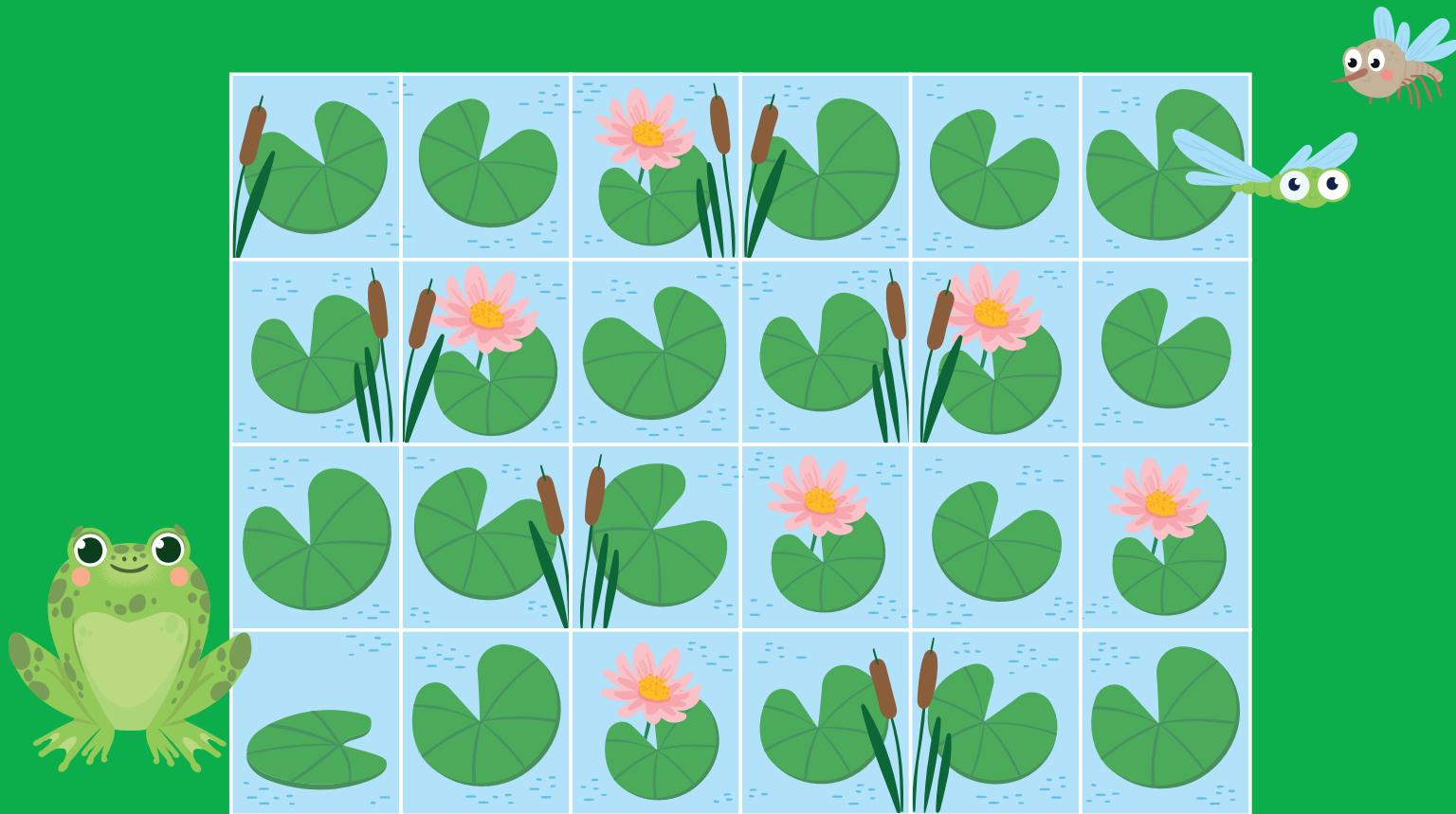


Algorithms and Debugging

Computing KS1 Year 2



Algorithms and Debugging - Year 2

Computing

Key Stage 1 Year 2

Learning aims

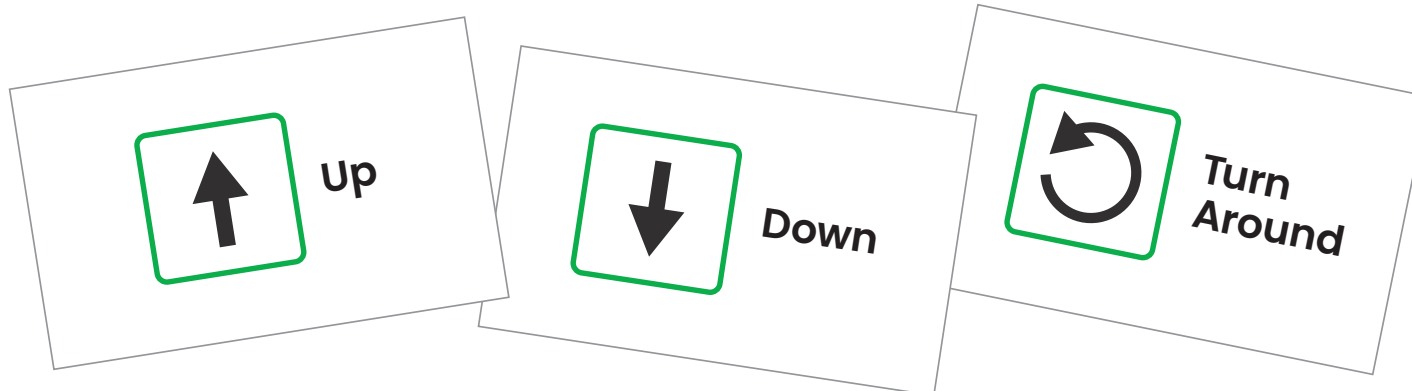
Understand what algorithms and bugs are in computing.
Explore debugging in an unplugged activity.

Curriculum links

Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
Create and debug simple programs.

Keywords

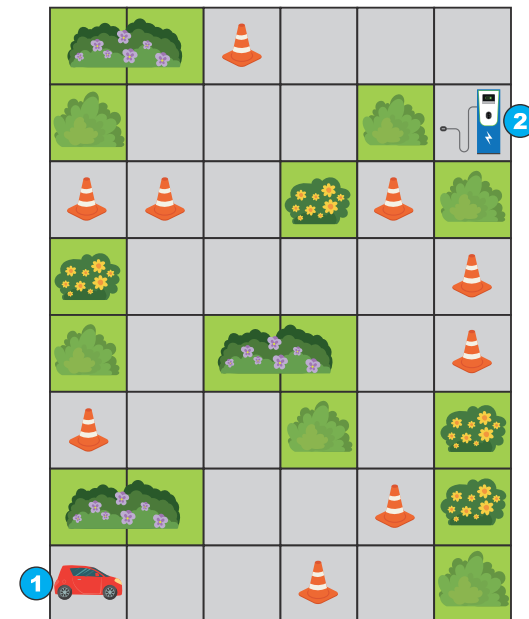
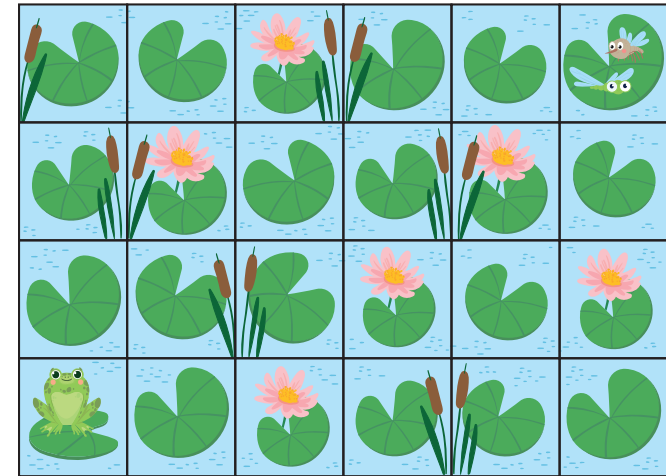
Algorithm; debugging. The computer symbols as instructions.
These can also be found at the end of this PDF.

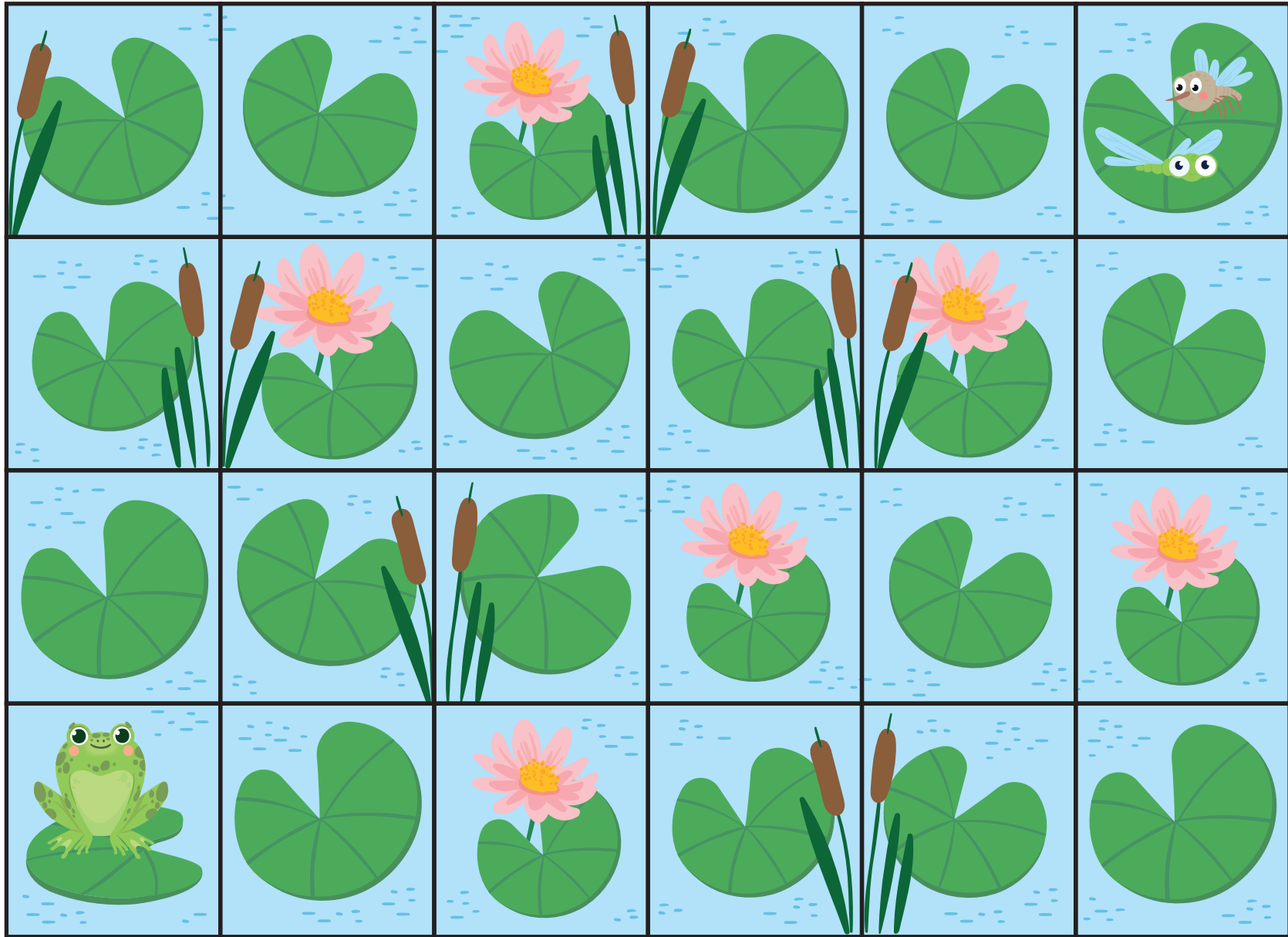


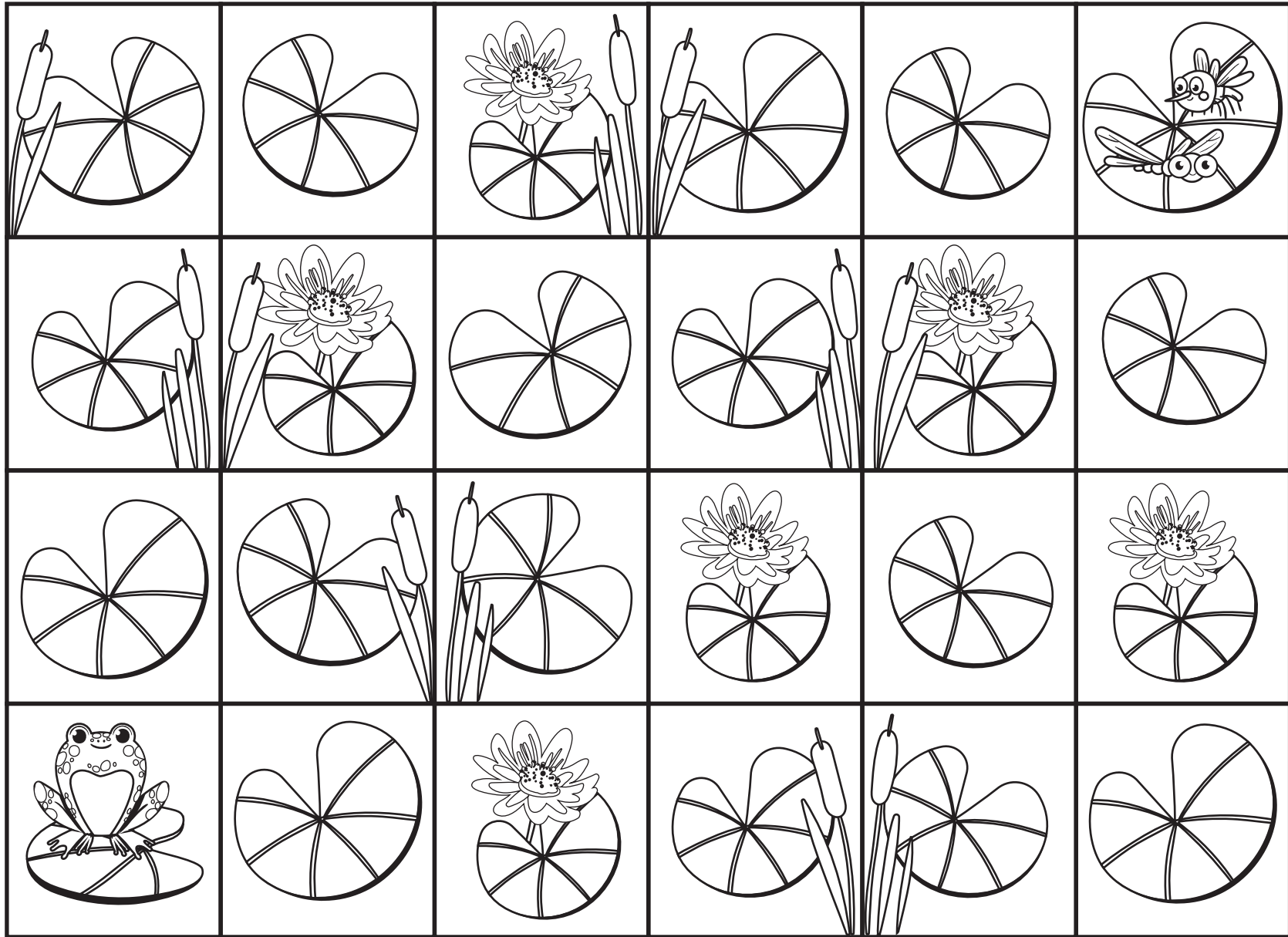
PowerPoint presentation

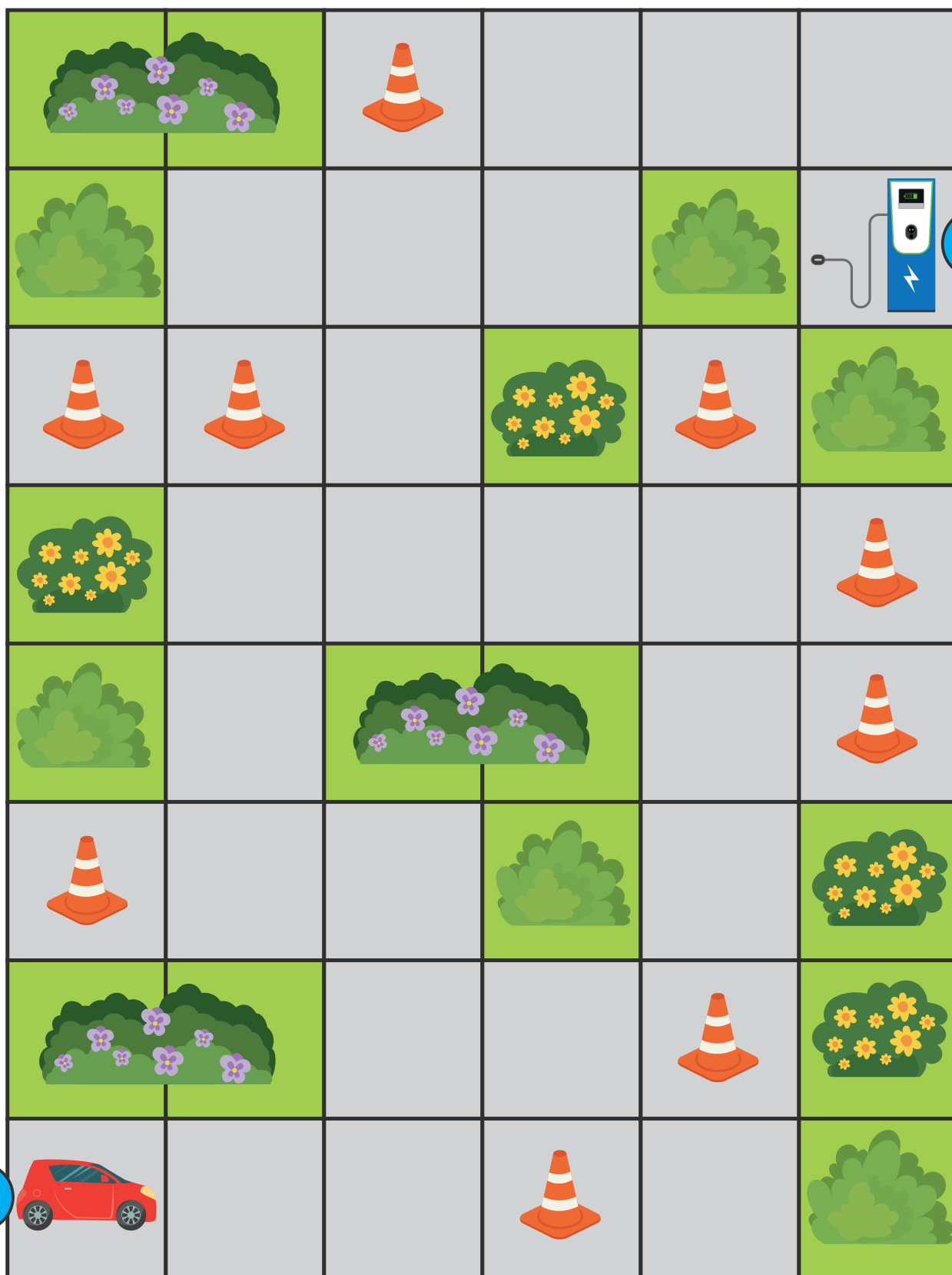
The accompanying PowerPoint presentation has 28 slides with the following learning points:

- Recaps that an algorithm is a set of instructions written for a computer, which must be written step-by-step in the correct order.
- **Writing an algorithm:** The lesson takes the children through writing an algorithm to help a frog cross a pond over lily pads, without landing on the leaves with lily flowers. This exercise covers 12 slides. It introduces the children to the computer symbols as instructions.
- **Activity:** Slide 16 asks the children to write their own set of instructions to help the frog cross the pond. You can use the grid on the following pages of this PDF.
- **Debugging:** Slides 17–25 cover instructions to help the frog return across the pond. But the instructions have a bug! Ask the children to see if they can find the bug. Then ask them how they would fix it.
- **Activity:** Slide 26: The PowerPoint introduces the children to their next activity, writing a set of algorithms to help a car travel from point 1 to point 2. You can use the grids (in colour or black and white) on the following pages of this PDF. You will also find blank grid pages at the end of this PDF, for children to write their own algorithm. These grid sheets are also supplied on the accompanying Word document.





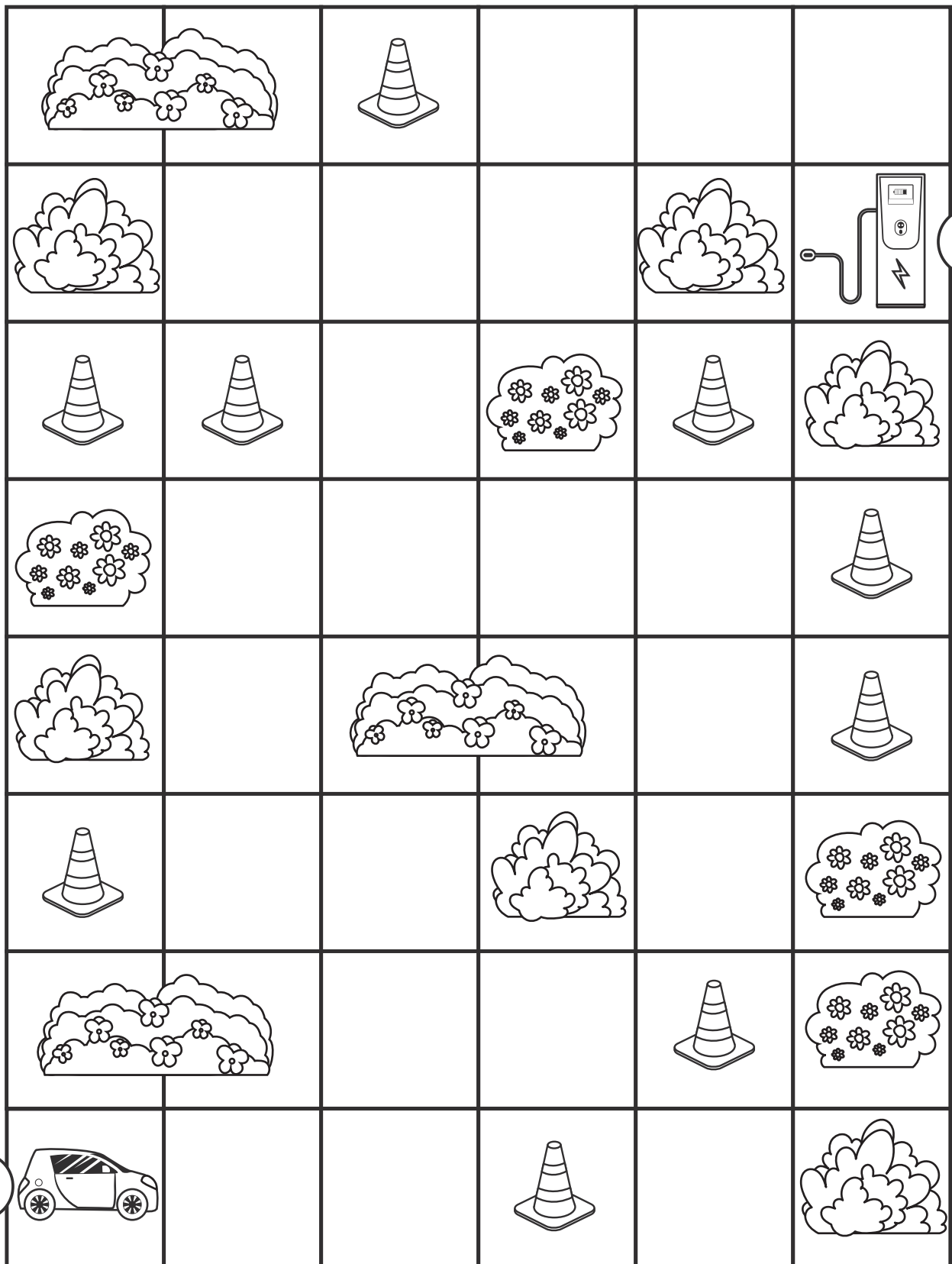




2

1





2

1

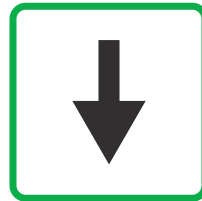




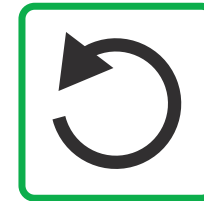
Algorithms for Year Two: Keywords Flashcards



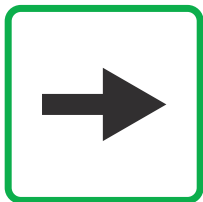
Up



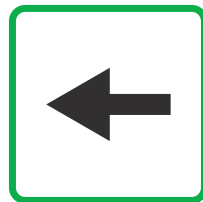
Down



Turn
Around



Forwards
(Right)



Backwards
(Left)

Algorithm



Debugging

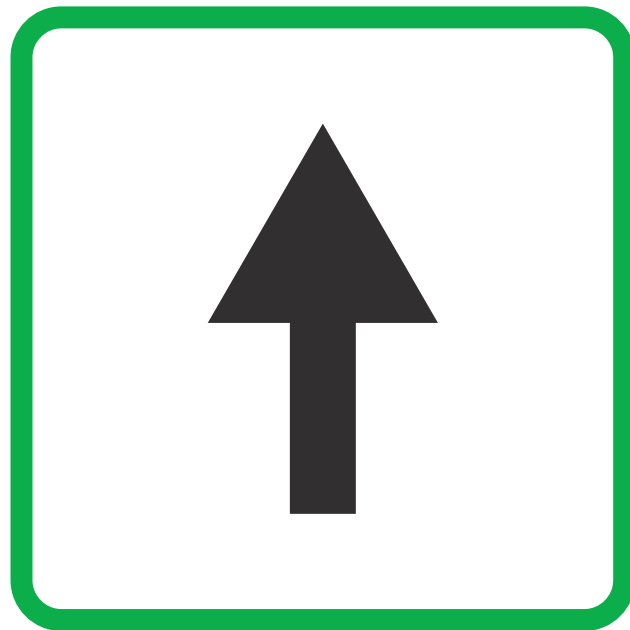
Up

Down

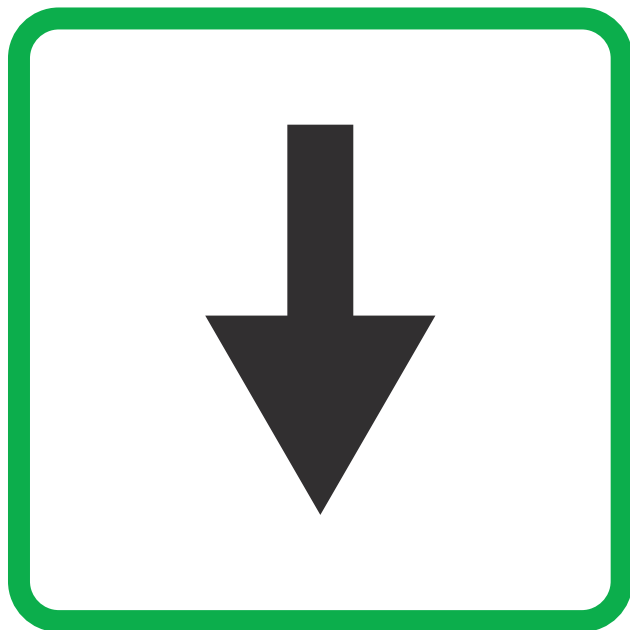
**Forwards
(Right)**

**Backwards
(Left)**

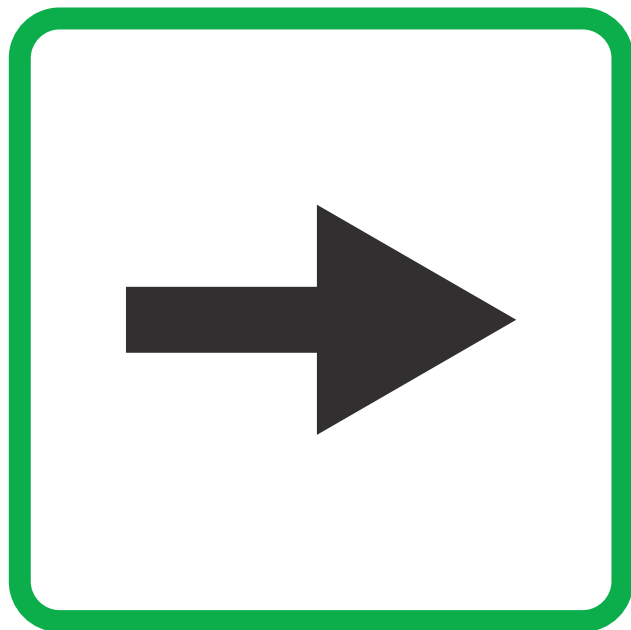
**Turn
Around**



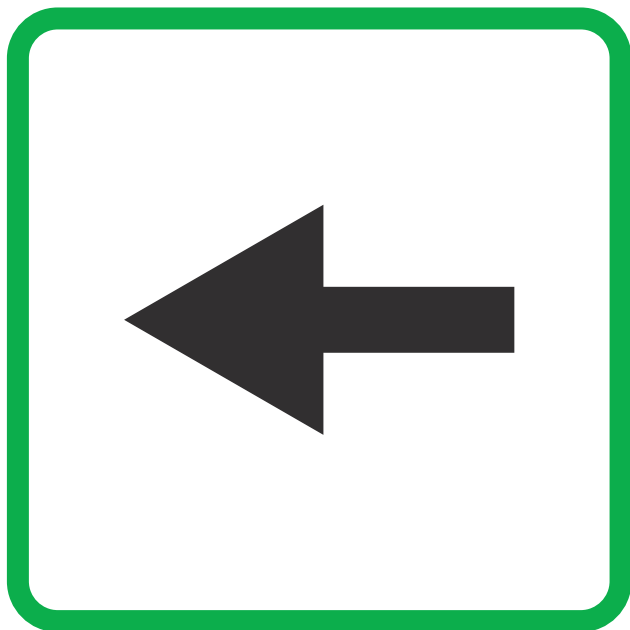
Up



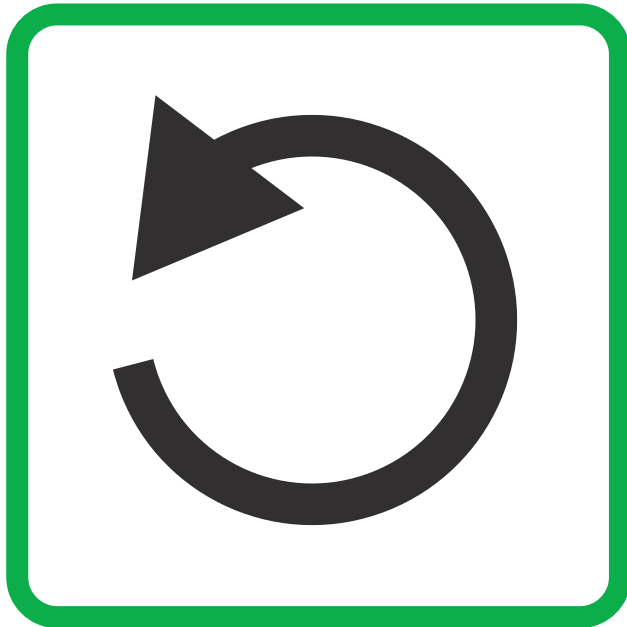
Down



**Forwards
(Right)**



**Backwards
(Left)**



**Turn
Around**

Algorithm

Debugging