

Coding Around An Object

Big picture ideas: Algorithms are a set of instructions to complete a task. They need to be clear, precise and unambiguous. They follow a common language that can be easily interpreted by others. Abstraction is the process of removing unnecessary information.

TASK: Create your own dance with 5 moves. Then write a code or algorithm for someone to follow.

Links to digital technologies curriculum:

- Computational thinking
- Progress outcomes
- Breaking the task down, block-by-block
- Creating an algorithm
- Debugging and checking work
- Thinking about the end user
- Repetition- are their parts of the pattern that repeat?
- Languaging- what is an efficient way to record your thinking?

Key Vocab:

- Algorithm
- Debugging
- Unambiguous
- Precise, clear
- Common language
- Abstraction

Links to other areas of the curriculum:

- Can be more of a 'one of task' to teach new DTC language and skills.
- Key competencies link:
 - Thinking, Relating to others, Using language, symbols, and texts.
- Dance

- **I can follow instructions**
- **I can create a sequence of instructions for people to follow (an algorithm)**
- **I understand that the order of instructions is important**

Lesson 1: [Coding a Dance](#)

Lesson 2: [Coding Around an Object](#)

Lesson 3 : [Coding Through a Maze](#)

Lesson Plan:

Explain to the students that they are going to be programmers/coders

Explain to the class that they are going to code a buddy around an object. Explain, if relevant, that a sequence of instructions to get something done is called an algorithm. Model to the students being a robot/teacher-bot. Have a student try to code the teacher around an object.

Place a sequence of move cards on the board and ask the students to follow the instructions to complete the code. Ask what happens if you swap two cards around? Explain that changing the order of the cards will change the algorithm.

Students can record their algorithms by sticking down the images into a sequence or writing up the steps

Ask students to share their algorithm and movements with the class.

Revisit/introduce the term algorithm. Explain that they have created a sequence of instructions and ask why the order of these instructions is important. What would happen if they swapped moves around?

Resources

[Coding Block Cards](#)

[Coding Dance Blocks](#)