

New world

New skills

Teacher Notes: Technology in our Lives

PwC Primary School Toolkit



Teacher Notes

Overview and Purpose

This lesson raises awareness of the ever-presence of technology in our daily lives. Students will learn concepts such as the Internet of Things (IoT) and Smart technology.

Students will then learn the fundamentals of artificial intelligence and how to distinguish between a human and computer through the Turing Test.

Objectives

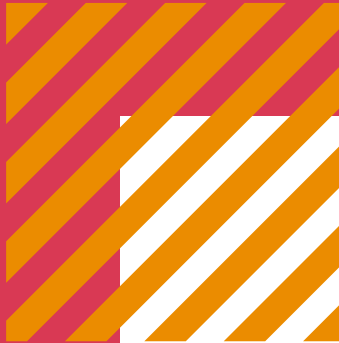
By the end of the session, students will be able to:

- Recognise technology around us
- Understand the basics of artificial intelligence
- Tell the difference between a human and a computer

Key Vocabulary

Internet of Things: connecting everyday objects to the internet, such as these smart assistants.

The Turing Test: a test to discover whether a person is talking to a computer or another human.



Preparation / Materials Needed

- ☐ A smartboard
- ☐ Download the session PowerPoint

Lesson structure

Section 1: Getting Started (2 min)

- Introduction
- Our objectives

Section 2: Technology all around us (15 mins)

- Example 1: sat navs - what are they?
- Example 2: smart assistants - what are they?
- Introducing the concept of the internet of things.
- Activity 1: making your own smart device.

Section 3: Can a robot become human? (15 mins)

- Discussion: can you tell the difference between a human and a robot?
- Introducing Alan Turing and the concept of the Turing Test.
- Activity 2: The Turing Test

Section 4: Wrap up and reflection (3 mins)

- Question and answer: what is the internet of things, who is Alan Turing and what is the Turing Test?
- Any questions?

Teacher Notes

Section 1: Getting Started (1 min)

(Slide 1) Today, we're going to explore all about the technology in our lives.

(Slide 2) By the end of this lesson we will have explored some of the technology around us, the basics of artificial intelligence and have a go at telling the difference between a human and a computer.

If students hear about something they don't understand, that's okay! There is no such thing as a silly question, so don't be afraid to ask.

Section 2: Technology all around us (15 mins)

(Slide 3) Introduce the first section of the class; technology is all around us. Nowadays, technology is used to improve most aspects of our lives. Here are some examples.

Sat Nav

- (Slide 4) Ask the students to raise their hands if they know what a sat nav is.
- Explain to the class that sat nav stands for Satellite Navigation, and that this technology uses a satellite which is in space to pinpoint your location and can help get you to your destination when travelling. When it was first released, sat navs did not always guide you on the best route: There might be a big traffic jam along the way or some of the roads it recommended might actually be closed for roadworks.
- However, over the past ten years, this technology has been improved a lot so that it now provides you with accurate information. It can read traffic reports so you get stuck in less traffic jams and it can check for any roadworks before you set off. Also, people now don't need a separate piece of technology, sat navs are available on your phones!

Smart Assistants

- (Slide 5) Ask the students whether they can tell you what a smart assistant is? Or even ask if anyone has heard of - or have in their homes - an Amazon Alexa or Google home?
- Explain that these are smart assistants that can help you out using voice commands. You can ask them what the weather is going to be like, you can ask them for cool dinosaur facts and you can even ask them to turn off your lights for you!
- Amazon Echo and Google Home are examples of the **internet of things**.

Internet of Things

Moving to **slide 6** explain that the internet of things can be described as connecting everyday objects to the internet, such as these smart assistants which are actually just small blobs that sit in the corner of a room. The internet of things has seen a huge increase in the types of smart devices. You can get a smart fridge, a smart heater and a smart doorbell.

Activity 1: Make your own smart device

(Slide 7) Now we will do an activity together.

- By themselves or in small groups, ask the class to spend a few minutes thinking of an everyday household item that they think would benefit from voice control and being connected to the internet. Can they come up with an idea for a smart device?
- Spend a few minutes hearing from the class their ideas for a smart device.

Idea inspiration:

- Smart toasters (a toaster that tells you the weather while your bread gets toasty)
- Smart door handle - the door only opens if it recognises your voice
- Smart oven - you can tell it what temperature to cook at without needing to turn any dials

Section 3: Can a robot become human? (15 mins)

Moving to **slide 8**, we will now think about the question - can a robot be human?

How do you tell the difference between a robot and a human? Well when you can see them, it's very obvious. But what about when you can't?

(Slide 9) Have a look at these message chains, can you tell which one was written by a human and which one a robot?

We can sometimes tell the difference because humans may use:

- Idiomatic language or slang such as 'you bet', 'what's up?', 'mate'.
- Using exclamation marks 'doing good mate!'
- Using improper sentences that make things shorter. For example, '*I'm* doing good mate! vs 'doing good mate!'.

(Slide 10) The Turing Test

Alan Turing was a very famous mathematician and computer scientist and worked on designing some of the very first computers ever made!

Alan Turing was very interested in artificial intelligence and came up with a test to discover whether a person was talking to a computer or another human. This is called the Turing Test.

The Turing Test focuses less on being able to state facts but more on whether a computer can show emotions.

(Slide 11) Time for another activity. Take a few minutes and have a think: If you asked Amazon's Alexa what the weather was like, and also asked another human what the weather was like, how would their answers be different?

What does a human do that a machine can't do?

Section 4: Wrap up and reflection

Moving to **slide 12**

- **Question:** ask the class whether anyone can tell you what the internet of things is?
- **Answer:** everyday objects that are connected to the internet, such as smart assistants which are actually just small blobs that sit in the corner of a room. The internet of things has seen a huge increase in different types of smart devices. You can get a smart fridge, a smart heater and a smart doorbell.
- **Question:** ask the class whether anyone can tell you who Alan Turing is?
- **Answer:** He was a very famous mathematician and computer scientist, he worked on designing some of the very first computers ever made and invented the Turing test.
- **Question:** ask the class whether someone can tell you what the Turing Test is?
- **Answer:** It tries to find out whether a person was talking to a computer or another human.

You may choose to collect students' answers as a way of evidencing their learning.

Finally, moving to **slide 13**, ask the students whether they have any questions about technology, the internet of things, smart devices or the Turing Test.

Disclaimer: This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors. Information available here is not to be relied upon as professional advice or for the rendering of professional services.

Certain links in this Site connect to other Web Sites maintained by third parties over whom PricewaterhouseCoopers LLP has no control. PricewaterhouseCoopers LLP makes no representations as to the accuracy or any other aspect of information contained in other Web Sites. © 2025 PricewaterhouseCoopers LLP. All rights reserved. 'PwC' refers to the UK member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.