Over Time	<ul style="list-style-type: none"> – how change is a feature of the human and natural world and may have consequences for our lives and the world around us. – ways in which change occurs over both short and long periods of time in the physical and natural world. 	<ul style="list-style-type: none"> – How do things change? – What kind of changes happen, have happened, might happen? – How can we influence change?

The Arts		
Area	Pupils should be enabled to	Possible examples
Art and Design	<ul style="list-style-type: none"> - Investigate and respond to direct sensory experience; including visual, verbal, spatial and tactile dimensions, memory and imagination. - Look at and talk about resource material to stimulate their own ideas. - Talk about their own and others' work and how it was made, use observations to identify difficulties and suggest modifications. - Experiment with a range of media, materials, tools and processes such as: three- dimensional construction. 	<ul style="list-style-type: none"> - look at a range of natural and man-made objects, exploring and getting to know the characteristics of what is seen by close observation, touch and recording. - visualise and describe objects, environments, places and entities. - produce individual and group visual work so as to develop responses over time; contributing to the development of ideas in the course of the work. - exploit the visual properties of a range of two and three-dimensional media. - reflect on the experiences of making work, making evaluative comments in relation to their own work. - use modelling and construction techniques to make three-dimensional work.

Personal Development and Mutual Understanding		
Area	Pupils should be enabled to explore	Children should have opportunities to explore
Personal Understanding and Health	<ul style="list-style-type: none"> - their self-esteem, self-confidence and how they develop as individuals. - effective learning strategies. 	<ul style="list-style-type: none"> - acknowledging that everyone makes mistakes, that attempts can fail or have disappointing outcomes but that this is a natural and helpful part of learning. - recognising how they can develop and improve their learning.
Mutual Understanding in the Local and Wider community	<ul style="list-style-type: none"> - playing an active and meaningful part in the life of the community and being concerned about the wider environment. 	<ul style="list-style-type: none"> - developing an awareness of the experiences, lives and cultures of people in the wider world.