| **Year 1: Computational Thinking with Cubetto**<br>**Unit 1: Lesson 4: Cubetto's Crododiles** | • 6 Cubettos and 6 boards<br>• 6 Ancient Egypt maps<br>• 6 sets of blocks (4 of each colour) | **Cross-curricula area:**<br>PE |
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| **NC Objectives**<br>To create a simple programme | **Outcomes**<br>• I can write a simple algorithm<br>• I can play in a team | **Computational thinking**<br>**Concept**: Algorithms<br>**Approach**: Collaborating | **Resources provided** | **Resources needed**<br>• Masking tape/cones<br>• Pieces of fabric/ribbon in one colour |
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**Preparation needed**
- Check batteries.
- Book use of hall/playground.

**Key vocabulary**
Algorithm
Attackers
Defenders

**Challenge**
Can you test out and evaluate someone else's algorithm?

**Creative play**
Make a crocodile or camel from an egg carton and paint it.

**Teacher-led introduction**
1. Lay out the Egypt map in the middle of the classroom and ask the children to sit in a circle around it.
2. Place Cubetto on the compass facing South and ask: How can we move Cubetto to the crocodiles in front? Collect pupils' ideas, asking further questions without correcting.
3. Ask: What is the first block we need to put in the board?
4. Ask for a volunteer to do as they think and place one of the blocks in the board.
5. Before pressing Action, ask: Where do you think Cubetto will end up?
6. Repeat for the next steps, testing after each block is put in the board until the programme is complete.
7. Ask: What do we call a set of instructions in the right order? ***Algorithm***.

**Guided activity [in hall/playground]**
1. Ask: What is the name of the river in Egypt? *The River Nile.* Explain that it is the longest river in the world!
2. Split the class into two groups: the **attackers** and the **defenders**, just like any team sport.
3. Explain that the attackers are crocodiles and hippos. Ask group of attackers to choose which animal they want to be.
4. Explain that the defenders are people riding camels along the banks of the Nile.
5. Hand out one piece of coloured ribbon to the defenders and model putting a piece in the back of your waistband so that half is visible.
6. Explain that the crocs and hippos (attackers) have to pull the ribbon gently from the back of the people riding camels (defenders) who will try to escape! The aim is for defenders to keep their ribbons and attackers to collect as many as they can.
7. Ask the two groups to stand at different ends of the hall and quietly discuss how they will try to win.
8. Play the game and stop after 10 minutes. Ask the teams to re-group and discuss what they could do differently. Repeat.

**Independent activity**
1. Work in a small group.
2. Place Cubetto on the compass with the face towards the top of the map (facing North).
3. Write an algorithm to get Cubetto from the compass to the crocodiles (you choose which crocodiles!).
4. Test out your algorithm after every block to see whether it is working and discuss what you might need to change with your partner.
5. When you have got Cubetto to the crocodiles, place it back on the compass facing North.
6. Now write an algorithm to get Cubetto to the other crocodiles square.

**Plenary and assessment**
1. Sitting in a circle with the map in the middle, ask pupils to bring their board and Cubetto in the middle to show their algorithm.
2. Before pressing the Action button, ask the class: How many blocks are in this algorithm? Do you think it will work? Why? Press Action.
3. Ask: Did you work out the algorithm the first time? What did you find easy or difficult?