



Mossend Primary School and Nursery Class

STEM Progression Planner

Rationale



The progression framework aims to embed the learning of Digital Technology in engaging, creative contexts that expose children to the World Of Work, STEM careers and subjects whilst linking naturally to relevant UN sustainability goals and the UNCRC rights; challenging stereotypes, discrimination and exploring emotions.

The framework allows children to learn practically and progressively through play and imagination as they explore the meta skills and attributes required for a variety of jobs, underpinned by the four capacities of Curriculum for Excellence. The pathway has been designed so that all children progress and succeed together, making use of various types of technology to collaborate, communicate and create. Concrete, pictorial and abstract problem-solving challenges ensure all learners have challenge and enjoyment.

This framework provides clear depth, breadth and coherence of learning in Digital Technology via a scaffolded play approach which ensures children experience personalisation and choice in where they want to take their learning.

RELEVANT REFERENCES

Refreshed narrative CfE – Importance of the four capacities and the skills and attributes children need, making clear links to future skills, providing skills for learning, skills for life and skills for work. Ensuring learners have clear progression pathways, embedding creativity and learning for sustainability in the curriculum design.

HIGIOS4 – 2.2 Skills for learning, life and work, Learning and Engagement, learning pathways 3.3 Increasing creativity and employability.

Building the Curriculum 4 - All children and young people are entitled to opportunities for developing skills for learning, life and work, The opportunity to engage in active learning, interdisciplinary tasks and to experience learning in practical contexts is important in enabling all children and young people to develop, demonstrate and apply a wide range of skills. Curriculum for Excellence can best be delivered through partnership working.

Developing Young Workforce - There should be a clearer focus on enabling children and young people to recognise and track their own skills across their learning develop skills for learning, life and work as an integral part of their education and be clear about how all their achievements relate to these; develop understanding of enterprise, entrepreneurship and self-employment as a career opportunity; a learning environment that recognises and promotes diversity and supports them to understand that it is everyone's responsibility to challenge discrimination; We need to ensure children, young people and adults are encouraged to develop an interest in, and enthusiasm for, STEM that is reinforced throughout their lives. We need to tackle the gender imbalances and other inequities that exist across STEM education and training including in relation to race, disability, deprivation and geography.

Enhancing learning and teaching through the use of digital technology - ensure our learners develop a level of general and specialist digital skills that are so vital for learning, life and work in an increasingly digitised world.



"It is important that young people have the opportunity to develop technology and industry awareness across all parts of the curriculum" Skills Development Scotland (2014)

"Digital Skills should be embedded in the curriculum and developing a digital literacy for all has to be integral throughout Curriculum for Excellence" Scottish Council for Development and Industry (2016)

"Students who were only exposed to digital education in designated ICT classes suffered a distinct disadvantage when compared to those whose school chose to mainstream technology and digital skills across the curriculum"

House of Commons Science and Technology Committee (2016)



Digital Technology in Mossend Primary School 2020





S.T.E.M Coverage Overview





| STAGE AND CONTEXT | EXPERIENCES & OUTCOMES | S.T.E.M FOCUS (CfE Organiser) | LINKS TO BE MADE (UNCRC + UN Goals) | Meta-Skills (DYW) |
|----------------------|---------------------------------|----------------------------------|--|----------------------|
| PRIMARY 1 | TCH 0-01A | + Digital Literacy | UNCRC - | (=) |
| | $TCH = 0.02\Delta$ | r Digital Elleraby | Article 16 | Problem Solving |
| THE | TCH = 0.03A | + Money | | Creativity |
| SHOPKEEPER | MNU 0 - 074 | 1 Woney | SUSTAINABILITY - | Communication |
| | MNU 0 – 11A | + Measure | EMOTION WORKS | Curiosity |
| PRIMARY 2 | | + Digital Literacy | | , |
| FIRST | TCH - 1-13A | Pigital Elleraby | | |
| THE BUS DRIVER | TCH - 1-14A | + Computing | UNCRC – Article 12 | Problem Solving |
| THE BOO BRIVER | TCH - 1- 14B | Science | | Creativity |
| | TCH - 1- 15A | 0010100 | SUSTAINABILITY - | Sense Making |
| | TCH - 1-09A | + Craft Design | GOAL 12 | Curiosity |
| | TCH – 1-10A | Engineering and | | |
| | TCH - 1-12a | Graphics | | |
| | MTH 1-17A | Crapilico | | |
| | MTH 1- 18A | + Shape, Position | | |
| | | and Movement | | |
| PRIMARY 3 | TCH – 1-01A | | UNCRC – Article 13 | Problem Solving |
| FIRST | TCH – 1-02A | + Digital Literacy | Article 19 | Creativity |
| THE ASTRONAUT | TCH – 1-03A | | | Communication |
| | TCH -1- 15A | + Computing | GOAL 4 | Curiositv |
| | TCH – 1- 14A | Science | | |
| | TCH – 1-14B | | EMOTION WORKS | |
| | TCH – 1-13A | + Planet Earth | | |
| | SCN – 1-06A | | | |
| PRIMARY 4 | TCH - 1-01A | | UNCRC – Article 19 | Problem Solving |
| FIRST | TCH – 1-02A | + Digital Literacy | | Collaboration |
| THE VET | TCH – 1-03A | | SUSTAINABILITY - | Focussing |
| | TCH -1- 15A | + Computing | GOAL 14 | roomig |
| | TCH – 1-14B | Science | | |
| | TCH – 1-13A | | EMOTION WORKS | |
| | SCN – 1-12A | + Biological Systems | | |
| PRIMARY 5 | | + Electricity | UNCRC – Article 29 | Problem Solving |
| SECOND | TCH – 2-01A | | SUSTAINABILITY - | Collaboration |
| THE DIRECTOR | TCH – 2- 03A | + Digital Literacy | GOAL 13 | Leading |
| | TCH - 2 –01A | | | Integrity |
| | SCN – 2- 10A | + Chemical | | |
| | | Reactions | | |
| PRIMARY 6 | TCH – 2 – 01A | + Digital Literacy | UNCRC – Article 12 Article 31 | Problem Solving |
| SECOND | TCH -2- 15A | | Article 51 | Focussing |
| THE WAITER | TCH –2-14B | + Computing | SUSTAINABILITY - | Feeling |
| | TCH –2-13A | Science | GOAL 2 | Leading |
| | TCH – 2- 04A | | EMOTION WORKS | |
| | 1CH – 2- 04B | + Food and Textile | | |
| | | I ecnnology | LINCRC - Article 17 | Problem Solving |
| | 1CH - 2 - 01A | +Digital Literacy | UNCRU - Article 17 | Collaboration |
| | 1CH = 2 = 02A | . Commuting | | Focussing |
| | $1 \cup \Pi = 2 - 03 \text{ A}$ | + Computing | SUSTAINABILITY - | Integrity |
| | 1 CH = 2 - 15A | Science | GOAL 5 | |
| | $1 \cup \Pi = 2 - 14B$ | Application of | | |
| | $10\pi - 2 - 13A$ | +Application of | | |
| | тсп –2- 12A | Engineering | | |

Progression of Skills Overview

| | | DIGI | TAL LITERA | CY | COM | IPUTER SCIENCE | | Skills for Life, Skills for | |
|----------------|-----------|--|---|--|--|---|--|---|---------------------------------------|
| MOSSEND SCHOOL | | SKILLS | | SKILLS | | Learning, Skills for Work | | | |
| | | Using digital products and services to achieve a purposeful outcome | Searching, processing and managing information responsibly | Cyber Resilience and Internet Safety | Understanding the world through computational thinking | Understanding and analysing computing technology | Designing, building and testing computing solutions | Problem Solving and Sense Making | Communication and Collaboration |
| | Primary 1 | \checkmark | \checkmark | \checkmark | | | | \checkmark | \checkmark |
| | Primary 2 | \checkmark | | | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark |
| | Primary 3 | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark | |
| | Primary 4 | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark |
| | Primary 5 | \checkmark | \checkmark | \checkmark | | | | \checkmark | \checkmark |
| | Primary 6 | \checkmark | | | | \checkmark | | | |
| | Primary 7 | \checkmark | \checkmark | | \checkmark | \checkmark | \checkmark | \checkmark | \checkmark |



Primary 1 - Early Level The Shop Keeper



| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|--------|--|--|--|
| Term 1 | I can explore digital technologies and use what I learn to solve problems and share ideas and thoughts. TCH 0-01a I am developing an awareness of how much money is used and can recognise and use a range of coins. MNU 0 – 09A I have experimented with everyday items as units of measure to investigate and compare sizes and amounts. MNU-0-11a | Learning through play, children will role play working in a shop, exploring who might work in a shop and what roles shop keepers might have. Children will work with money and weight across the term to reinforce maths skills, through effective questioning and scaffolding. Children will explore different types of technology that could be added to the shop and how these would work, identifying different parts of hardware. | Recognise different types of technology Identify key components of different types of technology Use digital technologies in a responsible way and with appropriate care Describes common objects using appropriate measurement language Identifies all coins to £2 Applies addition and subtractions skills uses 1p, 2p, 5p and 10p coints to pay the exact value for items to 10p |
| Term 2 | I can explore digital technologies and use what I learn to solve problems and share ideas and thoughts. TCH 0-01a - UN GOAL 2 | Children will begin to learn to login to a laptop, focussing on the keys and upper and lower case of the alphabets to support independent login. Children will begin to use an IPAD in their shop to add amounts using the calculator function. | Log on to a preferred device with given password |
| Term 3 | I can use digital technologies to explore how to search and find information. TCH 0-02a | Children will be given the task of finding a sign for the shop. Children will open and close applications and become familiar with icons. We will explore the rights of people and that materials cannot just be taken, using the example of stealing goods from the shop. Children will become familiar with Google Search | Identify and use images and key words when searching for specific information Demonstrate an understanding of how information found on websites can be text, audio, images and video Understanding of how they should not use materials owned by others without permission |
| Term 4 | I can explore, play and communicate using digital technologies safely and securely. TCH 0-03a ARTICLE 16 | Children will explore how to keep their shop safe, looking at locks and padlocks that storekeepers could use. We will then progress to look at how we keep information safe online/digitally and how to make a strong password . Links to Emotion Works | Demonstrates an understanding of appropriate behaviour and language in the digital environment. Demonstrates an understanding of the importance of passwords and passcodes for example to access the school building. |



Primary 1 - Early Level The Shop Keeper



The planner will allow all children to move together through the level, exploring ways to work in their shop. The learning will be extended by introducing technology and discussing how it could be used to help the shop. The learning through play aspect will ensure that children have a chance to make real life connections to technology and STEM.





Article 16 – We protect our own and other's private information online.



Goal 1 – No Poverty

Children will learn the value of money in their shop and discuss how we can help people who don't have money. Children will help create a food bank at Christmas in their shop.



Skills for Life, Skills for Learning and Skills for Work.

Children will visit a local shop and look at how the shop works, who works there and what they do. They will begin to develop ICT skills for life through the Digital Literacy outcomes.



Digital Literacy –

Primary 1 will focus on the Digital Literacy skills for early level, in a creative context of a shop. They will work together to solve problems on adding up the cost of their shopping and creating receipts and explore the use of Digital Technology to assist this.



Learning and Exploring through Play -

Primary 1 will spend the majority of term 1 role playing in a shop, developing mathematical skills in learning the use of Digital Technology in a creative context. As the term progresses, they will begin to learn Digital Literacy in the same context. Children will lead their own learning.



Mathematics

The shop context will provide opportunity for mathematical language in money and measure, this will be scaffolded by the teacher with effective questioning and extending of learning. Children



Primary 2 - Early Level



The Bus Driver

| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|--------|------------------------|----------------------------|------------|
| Term 1 | | | |
| Term 2 | | | |
| Term 3 | | | |
| Term 4 | | | |



Primary 2 - Early Level The Bus Driver



The planner will allow all children to move together through the level, exploring ways to work in their shop. The learning will be extended by introducing technology and discussing how it could be used to help the shop. The learning through play aspect will ensure that children have a chance to make real life connections to technology and STEM.

| RIGHTS RESPECTING SCHOOLS UNITED KINCDOM | Article 16 – We protect our own and other's private information online. Children will explore passwords online and look at how to keep the shop safe and discuss why it is important that we protect ourselves. |
|---|---|
| | |
| SUSTAINABLE GOALS | Goal 1 – No Poverty Children will learn the value of money in their shop and discuss how we can help people who don't have money. Children will help create a food bank at Christmas in their shop. |
| | |
| Developing the Young Workforce | Skills for Life, Skills for Learning and Skills for Work. Children will visit a local shop and look at how the shop works, who works there and what they do. They will begin to develop ICT skills for life through the Digital Literacy outcomes. |
| r | |
| DIGITAL SCHOOLS AWARDS | Digital Literacy – Primary 1 will focus on the Digital Literacy skills for early level, in a creative context of a shop. They will work together to solve problems on adding up the cost of their shopping and creating receipts and explore the use of Digital Technology to assist this. |
| | |
| EXPLORING through ,, Play | Learning and Exploring through Play - Primary 1 will spend the majority of term 1 role playing in a shop, developing mathematical skills in learning the use of Digital Technology in a creative context. As the term progresses, they will begin to learn Digital Literacy in the same context. Children will lead their own learning. |
| | |





Primary 3 - First Level The Astronaut



| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|--------|--|--|---|
| Term 1 | Using digital technologies responsibly I can access, retrieve and use information to support, enrich or extend learning in different contexts. TCH 1-02a ARTICLE 13 I can describe the patterns of movement and change over time. SCN – 1-06A | Children will explore space and planets – link to science investigation of gravity. Children will move on to produce a SWAY to persuade their audience, they will work collaboratively on this and share their finished presentation. Links to Emotion Works | Opens and saves a file to and from a specific location Communicate and collaborate with others using digital technology for example, email, glow or other platforms Describes how Earth spins around its Axis in 24 hours, resulting in night and day Understanding of how the Earth takes one year to completely orbit the sun. |
| Term 2 | I can explore and comment on processes in the world around me, making use of core computational thinking concepts and can organise information in a logical way. TCH - 13a I understand the instructions of a visual programming language and can predict the outcome of a program written using the language TCH-1-14A I understand how computers process information TCH-1-14b I can demonstrate a range of basic problem- solving skills by building simple programs to carry out a given task, using appropriate language. TCH-1-15a | Children will create an obstacle course for their moon buggy (Ollie Robot), they will need to identify the hardware and software elements of the robot. They will be required to code their moon buggy across the terrain using SCRATCH and will film this on an iPad. Children will explore how a computer processes information, progressing on from P2 BeeBot physical programming to more pictorial programming through Scratch. Children will have a task to solve and be encouraged to debug and edit their programming, making use of computational thinking and meta skills. | Demonstrates and understanding of the meaning of individual instructions when using a visual programming language, explains and predicts what a program in a visual programming language will do when it runs, demonstrate an understanding that computers take information as input, process and store that information and output the results. Simplifies problems by breaking them down into smaller steps, constructs a sequence of instructions to solve a problem, evaluates and suggests improvements |
| Term 3 | I can explore and experiment with digital technologies and can use what I learn to support and enhance my learning in different contexts. TCH 1-01a UN GOAL 4 | Children will research the role of the astronaut and what life is like in space. We will discuss elements linked to World Of Work and children will use WAKELET to curate relevant articles form the web. | Identifies the key components of frequently used digital technology and whether it is a piece of hardware or software Uses digital technology to collect, capture, combine and share text, sound, video and image |
| Term 4 | I can extend my knowledge of how to use digital technologies to communicate with others and I am aware of ways to keep safe and secure. TCH 1-03a ARTICLE 19 | Children will meet a real alien who is a little bit unsure how to stay safe online. As astronauts' children will need to come up with a song to help the alien remember how to stay safe online and record and edit this using a GREEN SCREEN , the song should include who to talk to if they come across something, they are worried about. | Demonstrates an understanding of rights and responsibilities as a digital citizen Demonstrates an understanding for the need for strong passwords Demonstrates understanding of potential dangers online and who to go to for advice and who to report a concern to Explains the need to get a person's permission before taking a picture of them |



Primary 3 - First Level The Astronaut





Article 13 - We communicate responsibly and with respect online. Article 19 -We stand up to Cyber bullying

Through the context of an alien landing on earth, children will look at how to stay safe online and stand up for the alien when he is being trolled online. Children will begin to collaborate online using SWAY and do some with respect and responsibility.



Goal 4 – Quality Education

Children will learn about their own planet and space and the need for quality education to develop children of the future who can continue exploring science.



Skills for Life, Skills for Learning and Skills for Work.

Children will explore the life of an astronaut and what life is like in space. This will introduce children to the World Of Work website as they curate what qualifications, skills and attributes and astronaut might need.



Digital Literacy & Computing Science

Primary 3 will be introduced to collaboration online, using SWAY to create and share a presentation. They will also use Wakelet to curate information from the web and a Green Screen to record and edit a video. They will be introduced to coding via Scratch and use Ollie robot to navigate the moon.



Learning and Exploring through Play -

Primary 3 will create a moon obstacle course and then using the physical robot Ollie they will debug, edit and improve their coding to ensure that the robot can navigate the moon. This exploring through play will utilise their meta skills of problem solving, curiosity and innovation.



Science

There will be clear links to the science outcomes of Planet Earth and Space as they explore what life for an astronaut would be like. They will report collaboratively on key features of planets and distance from the sun.



Primary 4 - First Level

The Vet



| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|--------|------------------------|----------------------------|------------|
| Term 1 | | | |
| Term 2 | | | |
| Term 3 | | | |
| Term 4 | | | |



Primary 4 - First Level The Vet





Article 13 - We communicate responsibly and with respect online. Article 19 -We stand up to Cyber bullying

Through the context of an alien landing on earth, children will look at how to stay safe online and stand up for the alien when he is being trolled online. Children will begin to collaborate online using SWAY and do some with respect and responsibility.



Goal 4 – Quality Education

Children will learn about their own planet and space and the need for quality education to develop children of the future who can continue exploring science.



Skills for Life, Skills for Learning and Skills for Work.

Children will explore the life of an astronaut and what life is like in space. This will introduce children to the World Of Work website as they curate what qualifications, skills and attributes and astronaut might need.



Digital Literacy & Computing Science

Primary 3 will be introduced to collaboration online, using SWAY to create and share a presentation. They will also use Wakelet to curate information from the web and a Green Screen to record and edit a video. They will be introduced to coding via Scratch and use Ollie robot to navigate the moon.



Learning and Exploring through Play -

Primary 3 will create a moon obstacle course and then using the physical robot Ollie they will debug, edit and improve their coding to ensure that the robot can navigate the moon. This exploring through play will utilise their meta skills of problem solving, curiosity and innovation.



Science

There will be clear links to the science outcomes of Planet Earth and Space as they explore what life for an astronaut would be like. They will report collaboratively on key features of planets and distance from the sun.



Primary 5 - Second Level The Director



| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|------------------|------------------------|----------------------------|------------|
| Term 1 | | | |
| Term 2 | | | |
| Term 3 Term 4 | | | |



The Director



RIGHTS RESPECTING SCHOOLS UNITED KINGDOM

Article 13 - We communicate responsibly and with respect online. Article 19 -We stand up to Cyber bullying

Through the context of an alien landing on earth, children will look at how to stay safe online and stand up for the alien when he is being trolled online. Children will begin to collaborate online using SWAY and do some with respect and responsibility.



Goal 4 – Quality Education

Children will learn about their own planet and space and the need for quality education to develop children of the future who can continue exploring science.



Skills for Life, Skills for Learning and Skills for Work.

Children will explore the life of an astronaut and what life is like in space. This will introduce children to the World Of Work website as they curate what qualifications, skills and attributes and astronaut might need.



Digital Literacy & Computing Science

Primary 3 will be introduced to collaboration online, using SWAY to create and share a presentation. They will also use Wakelet to curate information from the web and a Green Screen to record and edit a video. They will be introduced to coding via Scratch and use Ollie robot to navigate the moon.



Learning and Exploring through Play -

Primary 3 will create a moon obstacle course and then using the physical robot Ollie they will debug, edit and improve their coding to ensure that the robot can navigate the moon. This exploring through play will utilise their meta skills of problem solving, curiosity and innovation.



Science

There will be clear links to the science outcomes of Planet Earth and Space as they explore what life for an astronaut would be like. They will report collaboratively on key features of planets and distance from the sun.



Primary 6 - Second Level The Waiter



| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|--------|------------------------|----------------------------|------------|
| Term 1 | | | |
| Term 2 | | | |
| Term 3 | | | |
| Term 4 | | | |



The Waiter



RIGHTS RESPECTING SCHOOLS UNITED KINGDOM

Article 13 - We communicate responsibly and with respect online. Article 19 -We stand up to Cyber bullying

Through the context of an alien landing on earth, children will look at how to stay safe online and stand up for the alien when he is being trolled online. Children will begin to collaborate online using SWAY and do some with respect and responsibility.



Goal 4 – Quality Education

Children will learn about their own planet and space and the need for quality education to develop children of the future who can continue exploring science.



Skills for Life, Skills for Learning and Skills for Work.

Children will explore the life of an astronaut and what life is like in space. This will introduce children to the World Of Work website as they curate what qualifications, skills and attributes and astronaut might need.



Digital Literacy & Computing Science

Primary 3 will be introduced to collaboration online, using SWAY to create and share a presentation. They will also use Wakelet to curate information from the web and a Green Screen to record and edit a video. They will be introduced to coding via Scratch and use Ollie robot to navigate the moon.



Learning and Exploring through Play -

Primary 3 will create a moon obstacle course and then using the physical robot Ollie they will debug, edit and improve their coding to ensure that the robot can navigate the moon. This exploring through play will utilise their meta skills of problem solving, curiosity and innovation.



Science

There will be clear links to the science outcomes of Planet Earth and Space as they explore what life for an astronaut would be like. They will report collaboratively on key features of planets and distance from the sun.



Primary 7 - Second Level The Mechanic



| Term | Experiences & Outcomes | Suggested Learning Context | Benchmarks |
|--------|--|--|---|
| Term 1 | I can use digital technologies to search, access and retrieve information and are aware that not all of this information will be credible. TCH 2-02a | Children will explore the role of a mechanic and the various types of mechanics using SEARCH ENGINES , they will curate their information using ONENOTE and saving their files to GLOW . Children will them make a FORM quiz for their peers to complete on the World Of Work and life as a mechanic and discussion of | Uses search engines to search the internet for specific or relevant information for example using quotation marks to narrow results Access websites and use navigation skills to retrieve information for a specific task and a Stores, shares and collaborates using an online cloud based service for example Glow Selects and uses applications and software to capture. |
| | | gender equality in roles such as mechanics. | create and modify text, images, sound and video |
| Term 2 | I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way. TCH 2-01a I can extend my knowledge and understanding of engineering disciplines to create solutions. TCH -2- 12A | Children will explore input and output devices and make a list of what they would need in their theme park. They will find a sign for their theme park, respecting copyright and then design their park using 3D PAINT and LEGO . They will save all their associated files for their theme park in a folder on their own ONEDRIVE account. | Identifies the key features of input, output and storage devices, Demonstrate an understanding of usage rights and apply these within a search for example creative commons. Identifies and saves in a range of standard file formats Saves files using an organised filing system Builds/simulates solutions to engineering problems. |
| Term 3 | I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way. TCH 2-01a I understand the instructions of a visual programming language and can predict the outcome of a program written using the language TCH-2-14A I can demonstrate a range of basic problem-solving skills by building simple programs to carry out a given task, using appropriate language. TCH-2-15a | Children will code a MICROBIT as a game for their theme park. They will film their game and instructions by creating an IMOVIE . This will progress from the concrete materials they used in early first level, the pictorial Scratch programs to more abstract coding with the option of coding in HTML. Children will then film how their game works, discussing the instructions so others can learn. | Selects the most appropriate digital software to perform a task Demonstrates an understanding that all computer data is represented in binary, for example numbers, texts, black and white graphics, explains and predicts how parallel activities interact, Predicts what a complete program in a visual programming language will do when it runs, including how the properties of objects for example, position, direction and appearance change as the program runs. Creates programs in a visual programming language including variables and conditional repetition, identifies patters in problem solving and reuses aspects of previous solutions appropriate, Identifies when a process is not predictable because it has a random element. |
| Term 4 | I can explore online communities demonstrating an understanding of responsible digital behaviour and I'm aware of how to keep myself safe and secure. TCH 2-03a ARTICLE 17 | Children will discuss how to keep people safe in their theme park, what the rules would be for taking photos or posting online, particularly on social media. We will then create a SWAY to present our information and use a QR Code to share it. We will look at what appropriate websites are to stay safe. | Discusses the importance of being a responsible digital citizen, giving examples of appropriate online behaviours and actions Identifies appropriate ways to report concerns Uses strong passwords Has an understanding of the law as it relates to inappropriate or illegal online behaviours, for example, the sharing of inappropriate images. |



Primary 7 - Second Level The Mechanic





Article 17 - We visit appropriate websites.

By revisiting how to stay safe online with a focus on Social Media at the Theme Park children will explore appropriate online behaviours and websites.



Goal 5 – Gender Equality

Through the role of the Mechanic, children will explore what jobs are for males and females and discuss the need for equality in all roles, particularly STEM subject roles.

Children will have a visit from a mechanic who will discuss the work they do and the skills they require. Children will revisit the World Of Work website and use Technology



to create quizzes for their peers on the life on a mechanic.

Skills for Life, Skills for Learning and Skills for Work.



Digital Literacy & Computing Science

Primary 7 will move on to abstract coding with the aid of a MicroBit to program elements for their theme park. They will continue to share and work collaboratively online using OneDrive, OneNote, Wakelet, SWAY, QR Code Generation, iMovie, Form and 3D Paint. This will be a clear depth of the progressive skills they have learned since P1.



Learning and Exploring through Play -

The benefits of learning and exploring through play and not just relevant to Early and First Level. Children at second level will continue to explore their learning in relevant and engaging contexts. P7 will have the opportunity to use LEGO blocks to create rollercoaster and extend their learning, before moving on to 3D Paint designs.



Application of Engineering

There will be clear links to engineering in this topic, as children design and create their roller coasters using physical objects before moving on to design using Digital Technology. This will make use of technology, mathematics and engineering skills.



CREATING SKILLS FOR WORK





CREATING SKILLS FOR LIFE

S Education Scotland Foghlam Alba





"I understand and can demonstrate, the benefits of digital technology." "I have the skills and ability to experiment and create innovative digital solutions."



"I have the opportunity and means to use digital technology to access online content."



"I have the confidence and competence to embrace digital technology and the internet."

"I have the skills and knowledge to use the internet safely and responsibly."

Digital Learner

"I have the skills and opportunity to work with others using digital technology."



"I have the skills, ability and agility to select and use appropriate digital technology for learning, life and work."

https://digilearn.scot/digital-vision/

For Scotland's learners, with Scotland's educators



CREATING SKILLS FOR LEARNING



Digital ELC & Primary School



"We will integrate digital technologies across the curriculum. Staff will demonstrate a clear understanding of how digital technology can be used to improve learning."



"We will demonstrate a commitment to ongoing professional development around digital technology, informing teachers of courses in professional development, as well as offering general support."

"We will have a digital technology strategy, and a positive attitude towards digital technology."



"We will demonstrate an awareness that digital technology affects the quality of learning and teaching, pupil attitudes and behaviour, and the school community."





For Scotland's learners, with Scotland's educators