



Corpus Christi Primary School

STE-M (STE Education) Plean Scoile

Introduction

This document is a statement of the aims, principles and strategies for the teaching and learning of STEM in Corpus Christi Primary School. This plan will form the basis of each teacher's long- and short-term planning in STE - M and so will influence the teaching and learning in individual classrooms. It will also inform teachers of our approaches and methodologies in this subject area. The plan was drafted in accordance with the guidelines set out by the new Science, Technology, Engineering and Mathematics (STEM) Education Specification For Primary and Special Schools Policy (2023) in consultation with our school staff. The policy was reviewed in 2025/2026. A review of our STEM policy takes place every three years. The implementation of this policy is the responsibility of all the teaching staff.

Rationale

STE is a valued and integral part of the curriculum in Corpus Christi Primary School. In line with the *Science, Technology, Engineering and Mathematics (STEM) Education Specification for Primary and Special Schools* (DES 2025/2026), Corpus Christi PS recognises that all children, regardless of background or ability, should be supported in developing the knowledge, skills and dispositions necessary to participate as active and informed citizens. The specification affirms children as naturally curious investigators, designers and creators, and highlights the role of Science, Technology and Engineering (STE) Education in deepening understanding of the natural and designed world, fostering problem-solving, promoting agency and connecting learning to children's lived experiences.

Accordingly, Corpus Christi PS is committed to providing a structured, inclusive and child-centred STE programme across all class levels. Through inquiry-based and collaborative learning, pupils will explore nature, materials, the living world, energy and forces, while developing an informed awareness of technological advancement and human innovation and design. Our approach ensures coherent, progressive and meaningful STE experiences that support the holistic development of every pupil in line with the new Primary Curriculum Framework.

We aim to:

- foster agency in children,
- connect them with experiences and interests,
- aid resilience development; and,
- provide opportunities to build confidence in both their own and wider environments

Vision

At Corpus Christi Primary School, we believe that all children, regardless of ability, background, or learning profile, can benefit from rich and meaningful experiences in Science, Technology, and Engineering (STE) Education. Through inclusive and engaging STEM learning, we aim to nurture children's curiosity, creativity, confidence, and capacity to engage fully with the world around them, while also supporting equity of opportunity and helping to

address the STEM participation gap for pupils from disadvantaged or underrepresented backgrounds.

This plan seeks to ensure that all children experience a broad, balanced, and integrated STEM curriculum which promotes scientific inquiry, playful experimentation, investigation, computational thinking, and the engineering design process. Through authentic and collaborative learning experiences, pupils will develop key competencies and life skills such as critical thinking, problem-solving, communication, creativity, resilience, and teamwork.

In Corpus Christi PS, we are committed to fostering meaningful learning experiences that recognise children as unique, competent, and capable learners, while supporting a continuum of progression in their STE learning and development throughout their primary education.

Using their teacher agency and professional judgement, teachers will provide scaffolded and differentiated learning opportunities drawn from the strands and elements of the STEM specification. Through real-life contexts, inquiry-based learning, and integrated STEM experiences, pupils will be encouraged to explore, design, question, investigate, and apply their learning in purposeful and engaging ways.

STEM Education (STEM Policy Statement)

STEM education is multi-faceted and goes well beyond the main disciplines that constitute the acronym STEM. The foundations for STEM education begin in early childhood. From the earliest years through their play experiences and family environment, children engage with the world in ways that can promote learning related to Science, Technology, Engineering and Mathematics. Young children naturally engage in early STEM exploration through hands-on multisensory and creative experiences. By engaging in these experiences, young children are developing curiosity, inquisitiveness, critical-thinking and problem-solving capacities which are built on through their primary and post-primary school experience.

The four STEM disciplines are Science, Technology, Engineering and Mathematics and may be summarised as follows

- **Science** enables us to develop our interest in, and understanding of, the living, material and physical world and develops the skills of collaboration, research, critical enquiry and experimentation
- **Technology** covers a range of fields which involve the application of knowledge, skills and computational thinking to extend human capabilities and to help satisfy human needs and wants, operating at the interface of science and society
- **Engineering** is about the design and creation of products and processes, drawing on scientific methods to provide the skills and knowledge to solve real-world problems
- **Mathematics** equips us with the skills needed to interpret and analyse information, simplify and solve problems, assess risk, make informed decisions and further understand the world around us through modelling both abstract and concrete problems

(DES 2017, p.6)

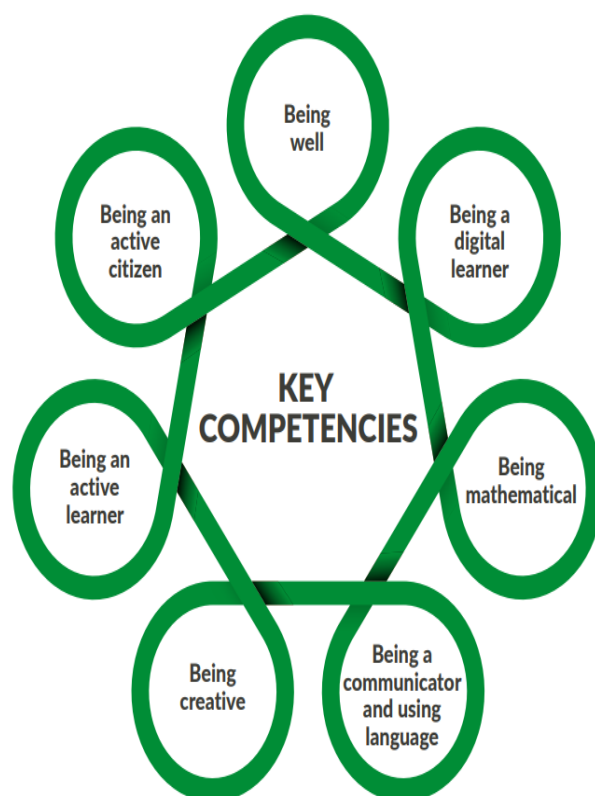
Aims

The STE Education programme in Corpus Christi PS aims to enable children to:

- ❖ *Develop their curious disposition*
Explore the world with curiosity and playfulness and develop an appreciation for the endless possibilities of Science, Technology and Engineering.
- ❖ *develop STEM skills*
Develop, use and adapt a variety of Science, Technology and Engineering skills in effective ways.
- ❖ *Build conceptual and procedural understanding.*
Understand and apply key Science, Technology and Engineering concepts and procedures.
- ❖ *Create and innovate.*
Use imagination and creativity to generate ideas, make discoveries and explore possible solutions to real-world and imagined problems in Science, Technology and Engineering.
- ❖ *Develop critical thinking.*
Be open-minded whilst questioning, discussing and making judgements using evidence.
- ❖ *Communicate ideas and use disciplinary language.*
Develop, use and apply Science, Technology and Engineering language in order to communicate, evaluate and reflect on learning experiences.

Broad Objectives

- ❖ To continue being a school of excellence in Corpus Christi Primary School through the Curious Minds Awards
- ❖ To create a shared STE learner experience for the children in Corpus Christi Primary School - developing STE links within primary school, post primary school, parental involvement, STEM outreach, and Universities/ Colleges
- ❖ To upskill teachers/educators in the area of STE on an annual basis
- ❖ To enhance and develop each pupil's STE literacy in Corpus Christi Primary School, particularly the language associated with the area.
- ❖ To help develop the child's life skills and problem-solving ability for the wider world
- ❖ To foster and maintain a positive STE environment in Corpus Christi in which all the children's needs will be met
- ❖ To develop a whole school shared STE approach
- ❖ To follow the annual Corpus Christi STE school policy
- ❖ To increase pupils' performance in world-wide examinations in the area of mathematics and science
- ❖ To review Corpus Christi Primary School STE policy every three years
- ❖ To continue to support the children's STE key competencies of being; an active citizen, an active learner, a communicator and using language, creative, a digital learner, mathematical and well



Approaches

Teachers will take a thematic approach in ensuring all strands and elements are covered throughout the academic year and use their teacher agency to plan accordingly in line with the suggested topics listed below, in addition to other areas they deem appropriate, any given year.

STE is taught interconnectedly across Science, Technology and Engineering and is also integrated across the curriculum.

Time is allocated at the end of lessons for children to explore being active and curious, open minded and innovative, organized and persevering and logical and informed through discussion, exploration and problem solving as part of the lessons.

STE weeks will be explored each term and will incentivize a schoolwide approach to the curriculum topics.

Curriculum in Practice

The six strands of the new STE curriculum include:

- ❖ Nature of STEM
- ❖ Living Things
- ❖ Materials
- ❖ Energy and forces
- ❖ Technology, and,
- ❖ Engineering

These strands are interconnected rather than discrete and offer a clear and structured way to present the learning outcomes across 4 key stages:

Stage 1: Junior and Senior Infants

Stage 2: First and Second Classes

Stage 3: Third and Fourth Classes

Stage 4: Fifth and Sixth Classes

Within the strands, the elements of ‘Exploring and understanding’, ‘Creative and critical thinking’, ‘Applying and problem solving’, and ‘Evaluating and communicating’ are engaged with as part of STE Education also through the pedagogical approaches as highlighted in Figure 5 of the STE Education Specification policy document below.

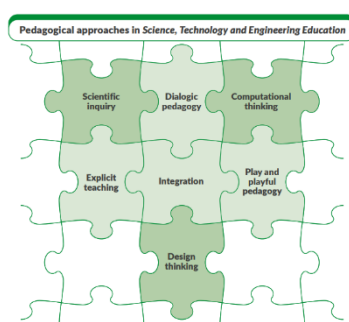


Figure 5: Teaching in Science, Technology and Engineering Education

CORPUS CHRISTI PRIMARY SCHOOL – STE Education

Corpus Christi PS STE Plean Scoile Progressive Lesson Ideas for class levels and stages This is not an exhaustive list but can be taken from alongside teacher agency of topics covered in class and						
	Nature of STEM	Living Things	Materials	Energy and Forces	Technology	Engineering
Junior Infants	Focus: Exploring and noticing Activities - Nature walks - Sorting natural objects - Sink/float predictions - Building with blocks/natural materials - Exploring shadows - STEM story discussions Skills - Curiosity - Observation - Talking about ideas	- Sheep - Farm Animals - Living Versus Non Living things - Nocturnal Animals - Growth and cycle of seeds - Summer Plants - Sea horses - Sea Creatures - Body Parts - Seasons – Identifiers	- Waterproof/non waterproof clothing - Materials for clothes 3D farm building - Making clothes* - Making animals* - Making vehicles* - Making sea creatures* - Making pictures* - Homes – 3 Little Pigs *with playdoh and other materials	- Animal sounds - Sound walks - Magnetism- things that are magnetic - Push and pull toys - Light – shadows/puppet shows - Floating and Sinking at the sea - Electricity at home - Butter making	Focus: Being Digital + Creating Bee-Bots - Move Bee-Bot to picture cards (Being Digital) - Follow teacher-created path (Managing Thinking) - Predict where Bee-Bot will stop (Thinking) iPads - Take photos of seasonal changes (Managing Information) - Draw plants/animals (Creating) - Record sound walks (Creating) Other - Interactive whiteboard sorting (Being Digital)	Focus: Exploring and Building Suggested Tasks - Build a tower with blocks - Make a house for teddy - Create a bridge for toy animals - Build a farm using recycled materials - Design a boat that floats - Make ramps for toy cars - Build with magnetic tiles - Create animal shelters - Build using playdough and sticks - Make paper chain bridges Skills - Exploring materials - Balancing - Joining - Talking about designs
Senior Infants	Focus: Asking questions Activities - Predict and test activities - Nature scavenger hunts - Exploring how toys work - Building and improving structures - Weather observations Skills	- Plants and Animals in our School - Myself – Growing and changing - My senses - Seasonal Nature Trails - Hibernation - Leaves and trees - The Beach - Habitats - Sea Creatures - Pets in homes - Growing and changing – my body - Mammals - Reptiles - Insects	- Building houses/schools - Sorting materials – soft/hard etc - Waterproof materials - Melting and change - Metal - Plastic - Glass - Wood - Fabric - Lava Lamps - Creeping Colours - Elasticity - Making Quilts - Making friendship bracelets	- Sound – high, low, soft, loud - Making sounds - Day/Night - Light in Autumn - Weather - Magnets and magnatiles - Magnetic fishing - Electricity - Force on toys - Warmth in winter – thermal - Hot vs cold - Shadows and the sun - Light/Dark in the summer - Dangers of electricity	Focus: Creating + Managing Thinking Bee-Bots - Create simple routes (Creating) - Debug wrong route (Managing Thinking) - Partner turns (Collaborating) iPads - Book Creator class science book (Creating) - Record weather reports (Communicating) - Stop motion plant growth (Creating) Chromebooks	Focus: Building for a Purpose Suggested Tasks - Build a strong bridge - Design a waterproof shelter - Create a marble run - Build a zoo enclosure - Design a chair for teddy - Make paper airplanes - Build a vehicle with wheels - Create a windmill - Build homes for animals - Make a boat that carries objects Skills - Predicting - Testing

	- Predicting - Questioning - Problem solving	- Fish - Birds - Zoo/Farm Life			Drag/drop sorting (Managing Information)	- Improving - Working together
First Class	Focus: Investigating and recording Activities - Simple fair tests - STEM stations - Building challenges - Sorting/classifying tasks - Recording findings with drawings/photos Skills - Observing - Recording - Comparing	- Animal Homes - Life Cycles – Tomatoes and Pumpkins - Owls - Irish Animals - Seals - My Senses - Seeds and plant cycles - Irish Animals - Animal Offspring - Healthy Body - Seashore living things - Ladybird	- Salt Crystals - Blubber - Bouncing Balls - Heating and Cooling - Paper strength investigation (flat vs folded vs rolled paper) - Which material makes the best umbrella for a toy? - Fabric testing – which is best for a teddy blanket? (softness test) - Natural vs man-made materials - Material scavenger hunt around school - Testing materials for sound (which makes the quietest shaker?) - Which material keeps ice frozen longest?	- Light and greenhouses - Neat - Magnetism and materials with magnetism - Exploring slopes and ramps – push and pull - Rolling objects investigation - Which surface slows movement most? (grass, table, mat) - Paper airplane distance test - Wind socks – exploring moving air - Spinners - Toy parachutes – slowing falling objects - Shadow tracing - Torch investigation - Ramp rolling - Pulling force test	Focus: Creating + Communicating Bee-Bots - Treasure hunt coding (Managing Thinking) - Multiple stop routes (Creating) - Pair programming (Collaborating) LEGO WeDo - Build moving animal (Creating) - Program movement (Being Digital) - Predict outcome (Managing Thinking) iPads - Record investigations (Communicating) - Take experiment photos (Managing Information) - Voice explanations (Communicating) Chromebooks - Label diagrams (Creating)	Focus: Designing and Testing Suggested Tasks - Build tallest tower challenge - Make parachutes for toys - Design a paper bridge - Build a playground model - Create a marble maze - Design a boat to carry cubes - Build a greenhouse model - Make vehicles with moving wheels - Create a house using limited materials - Design a bridge using only paper Skills - Testing ideas - Comparing results - Measuring - Problem solving
Second Class	Focus: Designing solutions Activities - Design-and-make tasks - Testing materials - STEM teamwork challenges - Measuring and comparing - Recording using iPads Skills - Planning - Testing	- My Body - My Eye - My Brain - My Bones - Migration - Farm Life - Winter - Polar Regions Animals - Seed Life Cycles - Healthy Body - Seasonal Changes - Habitats - Hibernation - Migration - Senses	- Mixing Materials - Waterproof Materials - Mixing Materials - Making Honey - Making Butter - Transparent / translucent / opaque sorting using classroom items - Absorbency test - Strongest bridge challenge (card + paper only) - Material for lunchbox liner - Flexible vs rigid materials sorting	- Heat and fireworks - Temperature - Sources of light - Magnetism - Observing and recording weather - Making sounds using classroom materials - Heating and cooling - Rainbow lava lamps - Water cycle - Melting - Fire Safety - Balloon cars (air as force) - Domino chain reactions (push force transfer)	Focus: Managing Thinking + Collaborating Bee-Bots - Grid map challenges (Managing Thinking) - Design own coding mat (Creating) - Partner debugging (Collaborating) LEGO WeDo - Build fan/vehicle (Creating) - Change motor speed (Managing Thinking) Sphero - Follow taped path (Being Digital) - Draw shapes (Creating)	Focus: Solving Problems Through Design Suggested Tasks - Build a balloon-powered car - Design a lighthouse - Create a strong boat - Build a tower that withstands wind - Make a waterproof container - Design a bridge for toy cars - Build a pulley with classroom materials - Create a mini playground - Build a shelter for rainy weather - Make a paper chair for a toy

	Improving design		- Rough vs smooth texture rubbings - Designing a shoe for rainy day - Which material protects an egg? - Paper chain strength test - Best material for flag (wind resistant) - Materials that bend and return to shape	- Marble run investigations - Friction with shoes – smooth vs rough surfaces - Wind-powered boats in tray of water - Gravity drop test - Swing investigation – gentle vs strong push - Toy car collision test - Stretch force with elastic bands - Sun warming investigation (objects in sun vs shade)	iPads - Stop motion life cycles (Creating) - Record fair tests (Communicating) Chromebooks - Simple science reports (Communicating)	Skills Planning Testing Improving designs Teamwork
Third Class	Focus: STEM in everyday life Activities - Bridge investigations - Coding simple robots - Renewable energy discussions - Measuring and graphing - STEM research tasks Skills - Designing - Measuring - Evaluating	- Australian Animals - Irish farms animals and environments - Family traits and inherited characteristics - How humans change as they grow - Plants and animals that adapt to seasonal change - Animal adaptations in winter - Ancient Egyptian farming along the Nile - Ration diets and nutrition during World War 2 - Irish woodland habitats - How the ear helps us hear sound	- Gas to blow up a balloon - Junk Art - Paper absorbency - Blubber experiment - Paper helicopters - Lego pyramids - Lego movie for St Patrick - Testing absorbency of household materials - Reversible and irreversible changes - Designing a Christmas decoration using strong materials - Investigating camouflage materials used in World War 2 - Materials used to build pyramids - Comparing modern and old Irish building materials - Exploring materials used in musical instruments	- Acceleration of cars – friction - Sound vibrations - Distance of sound - Creating musical instruments - Pushes and pulls in everyday family life - Investigating how materials change when heated or cooled - Circuits in Christmas lights - Forces involved in parachutes during World War 2 - Simple machines used in Ancient Egypt - Exploring wind energy in Ireland - Investigating vibrations using tuning forks - Pitch investigation using elastic bands	Third Class Focus: Creating + Managing Information LEGO Spike (intro) - Moving robot builds (Creating) - Distance test (Managing Information) - Speed comparison (Thinking) Micro:bit (intro) - Temperature display (Managing Information) - Shake animation (Creating) - Step counter (Thinking) Sphero - Maze coding (Managing Thinking) - Angle turns (Being Digital) Chromebooks - Google Slides presentations (Communicating) - Research habitats (Managing Information)	Focus: Structures and Movement - Suggested Tasks - Build a bridge and test weight - Design a moving vehicle - Create a catapult - Build a tall freestanding tower - Make a water transport system - Design a marble run with turns - Build a wind-powered vehicle - Create a pulley lift - Design a stable house - Build a LEGO moving model Skills Measuring Evaluating Designing Recording findings
Fourth Class	Focus: Improving designs Activities	- The Farm – Irish agriculture - Healthy lifestyles investigation	- Building a school using junk art and lego - Making butter	- Sound and noise pollution - Sound and pitch - Insulation	Fourth Class Focus: Managing Information + Collaborating LEGO Spike	Suggested Tasks - Build a strong bridge with limited materials - Design a crane

	- STEM project challenges - Coding tasks - Testing and redesigning models - Exploring simple machines - Creating presentations Skills - Evaluating - Teamwork - Data handling	- Pulse rate before and after exercise - Food groups and nutrition - School habitat survey - Life cycle of farm animals (Farming) - Pollinators and crops (Farming) - Food chains on the farm (Farming) - Roman diet and health (Ancient Rome) - Animals of North America (Native Americans) - Americans) - Animal communication (Sound) - Irish ecosystems (Ireland) - River and pond habitats (Water) - Sunflower investigations (Ukraine)	- Construct an aqueduct using lego and bamboo straws - Blizzard in a jar experiment - Best material for schoolbag straps - Materials used on farms - Roman building materials - Building teepees - Materials that absorb sound - Materials used in Irish homes - Waterproof materials testing - Conductors and insulators - Building strong bridges	- Forces in playground equipment - Light and shadow around school - Heat loss in classrooms - Wind energy on farms - Building Roman catapults - Circuits with Christmas lights - Floating canoe investigation - Vibrations investigation - Wind energy in Ireland - Water resistance investigation - Friction investigations - Wind and solar energy	- Obstacle avoiding robot (Thinking) - Speed variable testing (Managing Information) - Group builds (Collaborating) Micro:bit - Temperature investigations (Managing Information) - Compass direction activity (Being Digital) - Reaction game (Creating) Sphero - Timed races (Managing Information) - Team challenges (Collaborating) Chromebooks - Google Sheets graphs (Managing Information) - Research mini projects (Communicating)	- Create a water filter - Build a tower to survive shaking - Design a fairground ride model - Make a vehicle that travels furthest - Build a wind turbine model - Create a protective package for an egg - Design a bridge with a weight goal - Build a LEGO machine with gears Skills Fair testing Redesigning Team problem solving Using simple machines
Fifth Class	Fifth Class Focus: Applying STEM thinking Activities - Sustainable design tasks - Coding investigations - Prototype building - Data collection - STEM challenge stations Skills - Critical thinking - Planning - Independent learning	- Animals from Norman Times - Digestive System - Teeth - Healthy Eating - Fighting Infections - Immune Systems - Ecosystems – The Burren - Parts of a Flower - photosynthesis	- Homes – building materials - Solids, liquids, gases - Heating and cooling - Colour mixing - Properties of acids and alkalis - Reversible and irreversible changes - Rusting investigation - Insulators and conductors - Filtering and separating materials - States of matter - Testing absorbency of fabrics - Water purification investigation - Strength of different materials	- Heat and Insulating homes - Heat conductors - Convection Currents - Friction and air resistance - Sound waves – vibrations, travel, phones - Light – sun catchers/reflections/mirrors - Light as a source of heat - Gravity – weighted tests - Solar system push and pull - Mass and weight - Spring balance tests	Fifth Class Focus: Creating + Evaluating LEGO Spike - Engineering challenges (Creating) - Test and improve builds (Managing Thinking) - Group design tasks (Collaborating) Micro:bit - Light sensor investigation (Managing Information) - Reaction timer (Creating) - Step counter experiment (Thinking) Sphero - Maze design challenge (Creating) - Speed investigations (Managing Information) Chromebooks - Google Forms surveys (Managing Information)	Focus: Planning and Improving Designs Suggested Tasks - Design a model home - Build a large marble run - Create a vehicle for rough surfaces - Design a bridge with budget limits - Build a solar oven - Make a water transport device - Design a strong tower challenge - Build a LEGO robot challenge - Create a pulley system - Design packaging to protect fragile items Skills Planning Budgeting materials Improving designs Evaluating success

			Biodegradable vs non-biodegradable materials		Research presentations (Communicating)	
Sixth Class	Focus: Independent STEM inquiry Activities - STEM investigations - Robotics projects - Research and presentations - Model building - Analysing results Skills - Inquiry - Problem solving - Communication - Collaboration	- Lungs - Mammals - Arachnids - Insects - Life Cycle of hedgehogs - Food chains - Life Cycle of Mayfly - Life Cycle of Dandelion - The Ear and hearing	- Atmospheric pressure - Building bridges - Soluble and insoluble - Baking - Non mixing liquids - Chemical reactions - Designing waterproof materials - Dissolving and solutions - Environmental impact of materials - Plastics and recycling - Mixing materials and separating mixtures - Heat-resistant materials - Materials used in construction - Sustainable packaging design - Investigating gases released in reactions	- The Sun and the solar system - Wind farms and force - Aerodynamics - Paper airplanes - Sound – radio, soundwaves, amplifying, pitch - Water versus air as mediums of sound - Lever - Wheels - Axes - Rollers	Sixth Class Focus: Designing + Problem Solving LEGO Spike - Design own robot solution (Creating) - Sensor-based coding (Managing Thinking) - Evaluate design (Managing Information) Micro:bit - Environmental monitor (Creating) - Alarm system (Creating) - Data collection investigation (Managing Information) Sphero - Complex maze coding (Managing Thinking) - Team challenges (Collaborating) Chromebooks - Google Sheets data analysis (Managing Information) - Research projects (Communicating) - Scratch coding (Creating)	Focus: Independent Engineering Projects Suggested Tasks - Build a sustainable town model - Design a complex bridge - Create a chain reaction machine - Build a moving LEGO vehicle - Design a fairground ride - Make a flood protection model - Create a water filtration system - Design a strong structure challenge - Build a programmable robot task - Complete STEM team challenges Skills Independent design Project planning Evaluating and improving Collaboration

Technology and Computational Thinking School Plan

<u>Name</u>	<u>Image</u>	<u>Class Group</u>	<u>Description</u>	<u>Accessed</u>
Bee-bot		Junior Infants	Robotic floor device to introduce coding to younger children	Science Press
Bee-bot app		Senior Infants	Step beyond the bee-bot where children explore coding on the iPad	iPads: in infant rooms
Junior Scratch		First Class	Visual programming language designed to introduce coding skills	iPads in main school
Scratch		Second Class	Free programming language, where you can create your own interactive stories, games and Animations	Online at https://scratch.mit.edu/download
LEGO We Do Kits			Visual programming and engineering	And on iPads in Main School
Tynker		Third Class	Computer programming games online	School press and iPads
LEGO We Do Kits			Visual programming and engineering	Online using chromebooks or iPads https://www.tynker.com/
Lightbot		Fourth Class	Educational video game for learning software programming concepts	iPads
LEGO Spike			Visual programming and engineering	School press and iPads

Micro: bit		Fifth Class	Micro:bit is a pocket-sized computer that introduces you to how software and hardware work together. It has an LED light display, buttons, sensors and many input/output features that you	Science Press
LEGO Spike			Visual programming and engineering	Science Press and iPads

Hour of Code			can program and physically interact with	Online www.hourofcode.com
Code.org	 Code.org	Sixth Class	Website that aims to encourage people to learn computer science	Online: www.code.org
Sphero Balls			Sphero SPRK+ is a programmable robot ball designed to inspire creativity and curiosity through coding and play. With SPRK+, you can easily learn programming, complete hands-on STEAM activities, and share your creations with the community.	Science Press
Hour of Code				Online www.hourofcode.com

Corpus Christi Primary School STE weeks

Corpus Christi Primary School will hold both termly weeks associated with the specific domains of STE. During these weeks pupils will not only have a chance to enhance their STE skills and develop their Computational Thinking. Throughout these weeks pupils and teachers will be invited to attend various STEM and Computational Thinking events locally. Guest speakers and events will be organised for classes.

TERM 1: CCPS Science/STEM Week – November

TERM 2: CCPS Engineers Week/Computational Thinking Week – March

TERM 3: Technology focus

Overview of the Strands and Elements for each Class Stage

Discussion and agreement by our school staff in relation to the headings on the grid below have provided an overview of the STE whole school plan programme throughout the school, in order to promote continuity and progression and minimise unnecessary overlap and duplication.

Teacher Planning/ Preparation + Reporting

Teachers will plan using the whole school STE plan suited to each stage. Strands and learning outcomes will be used to create yearly schemes of work. Strand units and outcomes planned will be listed in fortnightly schemes and those achieved recorded in the Cuntas Míosúil.

Integration with other subjects will be taken into account while planning.

- Planning for STE is done on a short term basis
- Teachers plan according to year group and share responsibilities amongst themselves in advance of lessons.
- Strands/ Learning outcomes/ Competencies and Teaching Methodologies should be recorded on the monthly Cuntas Míosúil.

The following headings are necessary when planning for STE

Long-Term Planning

Short-Term Planning

Strands	Strands and Learning outcomes
Learning Outcomes	Content Objectives • How they will be achieved
Learning Experiences	Competencies • How they will be achieved
Elements	New Vocabulary
Competencies	Learning Experiences/Integration
Integration/Linked Themes	Assessment and monitoring • Teacher Observation/ Teacher Designed Tasks and Tests • Student Self-Evaluation

Children's Voice and Agency

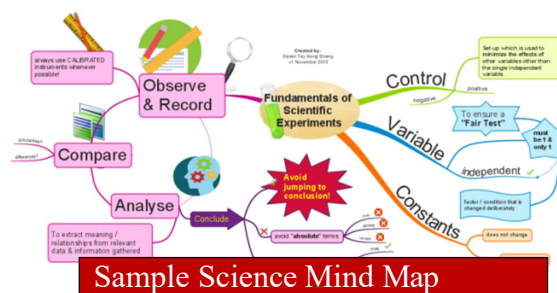
In Corpus Christi Primary School, children's agency may be the starting point for scientific activities. Children will be given opportunities to test their ideas through practical investigations. A wide range of strategies will be used to explore the children's ideas.

Children are encouraged to: generate ideas and questions, make choices about materials and approaches, express personal choice and agency through design, and revisit and adapt their work via discussion.

This approach supports ownership of learning and values the child as designer and creative thinker.

These strategies may include:

- Discussion + Questioning
- Annotated Drawings
- Brainstorming + Concept Mapping
- Questioning + Think, Pair, Share
- KWL Charts + Before/ After drawings



Approaches and methodologies

The teaching methods used STE will reflect the key methodologies of the Primary School Curriculum Framework and the STE Education Specification for Primary and Special Schools

- Scientific Inquiry
- Dialogic Pedagogy
- Computational Thinking
- Explicit Teaching
- Integration
- Play and Playful pedagogy
- Design thinking

Linkage and Integration

Opportunity for the use of an integrated approach exists in all levels in the STE Education Curriculum within the school. The strands work on a topic of investigation which may incorporate strands from other curriculum areas. Teachers will make provision for agency and linkage in their short-term planning in this regard

Inclusion

STE Education teaching in Corpus Christi aims to provide inclusive and meaningful learning experiences for all pupils across the school using the Universal for Design Learning approach. Teachers use a differentiated and child-centred approach, adapting the pace, content, learning experiences, and teaching methodologies to support the diverse needs, strengths, and stages of progression of all learners. These approaches are reflected in teachers' planning and preparation.

The needs of pupils with additional educational needs are carefully considered when planning STE learning experiences and related activities. Support may be provided through scaffolded instruction, peer collaboration, targeted support from the class teacher, SET teacher, or SNA, and the use of flexible and supportive learning environments. Pupils are encouraged to learn through active participation, observation, discussion, and shared problem-solving experiences with their peers.

Where appropriate, pupils with more complex needs may receive additional support to enable meaningful engagement and participation. Pupils requiring further challenge will be encouraged to extend their inquiry, investigation, and research skills, and may be given opportunities for leadership and collaboration within group activities. Through differentiation and inclusive practice, teachers aim to ensure that every child can participate successfully and experience achievement in STE Education.

Equality of participation and access

We are committed to providing a teaching environment conducive to learning. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability.

Assessment and record keeping

Looking at Children's Work:

Children's progress in STE Education is assessed through:

- Teacher observation
- Teacher designed tasks and tests
- Pupils work samples, projects, portfolios, concept maps and annotated drawings
- Self-assessment
- Conferencing
- Questioning
- Identify areas of difficulty in order to respond to the needs of the pupils
- Establish learning outcomes
- Assist the teachers in assessing their own practice and methodologies
- Assist the teacher with short term planning

Organisation

Timetable

As per the new Primary Curriculum Framework, STE Education falls under the band of flexible curriculum time and is given a monthly allocation rather than weekly which can be allocated according to teacher agency over the course of a month. This allows for collaborative project work for lessons.

The monthly time allocation for each Stage is as follows:

Stage 1: 3hours and 20 minutes

Stage 2: 4hours

Stage 3 & 4: 5hours

Displays

- ❖ In the classroom, school corridor/hall, on window of school etc.
- ❖ Outside school – garden and geodome
- ❖ local library (competitions) etc.
- ❖ School Website/ Social Media
- ❖ Curious Minds Awards Wall

Resources and ICT

STEM resources and equipment will be stored in the SCIENCE press and other designated areas within the school each year. Staff will be updated with location of STEAM drawers annually dependent on space available in classrooms. These facilities will be updated and maintained by the STEM coordinator/team.

See Appendices 1 for sample STEM resource

Health and Safety

During practical work teachers should be aware of the safety implications of any work being undertaken. Children should be encouraged to observe safety procedures during all tasks. The following is a summary of safety issues in the different strands of the curriculum:

- Outdoor work should be based in areas that are accessible and safe.
- Preliminary visit by teachers should be used to identify any possible hazards.
- Children should wash their hands after handling animals, plants or soil.
- Cuts, grazes and skin infections should be covered.
- Prior to engaging in any outdoor work the children and teacher should discuss how they will care for the animals and plants they may collect.
- Children should draw up their own conservation code before working in the outdoor environment.
- When engaged in work in the strand unit **Light** the pupils should use plastic mirrors, should not look directly at the sun or very bright beams of light.
- When working in the strand unit **Electricity and Magnetism** the children should be reminded of the importance of not using mains current, disposing of batteries properly.
- Magnets should be stored properly to preserve their magnetism. They should be stored with their keepers.
- Hammering, dropping or heating magnets will cause them to lose their magnetic properties.
- When working in the strand unit **Heat** teachers should be careful in organizing activities involving hot water.
- During **Designing and Making** activities, teachers should demonstrate and ensure that pupils are able to safely use any tools needed.
- During **Technology** lessons, children will be reminded of safety protocols and it is up to each individual teacher to ensure that devices are returned as they were received, plugged in, recharged and cared for in an appropriate manner.

Staff Development

The STE Education plan is implemented by the individual class teachers and SET teachers. There is frequent co-operation and sharing of ideas, approaches, methodologies and resources amongst the staff. Teachers are informed via the staff Aladdin System and local Education centre of any upcoming professional development courses in STE Education. Attendance at such courses e.g. Education Centre, is promoted and the sharing of knowledge and skills facilitated at staff meetings or planning days.

Parental involvement/Community links

We encourage parental involvement in the formation of our school policies. Draft policies are provided to the Parent's Association so parents are given the opportunity to contribute. The Board of Management and the Parents Association are given draft copies of our policies and plans and bring them to the attention of the wider community.

We encourage parental involvement particularly when a parent has a skill or interest they wish to share:

- Parents help with other aspects of the STE Education curriculum when they are asked to do so: Gardening Club, STEM for Fun, Family Coding, Maths for Fun
- Occasionally thematic projects and events are facilitated within the school.
- Also on occasion members of the community come to the school to share their knowledge and support the schools STEM programme

- Scientists from the Bernal Institute in UL regularly visit classes, in addition to links with TUS and Mary I.
- The local library often hosts STEM events and hosts pupils from the school also.
- Engineer visit for local engineering expert (Engineers Week)
- The Learning Hub links closely with Corpus Christi PS to promote STEM education in the community
- Junior Achievement Programme
- Guest visitors from STEM background during Corpus Christi PS STEM Week
- Field Trips to STEM industry

Success Criteria

We will use the following criteria to assess the success of this plan:

How will we know the plan is implemented?

- Our yearly and classroom planning is based on the Whole School Plan.
- There is a balance between skills and content.

How has the plan achieved its aims?

- Evidence that pupils are engaging in studies at an age-appropriate level.
- Inspectors' report and suggestions
- Teacher and Parent feedback
- Children's feedback
- STEM outreach feedback
- STEM industry feedback
- Universities/colleges feedback
- STEM awards

Has the plan prompted the key considerations when implemented the STE Education school plan?

- Integrated themes are being developed, on occasion, across the school, using a whole school approach.
- That the curriculum is spiral and developmental in its structure.
- Classes are engaged in outdoor observation and trails of the local environment.
- Procedures outlined in this plan are consistently followed throughout the school.

Implementation

Roles and Responsibilities

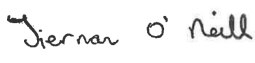
Kate Walshe is the postholder responsible for the coordination of the STE Education policy in Corpus Christi PS. Teachers are responsible for the implementation of the STE Education planning in their own classrooms, with the assistance of other staff members and local STEM outreach. Pupils, teachers, parents, STEM outreach, STEM industries and universities/colleges will be encouraged to present feedback and review surveys during reviews of STEM whole school plan. The plan will be monitored on an ongoing basis by all staff.

Timeframe, Monitoring and Review

This plan has been reviewed between February and May 2026 where updates and revisions were made as necessary to reflect the new Primary Curriculum Framework (2023) and the STEM Specification (NCCA, 2024). All staff was involved in the review of this policy. A Children's Advisory Panel, Parents' representatives on the Parents' Association and the Board of Management will be involved in its continued development and review.

A copy of this policy will be posted in the Curricular Policy section on the school website. This policy was ratified by the Board of Management on June 8th, 2026

Signed:  Date: June 8th, 2026
Chairperson of the Board of Management

Signed:  Date: June 8th, 2026

Appendix 1

Resources for STEM Teaching



STEM Projects Boxes

Appendix 2

STEM Planning Sheets Sample

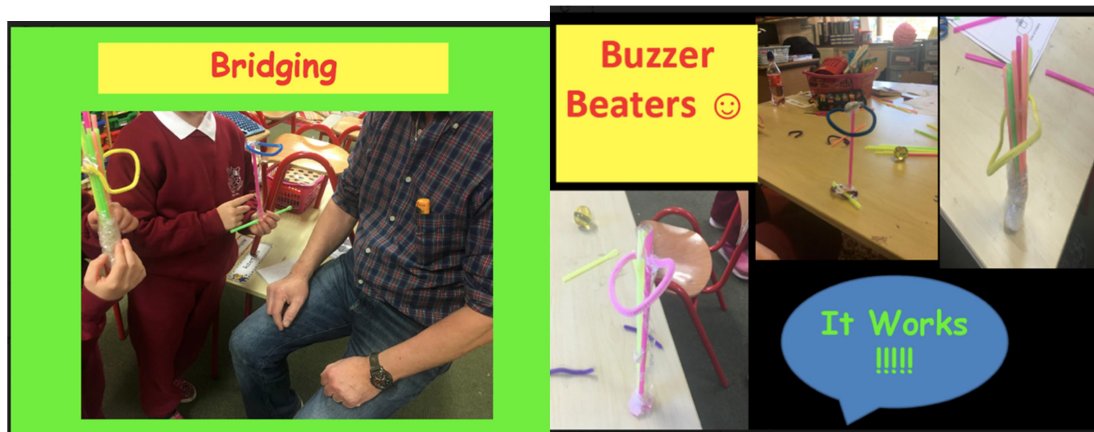
Names: _____ Date: _____	Names: _____ Date: _____
Basketball Goal 	Basketball Goal 
My Design	My Group's Design

Page 1 / 1

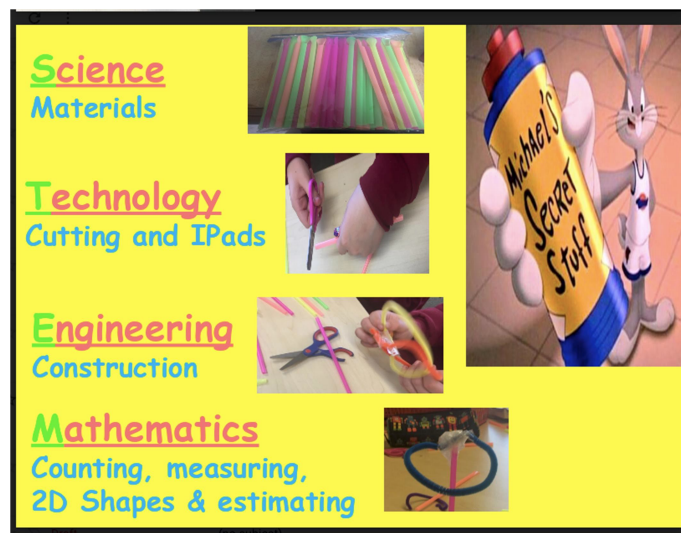
Appendix 3

Sample STEM Challenge/Lesson Steps





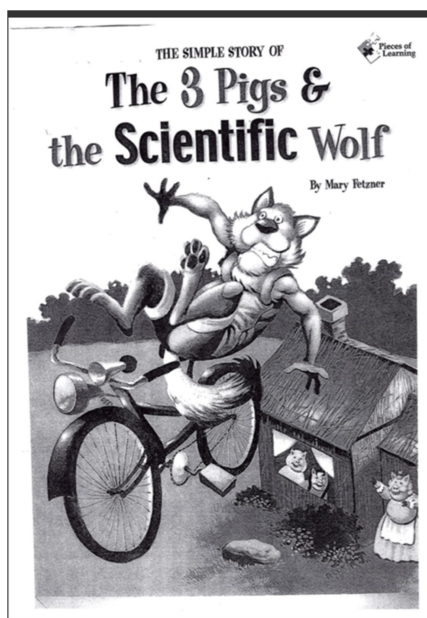
STEM Lesson Structure



Sample STEM Lesson Structure (STEM subjects in lesson)

Appendix 4

Sample STEM Curricular Integration



STEM Activity

Billy Goats Bridge Building

The goats need a new way to cross over the river.
 Can you help them by building a new bridge?
 What shape is the bridge going to be?
 What are you going to use?
 Is there any way you can make your bridge stronger?
 Do you need more tape?
 Do you need to make the bridge longer/shorter?
 Is your bridge strong enough to hold the goats?

Billy Goat Bridge Building

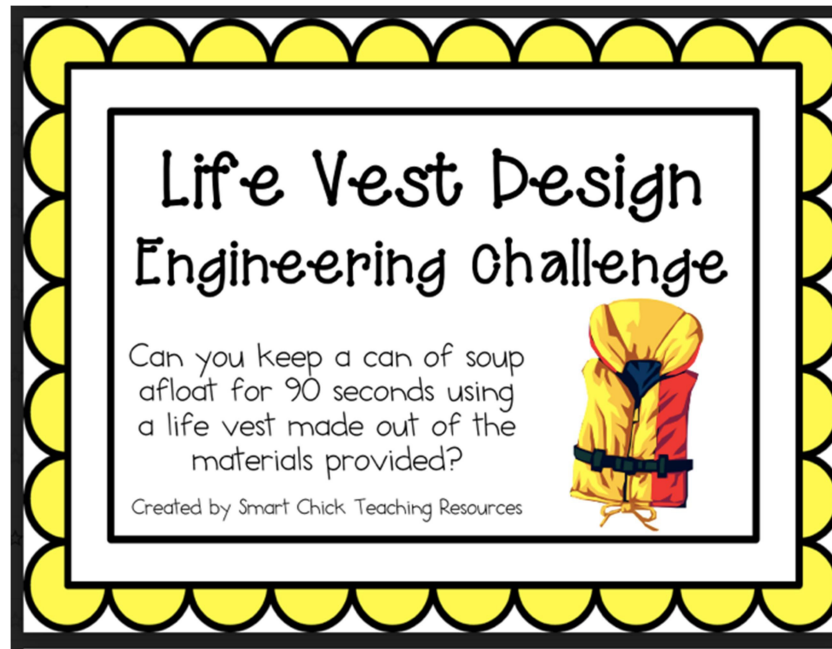
STEM Activity

Method

1. Tell the children that the goats need a new bridge to cross over the river so that the troll doesn't scare them.
2. Can they help by making a bridge for the goats?
3. They can only use the materials and tools that you have left out for them.
4. Look at the photos of bridges and talk about the different shapes and how the bridges go across the water.
5. The children can then decide how to join the materials to create their bridges.
6. Once the children have made their bridges, they could be tested to see if they are strong enough to support the goats as they cross the river.

You will need:
 A selection of card and paper
 Cardboard tubes and boxes
 Children's scissors
 Sticky tape
 Sticky tack
 String
 Small goat toys
 Types of Bridges Display
 Photos

STEM Curricular Integration (Junior Infants-Senior Infants)



STEM Curricular Integration (Middle Classes)



STEM Curricular Integration (Senior Classes)

Appendix 5

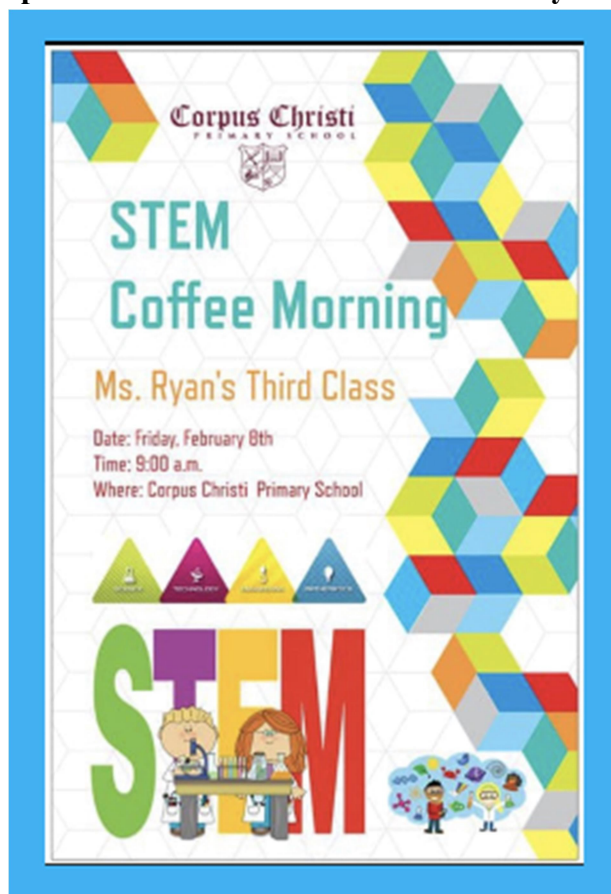
STEM Learning Experiences: Observation & Reflection Checklist

STEM Component	Prompt questions for reflection	Y/N	Notes & Observations
Authentic Problem	Does the learning experience present a real problem (an engineering challenge)?		
Pupil-centred	Will pupils relate to the problem?		
Open-ended	Does the learning experience allow pupils multiple, creative approaches and solutions?		
Cross-Curricular	Does the learning experience integrate and apply Science and Mathematics curriculum content and skills?		
Design & Make/ Engineering Design Process	Does the learning experience: ● Clearly use the engineering design process as the approach to solving problems?		
	● Lead to the design and development of a model or prototype?		
Hands-on learning	Does the learning use a child-centred, hands-on teaching and learning approach?		
Technology	Is the role of technology in the lesson clear to the students?		
Teamwork	Does the learning experience successfully engage pupils in purposeful teamwork?		
Evaluation & Iteration	Does the learning experience include testing the solution, evaluating the results, and redesigning to improve the outcome?		
Communication	Does the learning experience involve pupils in communicating about their design and results?		

Adapted from Liston, M. (2018). *Designing Meaningful STEM Lessons*. & Jolly, A. (2017). *STEM by Design: Strategies and Activities for Grades 4-8*.

Appendix 6

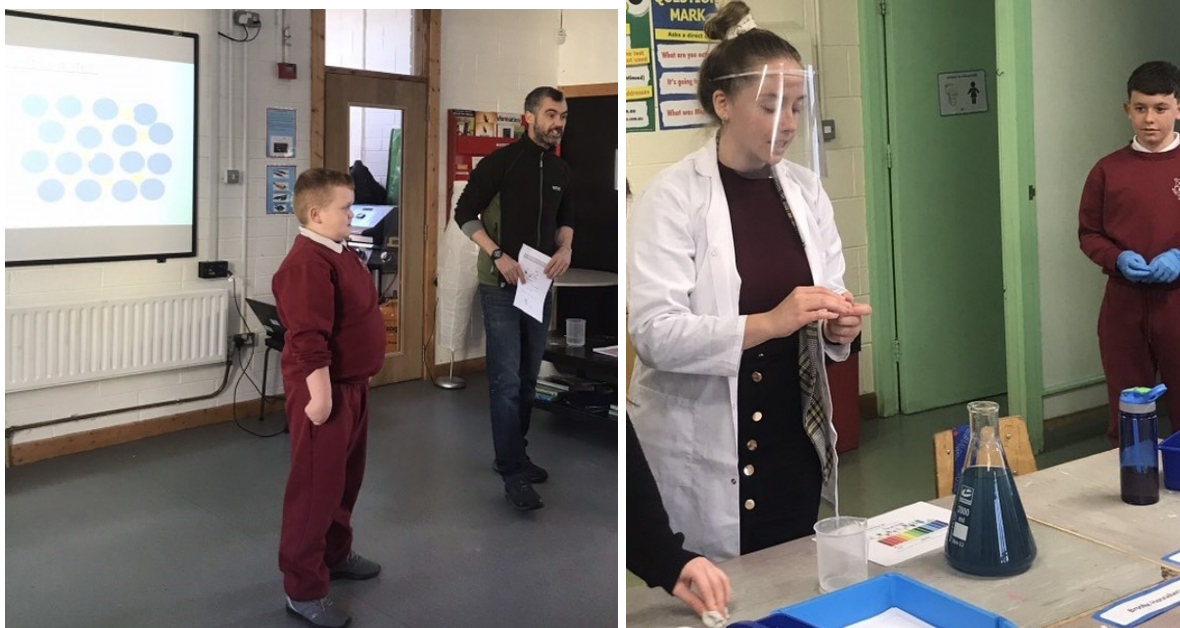
Sample STEM Parental Involvement Family Session



STEM For Fun (Middle Classes)

Appendix 7

Sample STEM Outreach Lessons



STEM Outreach (Learning Hub Visit)

Appendix 8

Engineer Week Visits



STEM Outreach (Engineer Visit -Engineer Week)

Appendix 9

Sample Bebras Challenge


Bebras Challenge
Welcome Challenges Login

Practice Challenge (Castor)

Right hand rule

Finnish friend

Banknotes

Rainfall

Phone tree

Lollipops

Cutting corners

Flipping coins

Telling lies

Fish

Matches

▶ **School Party**

Previous Next **School Party**
Review mode

The beavers have a school party.

For safety reasons, the teachers need to know how many beavers are at the party at the busiest time of the evening. Therefore everyone keeps track of the time he or she arrives and leaves.

Name	Arrival	Departure
Arjan	21:01	23:00
Done	20:01	22:00
Vince	20:01	23:00
Femke	22:01	23:00
Jan	21:31	22:30
Willem	20:01	21:00
Sophie	21:01	23:00
Diederik	22:01	23:00
Susan	20:01	21:00

Question:
How many beavers are present at the busiest time of the school party?

4
5
6
7

Practice Challenge (Benjamin)

Banknotes

Finnish friend

Rainfall

Right hand rule

Lollipops

Binary gate

Delete

Flipping coins

Telling lies

▶ **Tree stumps**

Beavers and raccoons

Match game

Matches

Moving dice

Room puzzle

Previous Next **Tree stumps**
Review mode

A beaver plays a game with tree stumps. He stands on the brown tree stump and wants to go to the blue tree stump.

Rules:
If he is standing on a tree stump, he can only go to the tree stump to the left of or below his present spot.



Question:
How many ways do the rules allow the beaver to reach the blue tree stump?
(Give your answer as an integer and press Save.)

Appendix 10

Corpus Christi P.S. Computational Thinking Junior Infants-Sixth Class

<u>Name</u>	<u>Image</u>	<u>Class Group</u>	<u>Description</u>	<u>Accessed</u>
Bee-bot		Junior Infants	Robotic floor device to introduce coding to younger children	Science Press
Bee-bot app		Senior Infants	Step beyond the bee-bot where children explore coding on the iPad	IPads: in infant rooms
Junior Scratch		First Class	Visual programming language designed to introduce coding skills	IPads in main school
Scratch		Second Class	Free programming language, where you can create your own interactive stories, games and animations	Online at https://scratch.mit.edu/download And on iPads in Main School
Tynker		Third Class	Computer programming games online	Online using chromebooks or iPads https://www.tynker.com/
Lego We Do Lightbot		Fourth Class	Educational video game for learning software programming concepts	IPads
Lego We Do				

Micro: bit		Fifth Class	Micro:bit is a pocket-sized computer that introduces you to how software and hardware work together. It has an LED light display, buttons, sensors and many input/output features that you	Science Press
Lego SPIKE			can program and physically interact with	
Code.org	 Code.org	Sixth Class	Website that aims to encourage people to learn computer science	Online: www.code.org
Sphero Balls			Sphero SPRK+ is a programmable robot ball designed to inspire creativity and curiosity through coding and play. With SPRK+, you can easily learn programming, complete hands-on STEAM activities, and share your creations with the community.	Science Press

Appendix 11 STEAM Kit Supplies

STEAM Kit Supplies	Drawer 1 • Magnatiles x1 • 2 timers • 2 torches with battery • Magnets • Mirrors x 10 Drawer 2 • Reusable plastic cups • Reusable shot glasses Drawer 3 • Paper clips • Pegs • Mini lollipop sticks • Match sticks • Straws • Skewers • Cable ties Drawer 4 • Pipettes x7 • Food dye x11 • Tweezers x7 • Bug Viewer x1 • Gloves • Testtube x 6 • Goggles x1 • Beaker x1 • Magnifying glass x1 • Testube holder Drawer 5 • Elastic bands • Plastic spoons • Pipe cleaners • Clipboards x4 Drawer 6 • Marbles x20 • Clear glue • Wire • Beads and x3 strings • AA Batteries • AAA Batteries Drawer 7 • Masking tape x6 • Sellotape dispenser • Sellotape x6 plus smaller ones Drawer 8 • Sellotape dispenser and sellotape x3 Drawer 9
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	• Dominoes • Stickle builder things • Tangrams Drawer 10 • Interlocking gears • Plasticine x2 packs • 10x mini playdough Drawer 11(some space) • Fairy liquid • Cooking oil • Baby oil • Cotton buds • Vinegar • Bicarbonate of soda
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Appendix 12

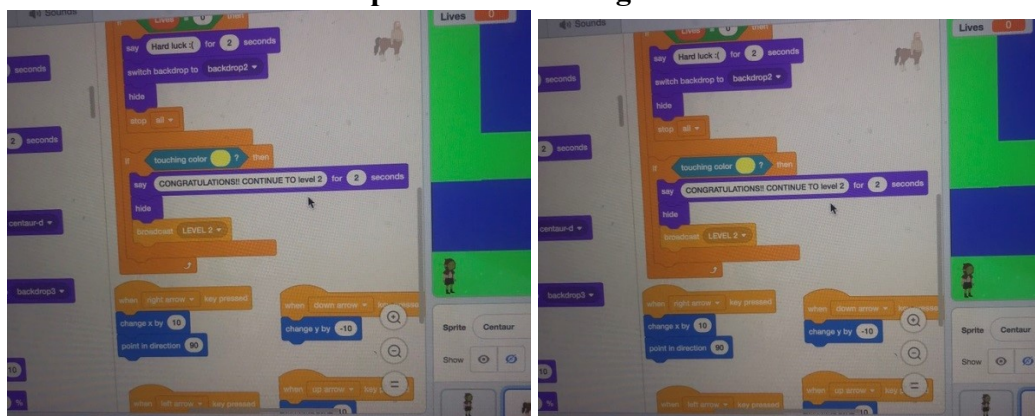
Sample Copy Code Approach to Programming



Sample Continuum of Programming Approaches

Appendix 13

Sample Scratch Coding Lessons



Appendix 15

Useful Website Links

Science

1. Primary Science
www.primaryscience.ie
2. Science Foundation Ireland
www.sfi.ie
3. Science Week
www.scienceweek.ie
4. Space Week
www.spaceweek.ie
5. Sustainable Energy Authority of Ireland
<https://www.seai.ie>
6. Citizen Science Projects
www.biodiversityireland.ie
www.birdwatch.ie
www.exploreyourshore
7. Science Experiments for Kids
<https://www.sciencefun.org/kidszone/experiments/>
8. Science for Kids
<https://www.sciencekids.co.nz>
9. Science Buddies
<https://www.sciencebuddies.org/stem-activities>
10. STEM Activities for Kids
<https://stemactivitiesforkids.com>

Technology

1. Bebras Ireland
<https://bebras.techweek.ie>
2. Computer Science
<https://code.org>
3. Scratch
<https://scratch.mit.edu/download>
4. Computer Programming Games Online
<https://www.tynker.com/>
5. Hour of Code
www.hourofcode.com/ie
6. EU Code Week
www.codeweek.ie
7. First Lego Lego
www.firstlegoleague.org
8. Tech Week
www.techweek.ie
9. Kids Coder Club
<https://kidscoderclub.ie>
10. Coding for Kids
<https://www.codemonkey.com>

Engineering

1. STEPS Young Engineers
www.steps.ie
2. Engineering for Kids
<https://www.engineeringforkids.com/about/news/2019/january/simple-ways-to-introduce-your-child-to-stem-at-a/>
3. STEM Village
<https://www.stemvillage.com/blog/5-tips-to-introduce-engineering-to-your-child>

Maths

1. Maths Week
www.mathsweek.ie
2. Maths Eyes
www.haveyogotmathseyes.com
3. Mangahigh Online Games
<https://www.mangahigh.com/en-gb/>
4. Mathletes Challenges
<http://mathletes.ie>
5. STEMNrich
<https://nrich.maths.org/stemnrch>