Lesson 2  Using Repeat and Timer Commands

Aims

- To understand the following terms when used in computer programming: Command, Repeat, Input, Output, Event, Collision Detection and Timer.
- To create a computer program using this new vocabulary.

Success criteria

- I can explain how to use the following terms in a computer program: Command, Repeat, Input, Output, Event, Collision Detection and Timer.
- I can create a computer program including at least four of those new coding vocabulary terms.

Resources

- Vocabulary cards from the downloads folder as per lesson 1.
- Exercise books to be used as 2Code workbooks for recording coding exercises, if desired.
- Repeat and Timer example code from Year 2 planning screen.

Activities

1. Review the following vocabulary using the flash cards and see if the children can contribute examples from their previous experience of coding: Command, Input, Output, Collision Detection, and Event.

2. Display the new vocabulary, Repeat and Timer, on the board using the flash cards and ask the children to guess what they mean. Discuss each word with the children and explain their meaning.

3. Explain that the children will be using these new terms to help them create a new program in Free Code Chimp. Open Free Code Chimp on the board and look at the left-hand side toolbar. Ask children if they can see any of the new vocabulary to which they’ve just been introduced.

4. Run through how to use the Repeat and Timer commands, using the Repeat and Timer example. Look at Design View to see the characters – a princess and a turtle – then switch to Code View and talk through the code:
• First the turtle repeats the action of turning 45 degrees, twice.
  *There is actually a shorter way that this can be coded without using ‘repeat’,
  can the children work out what this is? (turn 90°)*
• Then it repeats the action of going forwards two steps, three times.
• Then the princess moves up and, after 0.5 seconds, moves down and, after 0.5 seconds, stops.
  (This is supposed to look like the princess jumping on the turtle).
• Also, when the turtle and princess collide, there is a ‘splat!’ sound and the turtle hides (he has been squashed).

In the Chimp activities, the use of the timer is introduced in a video in Step 5 of ‘Princess and the Frog’, and the ‘Tick Tock Clock’ and ‘Magician’ activities also use a timer. You can look at these with the children if they need more guidance or ideas.

5. Ask children to create a program including at least four of the new terms they have learned. Remind children that they will need characters and ask them where they need to go to find them (Design Mode).

6. Children should plan out their programs in their 2Code workbooks using printouts of the commands etc. to help them, and once they have planned their programs they should go to their devices to start working.

7. For more vocabulary practice there are games on Purple Mash at the bottom of the Main 2Code page. Some suggested games are Objects and Commands game, Catching Objects game.