

Info Sheet



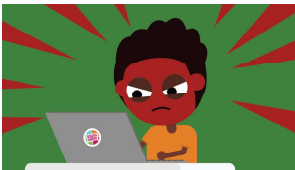
WHAT ARE BUGS?

Bugs are tiny things with many legs that crawl around. But in the computer world, bugs are really just a name for a mistake. Just like in any subject, mistakes happen all the time when we are coding! Sometimes it is not possible to know right away where a mistake is coming from, so we must hunt for the mistakes in a process called 'debugging'.

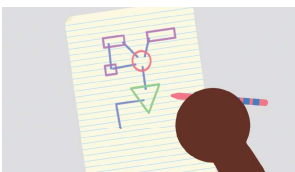


THE BUGS VIDEO

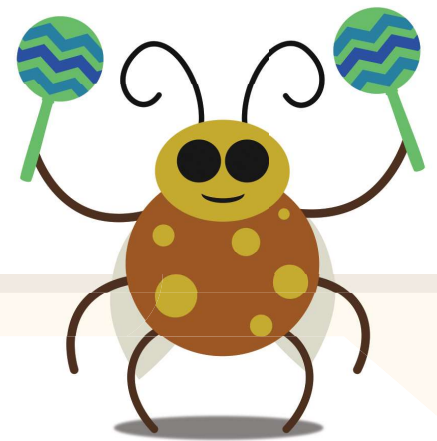
With all the different coding languages and types of mistakes that could be made, it would be very difficult to focus on specific example of coding bugs within this video. So instead the video is intended to convey that a) mistakes while you are coding can and will happen, but b) debugging can be fun, and c) there are things you can do to help deal with, and even prevent bugs!



(0:48) We are not going to lie... bugs can be frustrating!



(1:24) Here's an idea: what if you tried to make a plan about what you are trying to do BEFORE you even starting coding? It could save you time AND keep your frustrations in check!



TAKE AWAYS:

- Bugs are a part of coding.
- Finding and fixing bugs is called 'debugging'.
- With the right attitude, debugging could even be fun!

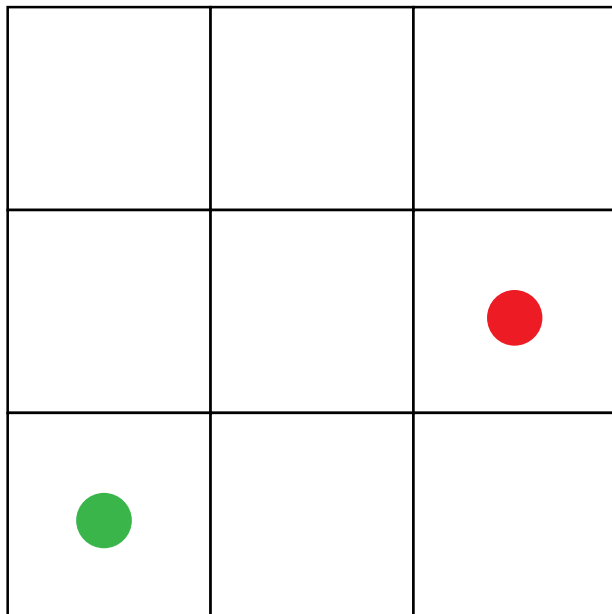
Activities

Mistakes happen! Remind learners of the sequencing video and the game where they had to think about the steps (using left, right, up, or down) to get from the green flag to the red flag. Ask learners, “What do we do before we start?” and guide them towards understanding they need to plan before they start. Reinforce that no matter how well we plan, mistakes can still happen and that's okay. That's how we learn!

In this activity learners will examine various examples of sequences that have a bug in them. For each example, have learners follow the specific instructions provided. Then, have them create their own sequences with bugs to exchange with another student in class.

Level 1

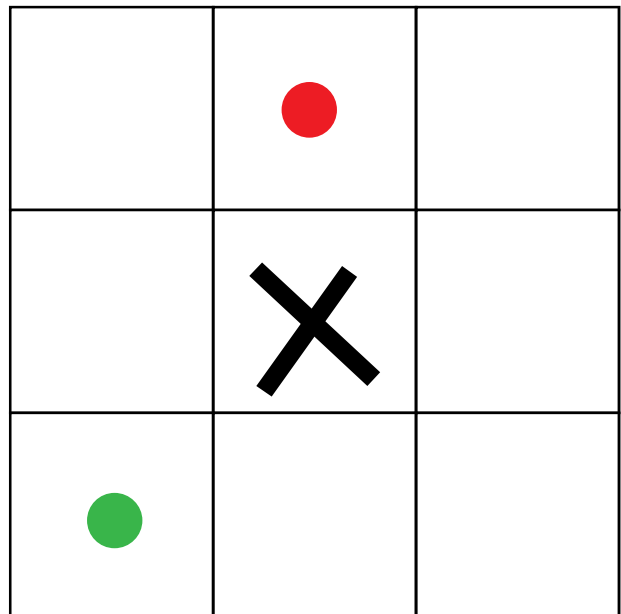
The following sequence's steps are supposed to get you from the green dot to the red dot, but there is a bug! Find the bug, then change the bug to the right direction.



Sequence: Move right, move up, move left

Level 2

The following sequence's steps are supposed to get you from the green dot to the red dot, but there is a bug! Find the bug, then rewrite the steps to the right direction. Avoid going through the X!



Sequence: Move up, move right, move up

Song Lyrics

**Find that bug! Bugs be gone!
Get that bug! Bugs be gone!
Find that bug! Bugs be gone!
Get that bug! Bugs be gone!**
Bugs bugs bugs bugs bugs bugs bugs be gone!

Well when you are coding there is one thing
You come across again and again
It's called a bug and they are always around
But you gotta find them, they need to be found!

Now it's not a like a real bug or a real insect
A bug is just a name for a mistake
Something you put into the code that's not supposed to go in it
Or you left out something you were supposed to put in it!

Now bugs in coding, you see them all the time
Just like the moon at night or the sun in daytime
And even though a bug means that something is wrong
Don't get mad, just find it, fix it, and move along!

Chorus

Well after you find bugs you can fix them too
It's called debugging; it's an important thing to do
Can you prevent bugs? Wouldn't that be nice?
Well it's hard to do but let me give you some advice:

The next time you're coding, before you start
Make a plan, wouldn't that be smart?
Ask yourself 'how can this design happen?'
Design it first, use a paper and pen!

If bugs are frustrating you, then take a break
Go for a walk and come back with a fresh brain
Bug hunting can even be fun!
Go on and get them, those bugs better run!

Chorus