- 6 Cubettos and 6 Boards
- 6 City Maps
- 6 Sets of Blocks (with 19 blocks in each)

**Cross-curricular area:
Maths**

NC Objectives	**Outcomes**	**Computational Thinking**		**Resources Provided**	**Resources Needed**
To create a simple algorithm	● I can spell numbers ● I can use the function block	**Concept** Algorithms	**Approach** Creating	● Maths crossword	● Tape and black squares 15x15cm ● Letter cards to spell 'twenty' and blanks ● Mini whiteboards

Preparation Needed	**Teacher-led introduction**
● Check batteries. ● Turn the maps over and turn into blank 6x6 grids using tape. ● Create example algorithm using function line to get Cubetto to move forward five squares. ● Copy and cut up crosswords.	1. Show crossword on board (see reverse) and ask: <u>What is this? How do we solve it?</u> 2. Reveal clues and read each one in turn, giving time for children to discuss and write the answer in the blank squares. 3. Explain that Cubetto's map has been turned into a **crossword** and the children need to help Cubetto solve all the **clues**. 4. Show the maths crossword on the board and explain that each of the clues is a maths question that they have to solve, then write the number in words in the blank square. Explain that some answers go **across** and some **down**. 5. Model completing the first question (10+10 = ?). Explain that pupils need to write in the word, not the number. 6. Ask: <u>Can anyone spell '20'?</u> Hand out the letter cards to six random pupils and ask them to stand at the front. 7. Ask class to tell the pupils which order to stand in to spell the word **'twenty'**. Then complete the first clue in the crossword, asking each child to sit down as you write in their letter. 8. Place the letter cards on the blank map to match the crossword and explain that Cubetto spells words by moving over letters in order. 9. Ask: <u>What blocks would we need to make Cubetto spell 'twenty', moving from 'T' to 'Y'?</u> 10. Show the blocks they have available and ask children to count the forward blocks, then the number of letters in the word. Ask: <u>How can this work?</u> 11. Show the blue block and explain that this is called the **function** block. It's like a rucksack because it can carry up to four other blocks inside it and can help when we don't have enough blocks. Demonstrate using the function line to get Cubetto to spell the word.

Key Vocabulary	**Guided activity**
Crossword Clues Across/down One, two… (up to twenty) Function	1. Show the black squares, blank map and crossword image. Ask pupils to work together to place the black squares on the map to make the crossword puzzle. 2. When completed, read out one clue and point to its starting point. Allow pupils time to solve the maths question. 3. Hand out mini whiteboards and ask pupils to write the number answer in words. Discuss spelling and correct together. 4. Write each letter of the word on a card and place the solution on the crossword map. Place Cubetto on the first letter. 5. Ask pupils to work in pairs to write an algorithm, using the function block, that will spell out this word. 6. Ask: <u>What blocks are in your function line?</u> Swap algorithms with another pair. <u>What's the same/different?</u> Repeat for other clues.
Challenge Can you write new maths clues to make the same answers?	**Independent activity** 1. Take a crossword and pencil. 2. Read the first clue and work out the answer. 3. Write down the number in words and check your spelling. 4. <u>Can you find where the answer goes in the crossword?</u> Write in your answer and repeat for all the clues.

Creative Play	**Plenary and assessment**
Move the black squares around to make a new crossword!	1. Ask: <u>How does the function block help us?</u> <u>How did you use it today?</u> 2. Show an algorithm using the function block and ask children to guess where Cubetto will move to. 3. Show the crossword and ask children to share their answers until the puzzle is solved 4. Play mini spelling bee: read a number and ask children to spell against the clock!

CROSSWORD 1

ACROSS

2 The opposite of strong
4 A sky colour
5 Creatures that make webs to catch insects
6 A bird builds this
7 A green animal that croaks

DOWN

1 A soft, comfortable kind of shoe worn indoors
2 A time when two people get married.
~~married~~
3 Write someone's name and _____ on an envelope