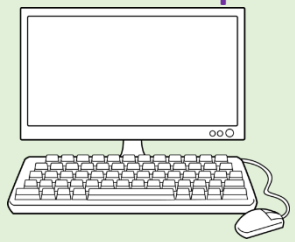
LEARNING JOURNEY

Computing systems and networks: Using a computer

Autumn 2 Computing



OUTCOME: **To name and understand the function of the main parts of a computer.**
To understand how to use the keyboard and mouse.
To know how to log in and out.

Q: What is a keyboard?

We are learning what a keyboard is and how to locate relevant keys.

I can recognise what a keyboard is and what it is used for.
I can recognise and identify familiar letters, numbers and symbols on a keyboard.

Q: How do you log in and log out?

We are learning how to log in and log out.

I can use and navigate with the mouse.
I am aware of why it is important to have a password.
I understand why we need to log in and out.

Q: Can you move the mouse and navigate the screen with some accuracy?

We are learning what a mouse is and develop basic mouse skills.

I can explain what a mouse is for.
I can click and move a mouse on a screen.
I can use basic mouse skills to make marks on the screen using the paint application.

Q: Can you use an online paint tool to create digital art?

We are learning to what a mouse is and develop basic mouse skills.

I can left-click and release to create a stamp on screen.
I can use basic mouse skills to make stamp art on the screen.

Q: Can you click and drag?

We are learning to what a mouse is and develop basic mouse skills.

I can navigate the screen with increased accuracy.
I can use basic mouse skills to participate in a simple computer game.
I can click and drag a digital object.

Key vocabulary:

arrow, computer, computer safety, computer tower, click, cursor, drag, drop, monitor, keyboard, mouse, move letters, left-click, log in, log out, lock, numbers, uppercase, lowercase, personal, protect, paint password, private, right-click secure, security, stamp and type.

LEARNING JOURNEY

Programming 1: All about instructions

Spring 1 Computing

OUTCOME: **To receive and give instructions.**
To understand the importance of precise instructions.

Q: Can you listen and follow instructions?

We are learning to follow instructions in practical activities and games.

I can respond to an instruction.
I can respond to more than one instruction when given at the same time.

Q: How will you guide a partner through an obstacle course?

We are learning to follow instructions precisely to carry out an action.

I can give simple and relevant instructions.
I can listen attentively and follow given instructions.
I can use positional language.

Q: Can you follow and give instructions in a dressing up game?

We are learning to follow and give simple instructions.

I can give simple and relevant instructions.
I can listen attentively and follow given instructions.
I can use appropriate and relevant vocabulary when giving an instruction.
I can give a two-part instructions.

Q: Can you follow and give instructions as part of washing hands?

We are learning to understand and be able to explain what decomposition is.

I can understand the importance of carrying instructions in the right order.
I can understand why and 'debug' an original sequence that went wrong.

Q: What is an algorithm?

We are learning to predict the outcome of an algorithm.

I can correctly sequence instructions.
I can predict the outcome of sequence.
I understand what the term 'algorithm'.
I can use ordinal language when talking about sequence.

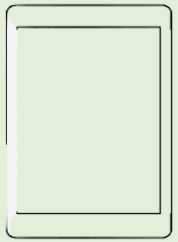
Key vocabulary:

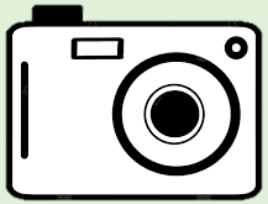
blindfold, step over, walk around, turn, left, right, to the side, straight on, stand still, stop, duck, under, bend down, walk, hop, tiptoe, shuffle, skip, run, instructions, timer, describe, adjective, two-part instructions, order, sequence, algorithm, predict, prediction, next, last, first, second and third.

LEARNING JOURNEY

Computing systems and networks: Exploring hardware

Spring 2 Computing





OUTCOME: **To tinker and explore with different computer hardware.**
To learn to operate a camera/ iPad.
To take photographs of meaningful creations or moments.

Q: What do you think and know about the hardware?

We are learning how to explore and tinker with hardware.

I can ask relevant question and the objects.
I can show critical thinking or problem-solving skills when exploring the items.
I can show interest in exploring the objects.

Q: Where is technology used?

We are learning to recognise that a range of technology is used in places such as homes and schools.

I can make connections with technology used at home.
I can show critical thinking or problem-solving skills when exploring the items.
I can match the hardware to relevant pictures.

Q: Can you take photographs of your independent play?

We are learning to operate a camera and/or iPad and use it to take photographs.

I can take a photograph independently.
I can make connections with taking photographs at home.
I can take a photograph correctly (subject is in shot and not blurry).

Q: Can you take photographs of your discoveries?

We are learning to operate a camera and/or iPad and use it to take photographs.

I can take a photograph independently.
I can make connections with taking photographs at home.
I can take a photograph correctly (subject is in shot and not blurry).

Q: Can you take a selfie?

We are learning to operate a camera and/or iPad and use it to take photographs.

I can flip the screen to see myself.
I can make comments about what I see as I look at myself on the screen.
I speak positively about myself.

Key vocabulary:

mouse, buttons, keyboard, keys, motherboard, USB stick, system fan, hard drive, monitor, computer tower, speaker, click, push, pull, twist, under, on top of, behind, open, shut, larger, smaller, camera, iPad, tablet, lens, point, shoot, capture, picture, image, gallery, record, photograph, photographer, still, blurred, blurry, crisp, clear, computer, dial, memory, technology, power, electricity, batteries, click, push, pull, twist, on, off and selfie

LEARNING JOURNEY

Programming 2: Programming Bee-bots

Summer 1 Computing

OUTCOME: **To learn about directions.**
To experiment with programming a bee-bot/blue-bot.
To tinker with hardware.

Q: What do directional arrows mean?

We are learning to understand the meaning of directional arrows.

I can follow simple instructions.
I can recognise the meaning of different arrows.
I ca use my knowledge of directional arrows to move in the correct direction.

Q: What does the bee-bot do when you press the buttons?

We are learning to experiment with programming a bee-bot.

I can use my knowledge of directional arrows to try to program a bee-bot.
I can use critical thinking skills to explore the functions of the bee-bot.

Q: How do you give a bee-bot simple commands?

We are learning to learn how to give simple commands and debug instructions (with adult support).

I can associate the picture of an arrow with movement of the bee-bot.
I can identify a problem.
I can solve a simple problem with adult support.

Q: Can you follow an algorithm in a game and debug instructions when things go wrong?

We are learning to follow an algorithm and debug instructions (with adult support).

I can use their knowledge of the meaning of arrows to move in the correct direction.
I can follow the sequence on my card and move in the correct way.
I can solve a simple problem with adult support.

Q: How do you give a bee-bot simple commands?

We are learning to learn how to give simple commands and debug instructions (with adult support).

I can follow the sequence to program the bee-bot.
I can associate the picture of an arrow with movement of the bee-bot.
I can identify a problem.
I can solve a simple problem with adult support.

Key vocabulary:

forward, back, backwards, right, left, arrow, direction, turn, straight on, directions, route, program, algorithm, instructions, circle, debug and sequence

LEARNING JOURNEY

Data handling: Introduction to data

Summer 2 Computing

OUTCOME: **To represent data by sorting and categorising objects in unplugged scenarios.**
To represent data through pictograms.
To explore branching databases through physical games.

Q: Can you explain how items have been sorted and categorised?

We are learning to understand how to sort and categorise objects.

I can explain how I chose to sort objects.
I can join in different ways of sorting objects.

Q: Can you sort children into groups on given categories?

We are learning to explain how items have been sorted and categorised.

I can work with others to categorise ourselves.
I can identify problems and offer solutions.
I can explain how I chose sort in a specific way.

Q: Can you respond to yes/no questions?

We are learning to understand how to and explain how items have been sorted and categorised.

I can listen carefully and understand the question.
I can ask relevant questions.
I can identify and explain how I have sorted data

Q: Can you ask and answer yes/no questions to sort and group data?

We are learning to explore and understand the concept of branching databases.

I can listen carefully and understand the question.
I can follow the arrows.
I can suggest a relevant question.
I can show an understanding of what a branch database is.

Q: What can you find out by looking at a pictogram?

We are learning to design an invention to gather data.

I can position the fruit correctly on the pictogram.
I can count with an adult to evaluate a pictogram.
I can use the pictogram to decide which are the most popular and least popular fruits.

Key vocabulary:

sort, categorise, category, group, describe, texture, colour, pattern, size, weight, height, length, more, less, count, in total, altogether, share, divide, equal, bigger than, smaller than, thicker than, thinner than, branch database , pictogram, graph, column, row, square, data, collect, record, count, more, less in total, altogether, most popular and least popular.