**Story text**

The children heard an angry voice coming from the workshop and when to explore. When they arrived, they saw Archie and he looked unhappy.

“What’s wrong Archie?” asked the children.

“Well,” replied Archie, “I was trying to write a new set of instructions for Marty so that could help more with tidying up in the workshop, but I’m a bit stuck. I think there’s a bug in the code.”

“A bug? What does that mean? How did a bug get in Marty and how do we get rid of it?”

“No, no no,” chuckled Archie. “When we write instructions for robots and computers, a bug is when something goes wrong, but it’s funny that you mention it because the first time a person talked about bugs and instructions, or code, was a long time ago.”

*Click to play the video. It will move to the next slide after the important information has been shared.*

“We need to find out what has gone wrong with this code. I have been working on it for ages and I think I am getting very tired and can’t spot the mistakes. Can you have a look at it while I take a nap?”

“What I am trying to get Marty to do is walk to the wall, move their arm up and down (they will have a paintbrush, later) and then come back to get more paint. I’ll add more so that he paints different places; just now, I am having enough trouble getting Marty back for more paint.”

“I need them to do this three times but they keep walking into the wall. This would get them covered in paint, which is terrible to clean. Please have a look and see what you can do.”

*The video will show Marty walking into the wall.*

*Show the code that is buggy for learners to investigate.*

“OK, team,” said one of the children, “Let’s help Archie and fix the code so that Marty can properly paint the walls.”

The children looked at the code and discussed where they thought the bug might be.

*Stop reading the story here for more able learners or read the next paragraph as a prompt for group discussion.*

One of the younger children exclaimed, “I’ve got it! I think. There is definitely something wrong with the repeat block. Look at what Marty is doing over and over again, I don’t think that’s right. How could be change it so that Marty goes back to the paint and doesn’t walk into the wall, again and again?”

*Ask the learners if they think they can help the children. Have them use their workbooks, where they will see the buggy code, and have them discuss the possible improvements that will solve the problem.*

*After learners have had time to explore, debug and edit the code,*

Archie comes back into the workshop to see Marty moving to the wall, moving his arm, as if he was painting, and moving away to get more paint. “Amazing!” said Archie. “Who feels confident that they could explain to me the mistake I made and how you debugged the code?”

*Ask for volunteers to talk through what they did and how they did it. Then, continue with the rest of the lesson.*