Key Stage 1
Activity Set

Activity Set summary

In this set, children will learn the basics of coding by programming a delivery van to drive around simple routes. They will sequence instructions and use simple repetition commands in a visual programming language. At the end of the set they will create their own map environment for a partner to program the van and deliver groceries.

Resources

- Rapid Router app: www.codeforlife.education
- Resource sheets KS1-S1-1 to KS1-S9-1
- Glossary
- Levels Guide
- KS1 Asset cards
- Code wall display cards
- Recognise common uses of Computer Science beyond school

Key

Vocabulary:
Programming terms appear in **blue**

Assessment:
Key questions appear in **red**

Children's previous experience

In the early years, children should have had some experience of giving each other instructions to move – e.g. 'playing robot', keying instructions to control a floor robot such as a Beebot.

Learning expectations

In this activity set, the children will:

- Create simple algorithms to move on-screen vans around different routes
- Understand that when a computer does something, it follows instructions called code
- Predict the outcome of a partner's program
- Debug their simple programs
- Use simple repeat loops
- Create a programming challenge for a partner, using logical reasoning to predict the outcome

Teacher preparation

- Familiarise yourself with the app *[fig AS.1]*
- Set up your class accounts to record progress and save new maps created by children (see guide at www.codeforlife.education)
- Note the difference between the turning instructions in this app to other programs or floor robots such as BeeBot. **Turn right** means drive around the corner to the right, going from grid line to grid line *[fig AS.2]*
- If you have used floor robots or Scratch, this is very different from the 'turn on the spot' meaning to turn 'right' and 'left'
- You will need to explain to the children that there are different programming languages. Each instruction in each language has a precise meaning in that language
- **Differentiation:** not all children will cover all levels. Unplugged table top activities will support most pupils, and the extension activities should stretch the more advanced

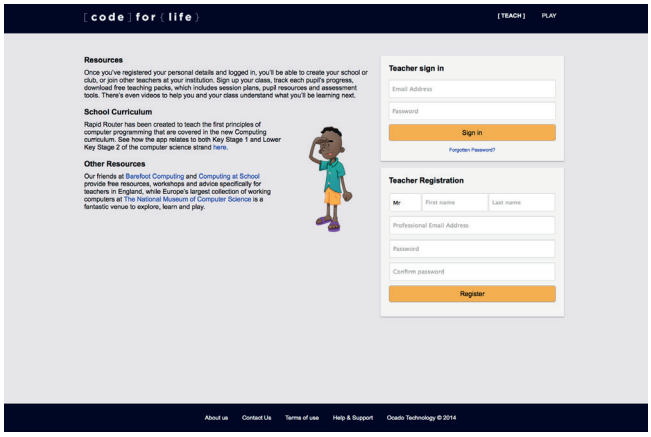

fig AS.1

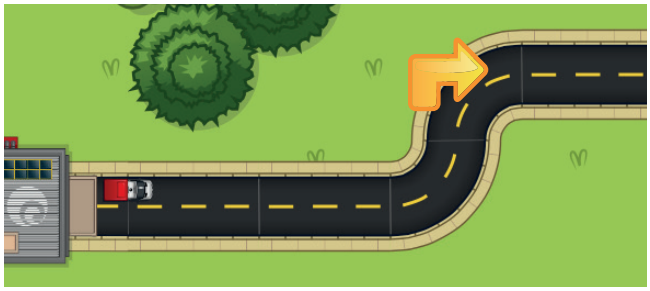

fig AS.2

Links to the National Curriculum for Computing PoS

Key Stage 1

- 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
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school

Key Stage 2

- Use sequence, selection, and repetition in programs