

EYFS Computing Knowledge and Understanding and Composite Questions for Exploration

Barefoot Autumn Term – Core Computing Concepts and Approaches

| FS1 | | FS2 | |
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| <p>Logical Reasoning - anticipating and explaining Abstraction - working out what is important and ignoring what is not. Pattern - Comparing, and spotting similarities and differences</p> <p>Tinkering - playing and exploring Logical Reasoning - anticipating and explaining Pattern - Comparing, and spotting similarities and differences</p> <p>Abstraction - working out what is important and ignoring what is not. Decomposition - breaking problems down into steps Creating - Making things, checking things and fixing things Collaboration - playing and working co-operatively</p> <p>Algorithms - Instructions and sequencing Decomposition - breaking problems down into steps Creating - Making things, checking things and fixing things</p> | <ol style="list-style-type: none"> Boats Ahoy - What is a good boat? Boats Ahoy - Is this a good boat? Boats Ahoy - On board role play Boats Ahoy - Build a boat | <p>Logical Reasoning - anticipating and explaining Pattern - Comparing, and spotting similarities and differences Creating - Making things, checking things and fixing things</p> <p>Logical Reasoning - anticipating and explaining Algorithms - Instructions and sequencing Decomposition - breaking problems down into steps Creating - Making things, checking things and fixing things</p> <p>Algorithms - Instructions and sequencing Decomposition - breaking problems down into steps Collaboration - playing and working co-operatively</p> | <ol style="list-style-type: none"> Awesome Autumn - Autumn garlands Awesome Autumn - Leaf Labyrinth Awesome Autumn - Pumpkin Soup |
| Vocabulary | Same Different Important Float Sink Test step | Vocabulary | Part Make Change Pattern Path First Next Create |
| Composite Questions/Lines of Enquiry | | Composite Questions/Lines of Enquiry | |
| <ol style="list-style-type: none"> <ul style="list-style-type: none"> What is a boat? I know what a boat is. Where can we find boats? I know where to find boats. What do boats do? I know how boats are used. Are those boats the same? Why/Why not? I know similarities and differences between different boats. What is most important about boats? I know the distinguishing features of a boat. What does float mean? I know what floating is. What does sink mean? I know what sinking is. What does our boat need to have? I know what a boat needs to have to work. How can we use materials from our classroom to make a simple boat? I know what materials would be useful to make a boat. What can you tell others about your boat? I can share ideas about features of my boat and describe my boat to others. What are you going to do first/ next? Why? I know how to make a simple boat by following instructions. How can I test out my boat? I know how to test out my boat. Does my boat float? Why? I can explain if my boat worked or not. | | <ol style="list-style-type: none"> <ul style="list-style-type: none"> What is an autumn garland? I know and can describe what an autumn garland. What materials would be effective in an autumn garland? I know what materials would be effective for an autumn garland and why. What are the similarities and differences between everyone's garland designs? I know what the differences and similarities are between designs. What have you found out? I can reflect and evaluate on my design. What would you change? I know what changes I would make. <ul style="list-style-type: none"> What is a pattern? What is this pattern? I know what a pattern is and can describe it. What steps will you take to create a pattern? I know the steps taken to create my pattern. What directions will be pattern follow? I know the direction my pattern will follow. What do we need to do to create the maze? I know what materials are needed to create my maze. <ul style="list-style-type: none"> What are you going to do first/next? I know how to begin a sequence of instructions. How do you make pumpkin soup? I know how to follow a simple pumpkin soup recipe. | |

Barefoot Spring Term - Core Computing Concepts and Approaches

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| <p>Pattern - Comparing, and spotting similarities and differences Logical Reasoning - anticipating and explaining Creating - Making things, checking things and fixing things</p> <p>Abstraction - working out what is important and ignoring what is not. Tinkering - playing and exploring Creating - Making things, checking things and fixing things</p> <p>Algorithms - Instructions and sequencing Collaboration - playing and working co-operatively Persevering - not giving up</p> | <p>1. Super Space - Amazing Aliens</p> <p>2. Super Space - Build a Rocket</p> <p>3. Super Space - Space Chase</p> | <p>Abstraction - working out what is important and ignoring what is not. Creating - Making things, checking things and fixing things Collaboration - playing and working co-operatively Tinkering - playing and exploring</p> <p>Algorithms - Instructions and sequencing Collaboration - playing and working co-operatively Persevering - not giving up</p> <p>Algorithms - Instructions and sequencing Decomposition - breaking problems down into steps Collaboration - playing and working co-operatively</p> | <p>1. Springtime - Scarecrows</p> <p>2. Springtime - Rabbit Run</p> <p>3. Springtime - Seed Sequencing</p> |
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| <p>Vocabulary</p> | <p>Head Body Join Together Correct Tricky Difficult Instruction Same Different Change</p> | <p>Vocabulary</p> | <p>Similarity Difference Persevere Idea Problem Solution Challenge Sequence</p> |
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Composite Questions/Lines of Enquiry

Composite Questions/Lines of Enquiry

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| <p>1. What do you notice about these aliens? I can describe the similarities and differences between the alien characters. How can I join parts together? I know how to join different materials together. How can I sort aliens and their parts? I know how to sort aliens into groups that are the same according to characteristics.</p> <p>2. How can I make a rocket? To know how to use materials to create a rocket for a purpose. Which material will I use and why? I can explain my choices of materials How does my rocket differ from other rockets? I know differences between my rocket and others.</p> <p>3. What are instructions? I know what instructions are. What is my next instruction? I know what my next instruction is. Which part is tricky? I know which part of the instructions are tricky. How can we fix the tricky part? How do I know my rocket works? I can use instructions to check my rocket and fix errors.</p> | <p>1. What is the same about all the scarecrows? What is different about them? I can describe the similarities and differences between scarecrows. What are you going to include in your scarecrow picture? I know what I will include in my picture. Are there any parts of your scarecrow that could move, so that the birds think they are real? I know how to make my picture move to achieve a goal. What did I find out about joining and assembling with my project? I know ways to explore joining and assembling.</p> <p>2. What solutions do I have to solve a problem? I know a solution to a given problem. Which part of the problem do you think will be difficult? I can identify difficulty in a challenge. What can we do to overcome this difficulty? I can check instructions to work out how to overcome a challenge.</p> <p>3. What is a sequence? I can identify what a sequence is. Can you create a sequence? I can create a sequence from given materials. What do I think will happen next? I can anticipate the next step and check that it will work. What will the next step be? I can find out what I need to do next?</p> |
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Barefoot Summer Term - Core Computing Concepts and Approaches

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| <p>Algorithms - Instructions and sequencing Pattern - Comparing, and spotting similarities and differences</p> <p>Algorithms - Instructions and sequencing Decomposition - breaking problems down into steps Abstraction - working out what is important and ignoring what is not.</p> <p>Algorithms - Instructions and sequencing Decomposition - breaking problems down into steps</p> <p>Logical Reasoning - anticipating and explaining Abstraction - working out what is important and ignoring what is not. Pattern - Comparing, and spotting similarities and differences</p> | <ol style="list-style-type: none"> 1. Summer - Busy Bodies - Look how we grow 2. Summer - Busy Bodies - Make a body 3. Summer - Busy Bodies - Movement Algorithms 4. Summer - Busy Bodies - Parts of our body | <p>Pattern - Comparing, and spotting similarities and differences Persevering - not giving up Creating - Making things, checking things and fixing things</p> <p>Logical Reasoning - anticipating and explaining Algorithms - Instructions and sequencing Tinkering - playing and exploring Creating - Making things, checking things and fixing things Collaboration - playing and working co-operatively</p> <p>Tinkering - playing and exploring Creating - Making things, checking things and fixing things Persevering - not giving up</p> | <ol style="list-style-type: none"> 1. Summer Fun - Colour Collections 2. Summer Fun - Journeys 3. Summer Fun - Seaside Tangrams |
| <p>Vocabulary</p> | <p>Before After Why? What? How? Improve Same Different Change</p> | <p>Vocabulary</p> | <p>Similarity Difference Persevere Idea Problem Solution Challenge Sequence Notice Organise Which? Where? Parts Check</p> |
| <p align="center">Composite Questions/Lines of Enquiry</p> | | <p align="center">Composite Questions/Lines of Enquiry</p> | |
| <ol style="list-style-type: none"> 1. How have I grown? I know the stages of growth I have been through so far. How have I changed since I was a baby? I know what I can do now that I couldn't do as a baby. 2. What are parts of the body called? I can name parts of the body. What does my model of a body need to have? I know what parts make up a body. What can I use to represent the different body parts? I know how to represent body parts with different materials. What else can I add to my model? I can add more detail to my model. 3. What are simple dance steps? I know what dance steps can look like. How do you create a sequence of actions in response to music? I can follow a simple set of dance steps. 4. What are your eyes for? I know what eyes are used for Are all eyes the same? I can describe similarities and differences between sets of eyes Is eye colour important? I can describe the importance of eye colour. | | <ol style="list-style-type: none"> 1. How can I sort a range of objects? I can sort objects based on colour, size or shape. What do I notice about the objects I have collected? I can describe similarities and differences between a collection of objects. How can I represent sorting in different ways? I can compare and group based on visual representations of sorted objects. E.G Pictograms/towers 2. What is a map? I know what a map is and what it is used for. How can I create a map of a simple journey? I know how to create a simple map of a journey. What are simple journeys that I carry out? I know examples of simple journeys I go on. 3. What shapes make a house? I know what shapes make a house. What sequence of shapes create a house? I know what sequence of shapes build house. How will I use what I have learned to design my house? I know what shapes are suitable to design my house. What steps will I follow? I know what sequence I will follow to create my design. | |