

## Coding activities

Coding is the process of using a programming language to get something to behave the way we want it to. This does not necessarily mean using a computer, and in early years there are many ways that can support early coding skills.

National Coding Week is an annual event that aims to help adults learn digital skills. In 2021, National Coding Week will be happening from September 14th - 20th. Why not use this national event as an opportunity to talk about coding with young children and have a go at one of the coding activities below?

### Learning aims

- Support practitioners' understanding of what coding means in early years
- Give children the opportunity to participate in coding activities that will support their learning, including following instructions, sequencing, problem-solving, logical thinking, and mathematical development.

### Resources

- Activity 1 – Map, some 'treasure' to hide
- Activity 2 - Lego/building blocks, step by step guides
- Activity 3 - Puzzles.



### Activity Outline

**Activity 1:** Treasure hunt – set up a treasure hunt inside or outside, where the children have to follow instructions, or a map, to find something. For example, two big steps forward, go under the table, one big step left, and so on. This type of activity requires many of the skills that computer programmers use when coding. By creating a treasure hunt with instructions and directions, children can follow to find their treasure. This activity teaches children about algorithms, a set of instructions to help a computer perform a specific task. The children could then have a go at hiding the treasure and making the map/directions for their friends to find.

**Activity 2:** Lego/building blocks – as well as having building Lego/building blocks available, where age/stage appropriate, add some step-by-step guides in order to produce the desired result (this is essentially what coding is). This will encourage those early skills. The children could build something and then even design their own instructions (pictorially) for a friend to copy. For example, attach two red, long pieces together, add four wheels and a blue short piece to make a car.

**Activity 3:** Puzzles – have a range of different puzzles available for the children. These enable them to problem-solve, which is one of the things computer programmers need to be good at. Puzzles support this important skill because essentially, you are giving them a problem to solve. Children need to consider what the puzzle looks like and examine the pieces to eventually put them all together to finish the puzzle. Breaking a big picture into small steps is the foundation of coding!

### Extending the activity

- Share your coding activities and photos at #NationalCodingWeek
- Share information with parents so they can support early coding skills at home too.

### Special considerations

*Risk assess activities, be aware of small pieces of Lego and choking risks, and supervise at all times.*