

Info Sheet



WHAT IS CODING?

What a great question! Well, coding is about telling a computer what to do through a set of specific instructions called a 'coding' or 'programming' language. But it's also about so much more! Coding is a way of thinking that involves problem solving in creative ways. It can also be about teamwork and having fun while learning new things! The skills learned through coding can be applied to many subjects situations outside of coding itself.



THE WHAT IS CODING VIDEO

The purpose of the video is to get learners excited about coding, while introducing some of the main general ideas of what coding is and what it can do. For example:

(0:50) **It's about making our lives better, while we work and we play!** Coding is the basis of any video game we might play, but it is also what makes other aspects of our day to day life possible. For example, when we text someone, book travel plans online, or even watch a YouTube video!

(0:53) **It's about breaking things down, then building them up!** As we will learn in later lessons, solving challenges in coding is often accomplished by breaking problems into smaller problems, then solving them one by one as you build something new!

(1:20) **It's about people!** Because coding involves 'talking' to machines, we can tend to think of it as something that robots do, but that's not true! Coding is done by people just like me and you!



TAKE AWAYS:

- It's not just words on a screen. Coding is a way of thinking!
- Coding is done by humans; it's not magic!
- Many people have learned how to code AND YOU CAN TOO!

Activities

Minds On: Brainstorm

This activity will have learners reflect on how coding affects their daily lives.

Have learners begin by brainstorming a list of items that they use everyday. These can range from a computer to their toothbrush! After this initial list has been created, direct learners to think about which items on the list they think are made possible because of coding.

Learners will then share their best ideas and co-create a final list of items they think use or are made possible because of coding. Have a discussion about why these items were selected.

Action:

Have learners, individually or in groups, select an item from the co-create list and research if and how the item uses coding to make it work (or to make it - assembly line, design, etc.)

Remind learners that we often have to break problems down before we can solve them and that they'll learn more about this in later lessons. For now, have learners reflect on the steps needed to build the item they're researching. Was coding used in the technology that makes the item? Is coding needed to make the item work?

Consolidation

Now that learners have an understanding that coding is used in many of the items they use on a day to day basis, it is time to explore who tells these machines what to do!

The list below of famous coders consists of people that all have done exciting things in the world of coding; learners will choose one (or one they already may know) and find out what that person created or built with coding. Guide learners toward the idea that anyone can learn to code!

Famous Coders

Joan Clark
Margaret Hamilton
Grace Hopper
Ada Lovelace

Discussion Questions

How would you describe coding?
Why do you think coding is important?
What kinds of things can coders create?
How is coding valuable to me?

Song Lyrics

It's kind of about telling a computer what to do
With specific instructions made just by you!

But it's really about so many other things
Please listen up now to the words that I sing...

It's about solving problems, and finding a way
To make our lives better while we work and we play
It's about breaking things down, then building them up
And working through challenges, and not giving up
It's about asking questions; not just words on a screen
It's inventing new things, things the world has never seen!
It's about imagination, and creating new dreams
That can change your life, and help you grow wings!
It's about... perhaps most of all
It's about people, like me and you, the big and the small!
Because you see...

The game that you're playing - someone made that!
The way that you're paying - someone made that!
Those points you're scoring - someone made that!
That guy over there snoring - well that's not really coding, actually,
But anyway, those other things are:
the computer game, and the payment system, and the points and stuff... well...
They didn't just appear, it's not magic, but truthfully...

Someone made those! Yes real human beings!
Actually not just one person, it was probably a team!
A team of people just like me and you, and you!
They learned how to code and you can too!