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| **DIGITAL LITERACY** | **FOOD AND TEXTILE** | **TECHNOLOGICAL DEVELOPMENTS IN SOCIETY AND BUSINESS** | **CRAFT, DESIGN AND ENGINEERING** | **COMPUTING SCIENCE** |

**LEARNING AND TEACHING IN TECHNOLOGIES DEVELOPS THE FOLLOWING SKILLS:**

* Knowledge and understanding of the key concepts in the technologies
* Curiosity, exploration and problem-solving skills
* Planning and organisational skills in a range of contexts
* Creativity and innovation
* Skills in using tools, equipment, software, graphic media and materials
* Critical thinking through exploration and discovery within a range of learning contexts
* Discussion and debate
* Searching and retrieving information to inform thinking within divers learning contexts
* Making connections between specialist skills developed within learning and skills for work
* Evaluating products, systems and services
* Presentation and communication skills
* Awareness of sustainability.



This pathway supports practitioners’ understanding of progression within and through all levels of Technologies. It provides a framework for planning learning and teaching which ensures that learners are progressing within and across the levels of the experiences and outcomes for Technologies. The document helps practitioners to ensure sufficient breadth, challenge and application is offered to learners. The Pathway also supports staff in building their pupils’ understanding of Technologies. so that they can be actively involved in the planning and development of their own next steps and goals, in line with the principles of Curriculum for Excellence, Getting it Right for Every Child, and the United Nations Convention on the Rights of the Child.

The Falkirk Technologies pathway is arranged (in the same way as the experiences and outcomes and national benchmarks) according to the 5 **main organisers**:

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| **Digital Literacy** – sub-organisers  | **Food & Textile Technology-** sub-organisers | **Craft, Design, Engineering & Graphics-** sub-organisers | **Computing Science -** sub-organiser |
| * Using digital products & services in a variety of contexts to achieve a purposeful outcome
* Searching, processing & managing information responsibly
* Cyber resilience & internet safety
 | * Food & textile
 | * Design & construct models/products
* Exploring uses of materials
* Representing ideas, concepts & products through a variety of graphic media
* Application of engineering
 | * Understanding the world through computational thinking
* Understanding & analysing computing technology
* Designing, building & testing computing solutions
 |
| **Technological Developments in Society & Business** - sub-organisers | * Awareness of technological developments (Past, Present & future), including how they work
* Impact, contribution & relationship of technologies on business, the economy, politics & the environment
 |

 Learner progress within and across the breadth of the experiences and outcomes **is not linear** and this pathway will help practitioners plot the most appropriate pace and challenge for individuals, groups, and classes. This pathway helps schools to define **what** needs to be taught in Technologies. so that practitioners can decide **how** to make this learning as progressive, active and engaging as possible for their learners. **Please note that practitioners will not be able to “cover” all experiences and outcomes or their progression statements every session and should select those which they feel will help their learners’ progress in the most appropriate and effective way without leaving “significant gaps”.**

**Each section of this pathway is arranged to** give details of **what progress within each experience or outcome looks like.** The final column shows **the benchmarks which define how a pupil can demonstrate achievement of a level.**

Falkirk Progression Pathways will help all staff to improve attainment by:

1. Developing a shared understanding of what progression looks like – within and across levels – in line with the national benchmarks
2. Supporting the planning and delivery of consistent, high quality learning & teaching which meets the principles of curriculum design
3. Providing a focus for dialogue about planning, assessment, moderation, and tracking
4. Pulling key information & guidance into one flexible, adaptable document – easing workload, streamlining bureaucracy, and maximising resources

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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Digital Literacy** | **Using digital products and services in a variety of contexts to achieve a purposeful outcome** | I can explore digital technologies and use what I learn to solve problems and share ideas and thoughts.**TCH 0-01a****Link with**:Literacy & English - Writing - Tools for writing **LIT 0-21b** | **I can/am able to:*** Begin to recognise & name different types of digital technology & their component parts e.g. interactive white board, computer, tablet, phone, screen, keyboard, mouse, etc.
* With support, identify & explore appropriate files, software, games or applications using digital devices.
* Begin to use my finger or a pen to drag & drop on a touch screen or interactive white board.
* With support, begin to start, open & close files, software, games or applications in the correct way.
* With support, demonstrate careful & responsible use of digital technologies e.g. during play & for specific purposes.
* With support, begin to recognise when & how digital technologies can help me solve problems & share ideas & thoughts.
 | **I can/am able to:*** Recognise & name familiar digital devices & say what they can do.
* Begin to identify most of the component parts of familiar digital devices & say what they are for or what they do.
* With support, begin to identify, access & explore appropriate programmes, software, games, applications & files e.g. photo albums
* Begin to move & access files & functions using touch screens or a mouse.
* With support, make increasing use of keyboard functions for a range of purposes & play.
* With support, begin to routinely open & close files, software & applications correctly.
* Demonstrate careful & responsible use of a range of digital technologies e.g. still & video camera, tablets, consoles, programmable toys.
* Begin to independently recognise when & how digital technologies can help me solve problems & share ideas & thoughts.
 | **I can/am able to:** * Recognise & name a wider range of digital devices & say what they can do.
* Identify the component parts of a broader range of digital devices & say/show what they are for & how they are used.
* Log in to preferred devices, websites & applications using given passwords e.g. to access & explore appropriate programs, files, software, games or applications.
* Use touch screens or mouse/keyboard with increasing confidence & skill to access digital technologies for a range of purposes e.g. spacebar, enter/return, backspace, shift keys.
* Identify & use icons for familiar applications, software & to open & close documents, files, etc.
* Demonstrate careful & responsible use of digital technologies including switching on, logging off & shutting down.
* With support, begin to use the main navigation features of software packages e.g. main menu, start, home, back.
* Recognise when & how digital technologies can help me solve problems & share ideas & thoughts.
 | * Recognises different types of digital technology.
* Identifies the key components of different types of digital technology.
* Logs on to a preferred device with a given password.
* Identifies icons for different applications.
* Opens and close a pre-saved file.
* Identifies and consistently use the close icon.
* Uses digital technologies in a responsible way and with appropriate care.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Digital Literacy** | **Searching, processing and managing information responsibly** | I can use digital technologies to explore how to search and find information.**TCH 0-02a****Link with:**Literacy & English - Listening and Talking – Finding and Using information **LIT 0-04a**Reading - Finding & Using Information**LIT 0-14a** | **For a range of purposes across my learning & play, I can/am able to:** * Recognise that there is an internet & talk about/explore how it can help us find useful information, pictures, videos & sound files.
* Begins to recognise that information & materials belong to people e.g. we put our names on our work.
 | **For a range of purposes across my learning & play, I can/am able to:** * With support, begin to suggest key words & questions to help search for specific information, images, video, audio, etc.
* With support, recognise that, & explore how, the internet can be accessed using a range of devices or methods e.g. typing, scanning, voice activation.
* With support, begin to talk about how we could use the information that we find.
* Recognise that people can share their own pictures & information using the internet.
* Begin to develop awareness of the need to ask permission when using other people’s materials.
 | **For a range of purposes across my learning & play, I can/am able to:** * Choose key words to help me search for & find specific information e.g. using search boxes.
* With support, begin to make supervised searches using a range of devices or methods to find information, pictures, videos or sound files
* With support, begin to save, copy or use information that I find.
* With support, begin to question & talk about who owns or who made the materials that we find & whether we are allowed to use it e.g. is it ok to copy & use other people’s work?
 | * Identifies and uses images and key words when searching for specific information.
* Demonstrates an understanding of how information can be found on websites as text, audio, images and video.
* Demonstrates an understanding of how they should not use materials owned by others without permission.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Digital Literacy** | **Cyber resilience and internet safety** | I can explore, play and communicate using digital technologies safely and securely.**TCH 0-03a****Links to:**Health & Wellbeing - Mental, social, emotional & physical wellbeing – Physical Wellbeing**HWB 0-16a & 0-17a** | **For a range of purposes across my learning & play, I can/am able to:** * Talk about how people communicate using the internet e.g. messaging, email, Twitter, Facebook, Skype & other familiar means of communication or “social media”.
* Through real-life experiences & play, explore & begin to understand how digital technologies keep us safe e.g. key pads, passcodes, buzzers, CCTV cameras, etc.
* With support, explore how to keep myself & others safe online e.g. what should remain private, what should & should not be shared.
 | **For a range of purposes across my learning & play, I can/am able to:** * Help to compose & send messages digitally (supervised) e.g. for a real-life purpose such as arranging a visit, ordering supplies for snack, etc.
* Through real-life experiences & play, explore & understand ways in which we can keep ourselves & others safe & secure.
* With support, continue to explore & begin to give examples of things I should not say or share online e.g. photos, videos or information about myself or others.
 | **For a range of purposes across my learning & play, I can/am able to:** * Make appropriate use of digital communication methods to complete tasks across the curriculum e.g. taking part in a Skype session with another class, collaboratively composing Tweets about our work.
* Show that I can use appropriate language & safe behaviour when using digital communication methods.
* With support, begin to use passwords & codes to access familiar online services e.g. Borrow Box, Bug club, Education City
 | * Demonstrates an understanding of appropriate behaviour and language in the digital environment.
* Demonstrates an understanding of the importance of passwords and passcodes for example access to school building.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Food and Textile** | **Food and Textile** | I enjoy exploring and working with foods in different contexts**TCH 0-04a**I enjoy experimenting with a range of textiles**TCH 0-04b**I can share my thoughts with others to help further develop ideas and solve problems.**TCH 0-04c** | **Through play & other activities I can/am able to:** * Begin to use very simple food preparation techniques e.g. hand washing for hygiene, sprinkling, mixing & stirring different foods.
* Begin to explore & handle a range of textiles & use a variety of textile-based techniques e.g. fabric collage, threading, gluing, etc.
* Work with others to solve simple food or textile-based problems e.g. how to make a sandwich, how to make things from fabric
 | **Through play & other activities I can/am able to:** * Use an increasing range of food preparation techniques & utensils safely when preparing food e.g. sprinkling, tearing, mixing, stirring & spreading.
* Use an increasing range of textile-based techniques when making things e.g. tasks which require more challenging fine motor skills or appreciation & understanding of the properties of the fabrics, yarns or tools being used.
* Share my thoughts with others to develop ideas & solve problems when working with others e.g. food preparation & textile-based tasks or challenges such as “Let’s make a new outfit for teddy” or “What food should we prepare for our Christmas party?”

**Links to HWB Food and Health, The Food experience HWB 0-29a, Developing Healthy Choices HWB 0-30a, Keeping Safe & Hygienic HWB 0-33a, The Journey of Food HWB 0-35a** | **Through play & other activities I can/am able to:** * Mix, spread, tear, peel & slice food to prepare simple meals & snacks e.g. using a wider range of utensils correctly.
* Cut, glue, thread & tie with increasing skill.
* Use simple techniques to make things using a range of textiles.
* Offer more than one idea or solution when working with others to solve textile or food-related problems.
* Listen to the ideas & suggestions of my peers then help to select the most appropriate solution e.g. give reasons for my choices
 | * Demonstrates simple food preparation techniques, for example, peeling, slicing, mixing, spreading
* Demonstrates simple techniques with textiles, for example, threading cards, selecting materials, gluing,
* Explores and identifies at least two ideas by using given resources to solve the problem
* Selects an appropriate solution.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Technological Developments in Society and Business** | **Awareness of technological developments (Past, Present and Future),****including how they work** | I enjoy playing with and exploring technologies to discover what they can do and how they can help us.**TCH 0-05a****Links to:**Social Studies - People, past events & societies SOC 0-01aPeople, society, economy & businessSOC 0-15a | **Through play & other activities I can/am able to:** * Notice objects & appliances around me & explore what they do.
* Begin to talk about how objects & appliances help us in our everyday lives e.g. what they are for & what they can do
 | **Through play & other activities I can/am able to:** * Talk about the objects, appliances & technologies I see around me e.g. say what they are for & how people use them
* Begin to notice & understand whether objects, appliances & technology are modern or from the past e.g. during a visit to a museum, or by comparing old household appliances or cars & more modern examples.
 | **Through play & other activities I can/am able to:** * Explain what I have discovered about the technologies around me e.g. what they can do & how they can help us.
* Talk about how I use different technologies.
* Show or talk about how objects, appliances & technologies have changed over time e.g. exploring the changes in toys through the ages
 | * Discusses times when they have used different technologies.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Technological Developments in Society and Business** | **Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment** | To help care for the environment, I reduce, re-use and recycle the resources I use.**TCH 0-06a****Links to:**Social Studies -People place & environment SOC 0-08a, SOC 0-12a I understand how local shops and services use technologies to provide us with what we need and want in our daily lives.**TCH 0-07a****Links to:**Social Studies - People in society, economy & business SOC 1-16a, SOC 1-20a**,**  | **Through a range of play and activities I can/am able to:** * Begin to recognise & name recyclable materials such as paper, card, metal & plastic
* Tidy up after myself e.g. put left over materials & waste into the correct places
* Explore & talk about the technologies used by our local services e.g. what equipment do our police & fire services need to keep us safe
 | **Through a range of play and activities I can/am able to:** * Recognise & name recyclable materials such as paper, card, metal & plastic
* Recycle most materials correctly when tidying up after myself
* Explore & talk about the technologies used by local shops & businesses to provide us with the things we want & need e.g. how does our local shop get the milk & bread that we buy? Which technologies help us get the things we want or need such as new shoes or toys.
 | **Through a range of play and activities I can/am able to:** * Say which materials can be recycled in our nursery/school & our local area
* Share ideas for how we could re-use waste or left-over materials
* Give examples of the technologies used by local shops & services e.g. telephone, internet & ICT, other equipment & tools needed
* Say how technologies help us get the things we want & need e.g. what technology is involved when we go shopping? Which equipment & tools do local shops & businesses use?
 | * Understands what can be reduced, re-used and recycled.
* Gives examples of how people (for example police, fire, and healthcare) who help us use technologies in their everyday work.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Craft, Design, Engineering and Graphics** | **Design and construct models/product** | I explore ways to design and construct models. **TCH 0-09a****Links to TCH 0-10a below**Numeracy & Maths -Number, money, measure – MeasurementMNU 0-11aExpressive Arts – Art & Design - EXA 0-06a & 0-07a | **Through a range of play and activities I can/am able to:** * Explore 3 dimensional materials by stacking, linking & joining them together in simple ways e.g. junk modelling, outdoor constructions, block play
* With support, use simple tools to help me construct & join models & products e.g. glue sticks & brushes, cutting tools, staplers, etc.
* With support, share my thinking about how to build things or solve 3 dimensional problems
 | **Through a range of play and activities I can/am able to:** * Make models & 3 dimensional products using an increasing range of materials & tools
* Demonstrate increasingly controlled gross & fine motor skills when creating models & 3 dimensional products
* With support, begin to plan for constructions or 3 dimensional solutions to problems
* With support, begin to comment on the effectiveness of construction methods, tools & materials chosen (by me & others).
 | **Through a range of play and activities I can/am able to:** * Demonstrate awareness of the properties & suitability of materials when designing & constructinga range of models using different materials e.g. beginning to recognise when qualities such as rigidity, strength or flexibility are required for specific purposes
* Draw, say or show how I plan to make models for specific purposes or to solve specific problems
* Use a growing range of tools & techniques with increasing gross & fine motor skill & control e.g. more accurate cutting with scissors, capacity to fold & form paper/card into cylinders, able to place glue appropriately when joining paper or fabric
 | * Builds models using different materials e.g. junk modelling, wooden blocks
* Uses tools and materials (paper, card, wood, plastic) to create models.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Craft, Design, Engineering and Graphics** | **Exploring uses of materials** | I explore everyday materials in the creation of pictures/models/concepts. **TCH 0-10a****Links to** TCH 0-09a above & TCH 0-11a belowLiteracy & English – Listening & talking – Enjoyment & Choice LIT 0-01a Creating Texts LIT 0-09aScience – Materials – Properties & uses of substances SCN 0-15aExpressive Arts – Art & Design EXA 0-02a  | **Through a range of play and activities I can/am able to:** * Explore & name everyday materials & use appropriate words to describe how materials look & feel
* Explore how everyday materials can help me create pictures & models e.g. mark-making in clay or mud, mixed media textural collages, practical exploration of heavy & light, etc.
* With support, begin to say what a material is good at (useful for) or not good at (not useful for)
 | **Through a range of play and activities I can/am able to:** * Explore & name a wider range of materials & use a growing vocabulary to describe how they look & feel e.g. describing how they look, their texture, weight & other qualities
* Combine & use a wider range of materials to create pictures & models
* Say what a material is good at (useful for) or not good at (not useful for)
 | **Through a range of play and activities I can/am able to:** * Describe how a range of materials look & feel using a varied range of appropriate vocabulary
* Combine & make considered use of a range of materials when creating pictures & models & exploring & sharing my thinking & ideas
* Answer questions and/or show that I have considered what my chosen materials are good at or useful for
 | * Describes materials by touch for example: sticky, squidgy, soft, fluffy, hard, rough, wet, heavy, light.
* Uses a range of materials when creating pictures/models/concepts for example: sticky, squidgy, soft, fluffy, hard, rough, wet, heavy, light.
* Identifies when a material is suitable or not for specific function or task e.g. sticky, squidgy, soft, fluffy, hard, rough, wet, heavy, light.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Craft, Design, Engineering and Graphics** | **Representing ideas, concepts & products through a variety of graphic media** | I explore and discover different ways of representing ideas in imaginative ways. **TCH 0-11a****Links to** TCH 0-09a & TCH 0-10a aboveExpressive Arts – Art & DesignEXA 0-02a & EXA 0-03aNumeracy & Maths – Shape, position & movement – Properties of 2 D shapes & 3 D objects – MTH 0-16aAngles, symmetry & transformation – MTH 0-19a | **Through play and a variety of experiences across my learning I can/am able to:** * Draw lines & shapes when exploring & experiencing a range of natural & man-made materials
* Explore digital methods of creating lines & shapes
* Talk about what these lines & shapes represent to me
 | **Through play and a variety of experiences across my learning I can/am able to:** * Explore & use a range of materials & methods to represent my ideas
* Say & share what my lines & shapes represent
* Begin to explore & form basic 2D shapes when representing my ideas
 | **Through play and a variety of experiences across my learning I can/am able to:** * Create pictures using a range of natural, man-made & digital tools & materials
* Share & describe my ideas with others
* Recognise & use 2D shapes to represent my ideas or explain my thinking (concepts)
 | * Uses a range of materials (natural and man-made) and resources to create pictures.
* Shares ideas with others.
* Recognise 2 D shapes and how they can be used to visually represent ideas/concepts.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Craft, Design, Engineering and Graphics** | **Application of engineering** | I explore a variety of products covering a range of engineering disciplines. **TCH 0-12a****Links to** TCH 0-09a & TCH 0-10a aboveLiteracy & English – Listening & Talking – Creating Texts – LIT 0-10aScience – Planet Earth – Energy Sources & sustainability SCN 0-04a, SCN 0-07a, SCN 0-09aMaterials – Properties & uses of substances SCN 0-15a | **Through play and a variety of experiences across my learning I can/am able to:** * Explore a range of construction materials & objects with moving parts
* Use natural & man-made materials to explore simple engineering problems e.g. making structures & bridges outdoors
 | **Through play and a variety of experiences across my learning I can/am able to:** * Use a range of construction materials & found objects to discover then solve engineering problems in my environment
* Name & talk about how simple moving parts work e.g. wheels go around, a see saw goes up down (pivots)
* Name & recognise machines, bridges & familiar structures
 | **Through play and a variety of experiences across my learning I can/am able to:** * Recognise & name parts & tools such as nuts, bolts, screws, nails, hammer, screwdriver, clamp
* Show how to build & de-construct a simple toy, machine or appliance
* Talk about how well a machine or construction works – share personal opinion & reasons
* Recognise & name examples of engineering e.g. in the world around me, and in books or online
 | * Recognises engineering in the world around them, for example, bridges, construction, electronics, computers.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Computing Science** | **Understanding the world through computational thinking** | I can explore computational thinking processes involved in a variety of everyday tasks and can identify patterns in objects or information.**TCH 0-13a****Link to:** Numeracy & Maths – Number Money & Measure – Patterns & relationshipsMTH 0-13aShape, position & movement – MTH 0-16a, Information Handling – Data & Analysis – MNU 0-20b & c | **Through a variety of activities & play across my learning I can/am able to:*** Observe & explore the order of everyday processes in the world around me e.g. getting up & getting ready to come to nursery.
* With support, begin to observe & talk about similarities & differences between objects & things e.g. same colour or size.
* With support, begin to notice patterns, similarities & differences in things I see, hear, feel & do e.g. words & actions in songs & rhymes, eye colour/hair colour, etc.
 | **Through a variety of activities & play across my learning I can/am able to:*** Say what happens first, next & last when observing the order & sequence of everyday processes e.g. our daily routine in nursery.
* Begin to observe & talk about how objects & things can be classified/grouped in more than one way depending on their similarities and/or differences e.g. colour, shape, size, texture, etc.
* Begin to notice patterns, similarities & differences in things I see, hear, feel & do e.g. noticing repetition, order, uniformity & changes such as those found in a simple dance routine.
 | **Through a variety of activities & play across my learning I can/am able to:*** Describe/show different everyday processes & sequence the beginning, middle & end to create simple instructions/an **algorithm** e.g. for washing hands, cleaning teeth, etc.
* Classify/group objects & things into simple categories with increasing independence & say why I have grouped them in this way e.g. resources, toys, natural materials, etc.
* Notice & talk about or demonstrate understanding of patterns & relationships between things I see, hear, feel & do e.g. the temperature at different times of the year, life cycles of different creatures
 | * Identifies and sequences the main steps in an everyday task to create instructions/an algorithm for example, washing hands.
* Classifies objects and groups them into simple categories for example, groups of toy bricks according to colour.
* Identifies patterns, similarities and differences in objects or information such as colour, size and temperature and simple relationships between them.
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Computing Science** | **Understanding and analysing computing technology** | I understand that sequences of instructions are used to control computing technology.**TCH 0-14a****Links to** – Numeracy & Maths – Shape, position & movement MTH 0-17aI can experiment with and identify uses of a range of computing technology in the world around me.**TCH 0-14b** | **I can/am able to:*** Explore & play with toys & games that can be programmed.
* Begin to recognise the order in which instructions are carried out e.g. when playing with toys & games, or when using electrical equipment.
* Explore computing technology in the world around me.
* Begin to talk about how computing technology is used in everyday life e.g. I use a tablet to play games.
 | **I can/am able to:*** Begin to recognise how symbols are used to represent process & information in the world around me e.g. pictorial hand washing instructions.

 * Through exploration and play begin to predict what a person or device will do in response to a given set of verbal or visual instructions e.g. Where will a human robot (or programmable device) end up in response to simple instructions (two or three).
* Begin to identify and talk about obvious and not so obvious computing technology in the world around us. e.g. when I go near a door sensor the doors automatically open.
 | **I can/am able to:** * Recognise how symbols are used to represent process & information in the world around me e.g. Following pictorial instructions to build a Lego toy.
* Through exploration and play predict what a person or device will do in response to a given set of verbal or visual instructions e.g. Where will a human robot (or programmable device) end up in response to four or more instructions.
* Identify the uses of computing technology in the world around me e.g. smart speaker (Alexa), ATM (cash machine), games console (Play Station).
 | * Demonstrates an understanding of how symbols can represent process and information.
* Predicts what a device or person will do when presented with a sequence of instructions for example, arrows drawn on paper.
* Identifies computing devices in the world (including those hidden in appliances and objects such as automatic doors).
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| **EARLY LEVEL** | **TECHNOLOGIES** |
| **Experiences and Outcomes** | **Progression**  | **Benchmarks** |
| **Organiser – Computing Science** | **Designing, building and testing computing solutions** | I can develop a sequence of instructions and run them using programmable devices or equivalent**TCH 0-15a****Links to:** Numeracy & Maths, Angles, Symmetry & transformation MTH 0-17a Literacy & English – Listening & talking – Creating texts LIT 0-09aReading – Understanding, evaluating & analysing LIT 0-16a  | **Through a variety of activities & play across my learning I can/am able to:*** With support, begin to experiment & have fun trying to input a simple sequence of instructions into a programmable device e.g. to get it to move left, right, backwards & forwards from a chosen starting point to a chosen end point.
* Begin to be able to observe & talk about how well different sequences of instructions worked.
 | **Through a variety of activities & play across my learning I can/am able to:*** Begin to create simple sequences of instructions for programmable devices in order to complete a task e.g. from a chosen starting point to a chosen end point via one or two identified positions or obstacles.
* Begin to observe & talk about mistakes in sequences of instructions & how to correct these
 | **Through a variety of activities & play across my learning I can/am able to:*** Begin to program simple sequences of instructions to get a programmable device to move left, right, backwards & forwards from a chosen starting point to a chosen end point via a few identified positions.
* Observe, talk about & correct errors in sequences of instructions.
 | * Designs a simple sequence of instructions/algorithm for programmable device to carry out a task for example, directional instructions: forwards/backwards.
* Identifies and corrects errors in a set of instructions.
 |