



**Computing – EYFS– Medium Term Plan**  
**Unit 1: Computing systems and networks: exploring hardware.**



Lesson	Learning Objective	Observations	ELG links	Vocabulary	Resources
One: Exploring hardware tinker tray	To learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary.	<p><b>Can the children:</b></p> <p>Show an interest in exploring the objects?</p> <p>Assimilate new vocabulary given by an adult or peer and use it themselves?</p> <p>Ask relevant questions about the objects?</p> <p>Show critical thinking or problem-solving skills when exploring the items?</p> <p>Show preexisting knowledge of the names or uses of any of the items?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Learn new vocabulary</li> <li>- Use new vocabulary through the day</li> <li>- Ask questions to find out more and to check they understand what has been said to them</li> <li>- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen</li> </ul> <p><b>Physical development</b></p> <ul style="list-style-type: none"> <li>- Develop their small motor skills so that they can use a range of tools competently, safely and confidently</li> <li>- Confidently and safely use a range of small apparatus, alone and in a group</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Playing and exploring</li> </ul>	<ul style="list-style-type: none"> <li>- Mouse</li> <li>- Buttons</li> <li>- Keyboard</li> <li>- Keys</li> <li>- Motherboard</li> <li>- USB stick</li> <li>- System fan</li> <li>- Hard drive</li> <li>- Monitor</li> <li>- Computer tower</li> <li>- Speaker</li> <li>- Click</li> <li>- Push</li> <li>- Pull</li> <li>- Twist</li> <li>- Under</li> <li>- On top of</li> <li>- Behind</li> <li>- Open</li> <li>- Shut</li> <li>- Larger</li> <li>- Smaller</li> </ul>	<ul style="list-style-type: none"> <li>- Tuff tray</li> <li>- A selection of disconnected computer hardware: mouse, keyboard, motherboard, USB stick, system fan, hard drive, monitor, computer tower, speakers (you could have multiples of some of the objects)</li> <li>- Tools: screwdrivers, magnifying glasses</li> </ul>
Two: Real world tinker tray	To learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary.  To recognise that a range of technology is	<p><b>Can the children:</b></p> <p>Show an interest in exploring the objects?</p> <p>Assimilate new vocabulary given by an adult or peer and use it themselves?</p> <p>Ask relevant questions about the objects?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Learn new vocabulary</li> <li>- Use new vocabulary through the day</li> <li>- Ask questions to find out more and to check they understand what has been said to them</li> <li>- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen</li> </ul>	<ul style="list-style-type: none"> <li>- Computer</li> <li>- Dial</li> <li>- Memory</li> <li>- Technology</li> <li>- Power</li> <li>- Electricity</li> <li>- Batteries</li> <li>- Click</li> <li>- Push</li> <li>- Pull</li> <li>- Twist</li> <li>- On</li> </ul>	<ul style="list-style-type: none"> <li>- Tuff tray</li> <li>- A selection of everyday technology to explore mobile phones, walkie talkies, tablet/iPad, digital camera, digital clock, remote control, electric toothbrush</li> <li>- Tools: screwdrivers, magnifying glasses</li> <li>- <i>Activity: Everyday technology images</i></li> </ul>

	used in places such as homes and schools.	<p>Show critical thinking or problem-solving skills when exploring the items (e.g. how to take out and replace batteries)?</p> <p>Provide any preexisting knowledge of the names or uses of any of the items?</p> <p>Match the objects on the tuff tray to the relevant picture?</p> <p>Make connections with technology used at home?</p>	<p><b>Physical development</b></p> <ul style="list-style-type: none"> <li>- Develop their small motor skills so that they can use a range of tools competently, safely and confidently</li> <li>- Confidently and safely use a range of small apparatus, alone and in a group</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Playing and exploring</li> </ul>	- Off	
Three: Pictures of play	To learn how to operate a camera and/or iPad and use it to take photographs.	<p>Do they show any prior knowledge of using a camera or tablet to take a photograph?</p> <p>Can they take a photograph independently or do they need support?</p> <p>Do they show an interest in making sure they take a photo correctly (subject is in shot, not blurry)?</p> <p>Can they make connections with taking photographs at home?</p>	<p><b>Physical Development</b></p> <ul style="list-style-type: none"> <li>- Develop their small motor skills so that they can use a range of tools competently, safely and confidently</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Playing and exploring</li> <li>- Active learning</li> </ul>	<ul style="list-style-type: none"> <li>- Camera</li> <li>- iPad</li> <li>- Tablet</li> <li>- Lens</li> <li>- Point</li> <li>- Shoot</li> <li>- Capture</li> <li>- Picture</li> <li>- Image</li> <li>- Gallery</li> <li>- Record</li> <li>- Photograph</li> <li>- Photographer</li> <li>- Still</li> <li>- Blurred</li> <li>- Blurry</li> <li>- Crisp</li> <li>- Clear</li> </ul>	- A digital camera, iPad or tablet.

<p>Four:</p> <p>Picture walk</p>	<p>To learn how to operate a camera and/or iPad and use it to take photographs.</p>	<p><b>Can the children:</b></p> <p>Recall how to use a camera or tablet to take a photograph?</p> <p>Take photographs independently or do they need support?</p> <p>Show an interest in making sure they take a photo correctly (subject is in shot, not blurry)?</p> <p>Make connections with taking photographs at home?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Articulate their ideas and thoughts in well-formed sentences</li> <li>- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen</li> </ul> <p><b>Understanding the world</b></p> <ul style="list-style-type: none"> <li>- Describe what they see, hear and feel whilst outside (or inside)</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Playing and exploring</li> <li>- Active learning</li> </ul>	<ul style="list-style-type: none"> <li>- Camera</li> <li>- iPad</li> <li>- Tablet</li> <li>- Lens</li> <li>- Point</li> <li>- Shoot</li> <li>- Capture</li> <li>- Picture</li> <li>- Image</li> <li>- Gallery</li> <li>- Record</li> <li>- Photograph</li> <li>- Photographer</li> <li>- Still</li> <li>- Blurred</li> <li>- Blurry</li> <li>- Crisp</li> <li>- Clear</li> </ul>	<ul style="list-style-type: none"> <li>- A digital camera, iPad or tablet.</li> </ul>
<p>Five:</p> <p>Class photo album</p>	<p>To learn how to operate a camera and/or iPad and use it to take photographs.</p>	<p>Do they show any recollection of how to use the camera or tablet to take a photograph?</p> <p>Are they aware of how to flip the screen so that they can see themselves?</p> <p>Can they make any comments about what they can see as they look at themselves on the screen?</p> <p>Are they able to talk about themselves in positive terms?</p>	<p><b>Personal, social and emotional development</b></p> <ul style="list-style-type: none"> <li>- See themselves as a valuable individual</li> </ul> <p><b>Literacy</b></p> <ul style="list-style-type: none"> <li>- Spell words by identifying the sounds and then writing the sound with letter/s</li> <li>- Write short sentences with words with known sound-letter correspondences using a capital letter and full stop</li> </ul>	<ul style="list-style-type: none"> <li>- Camera</li> <li>- iPad</li> <li>- Tablet</li> <li>- Lens</li> <li>- Point</li> <li>- Shoot</li> <li>- Capture</li> <li>- Picture</li> <li>- Image</li> <li>- Gallery</li> <li>- Record</li> <li>- Photograph</li> <li>- Photographer</li> <li>- Still</li> <li>- Blurred</li> <li>- Blurry</li> <li>- Crisp</li> <li>- Clear</li> <li>- Selfie</li> </ul>	<ul style="list-style-type: none"> <li>- A digital camera, iPad or tablet</li> </ul>

ELGs - Personal Social and Emotional Development, Playing and Exploring, Creating and thinking critically.



**Computing – Year 1 – Medium Term Plan  
Unit 2: All about instructions**



Lesson	Learning Objective	Observations	National Curriculum Links	Vocabulary	Resources
<p>One: Following instructions</p>	<p>To follow instructions as part of practical activities and games.</p>	<p>Who can respond to instructions?  Who can respond to more than one instruction when given at the same time?  Do any of the children need to have the instruction repeated multiple times?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Understand how to listen carefully and why listening is important</li> </ul> <p><b>Personal, social and emotional development</b></p> <ul style="list-style-type: none"> <li>- <u>ELG: Self-regulation</u>: Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Active learning</li> </ul>	<p>- Instructions</p>	<p>- No resources or special preparation required</p>
<p>Two: Giving simple instructions</p>	<p>To follow instructions as part of practical activities and games.</p>	<p>Are they giving simple but relevant instructions?  Are they listening attentively and following the instructions given?  Are they using appropriate vocabulary and positional language?  Do they understand positional language when following instructions?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Articulate their ideas and thoughts in well-formed sentences.</li> <li>- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</li> </ul> <p><b>Personal, social and emotional development</b></p> <ul style="list-style-type: none"> <li>- Build constructive and respectful relationships.</li> <li>- <u>ELG: Self-regulation</u>: Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions</li> <li>- <u>ELG: Managing self</u>: Be confident to try new activities and show independence, resilience and perseverance in the face of challenge</li> <li>- <u>ELG: Building relationships</u>: Work and play cooperatively and take turns with others</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Active learning</li> <li>- Creating and thinking critically</li> </ul>	<p>- Blindfold - Step over - Walk around - Turn - Left - Right - To the side - Straight on - Stand still - Stop - Duck - Under - Bend down - Walk - Hop - Tiptoe - Shuffle - Skip - Run</p>	<p>- Equipment to use as obstacles, such as cones, chairs, ropes, hoops etc, or use chalk to mark a path on the ground outside  - Blindfolds (per pair of pupils)  - An obstacle course for each pair of pupils</p>

<p>Three:</p> <p>Dressing up instructions</p>	<p>To follow instructions as part of practical activities and games.</p> <p>To learn to give simple instructions.</p>	<p><b>Can the children:</b></p> <p>Give simple and relevant instructions?</p> <p>Use appropriate and relevant vocabulary as they give instructions?</p> <p>Give a two-part instruction?</p> <p>Listen attentively and follow the instructions?</p> <p>Understand the concept of the game and follow the rules?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Articulate their ideas and thoughts in well-formed sentences.</li> <li>- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</li> </ul> <p><b>Personal, social and emotional development</b></p> <ul style="list-style-type: none"> <li>- Build constructive and respectful relationships.</li> <li>- <u>ELG: Self-regulation:</u> Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions</li> <li>- <u>ELG: Building relationships:</u> Work and play cooperatively and take turns with others</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Active learning</li> <li>- Creating and thinking critically</li> </ul>	<ul style="list-style-type: none"> <li>- Instructions</li> <li>- Timer</li> <li>- Describe</li> <li>- Adjective</li> <li>- Two-part instructions</li> </ul>	<ul style="list-style-type: none"> <li>- A selection of clothes and accessories (oversized/adult sizes work best): hats, scarves, boots, coats, socks, bags etc.</li> <li>- A soft ball or beanbag</li> <li>- A digital timer (or sand timer)</li> </ul>
<p>Four:</p> <p>Debugging instructions</p>	<p>To follow instructions as part of practical activities and games and to learn to debug when things go wrong.</p> <p>To learn to give simple instructions.</p> <p>To learn that an algorithm is a set of instructions to carry out a task, in a specific order.</p>	<p>Realise that there is a problem with the original set of instructions?</p> <p>Offer a solution to debug the problem on their own?</p> <p>Understand the need to give clear, specific instructions?</p> <p>Give a simple, relevant instruction?</p> <p>Understand why the original sequence went wrong?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</li> </ul> <p><b>Personal, social and emotional development</b></p> <ul style="list-style-type: none"> <li>- <u>ELG: Self-regulation:</u> Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.</li> </ul> <p><b>Physical development</b></p> <ul style="list-style-type: none"> <li>- Know and talk about the different factors that support their overall health and wellbeing</li> <li>- Further develop the skills they need to manage the school day successfully</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Active learning</li> <li>- Creating and thinking critically</li> </ul>	<ul style="list-style-type: none"> <li>- Instructions</li> <li>- Timer</li> <li>- Describe</li> <li>- Adjective</li> <li>- Two-part instructions</li> <li>- Algorithm</li> </ul>	<ul style="list-style-type: none"> <li>- Handwashing equipment for the adult: a bowl, water, soap and a towel or paper towel</li> <li>- A smartboard or flip chart to record the children's instructions</li> <li>- A camera or tablet</li> </ul>

<p>Five: Predictions</p>	<p>To predict the outcome of an algorithm.</p>	<p>Can they correctly sequence the instructions?</p> <p>Can they predict the outcome of the sequence, or give a logical answer?</p> <p>Do they understand that the term algorithm refers to a set of instructions to carry out a task, in a specific order?</p> <p>Do they the word 'algorithm' when talking about a specific set of instructions?</p> <p>Can they use ordinal language (firstly, second etc.) when talking about the sequence?</p>	<p><b>Communication and language</b></p> <ul style="list-style-type: none"> <li>- Describe events in some detail.</li> </ul> <p><b>Characteristics of Effective Learning</b></p> <ul style="list-style-type: none"> <li>- Active learning</li> <li>- Creating and thinking critically</li> </ul>	<ul style="list-style-type: none"> <li>- Instructions</li> <li>- Order</li> <li>- Sequence</li> <li>- Algorithm</li> <li>- Predict</li> <li>- Prediction</li> <li>- Next</li> <li>- Last</li> <li>- First</li> <li>- Second</li> <li>- Third</li> </ul>	<ul style="list-style-type: none"> <li>- <i>Presentation: Making predictions (see Activity set-up)</i></li> <li>- Glue sticks</li> <li>- Paper</li> </ul>
<p>ELGs - Personal Social and Emotional Development, Playing and Exploring, Creating and thinking critically.</p>					