BT Group

Healthcare

Bringing tech in healthcare to life

Our healthcare system is an **essential part of our lives.** It ensures that everyone can access the **advice, care and treatments** necessary to look after their **health and wellbeing.**

However, the NHS faces **growing demands and challenges**, such as **staffing shortages**, **reduced budgets**, and **more patients** needing help. Many NHS trusts use **outdated systems and processes** that are costly and time-consuming.

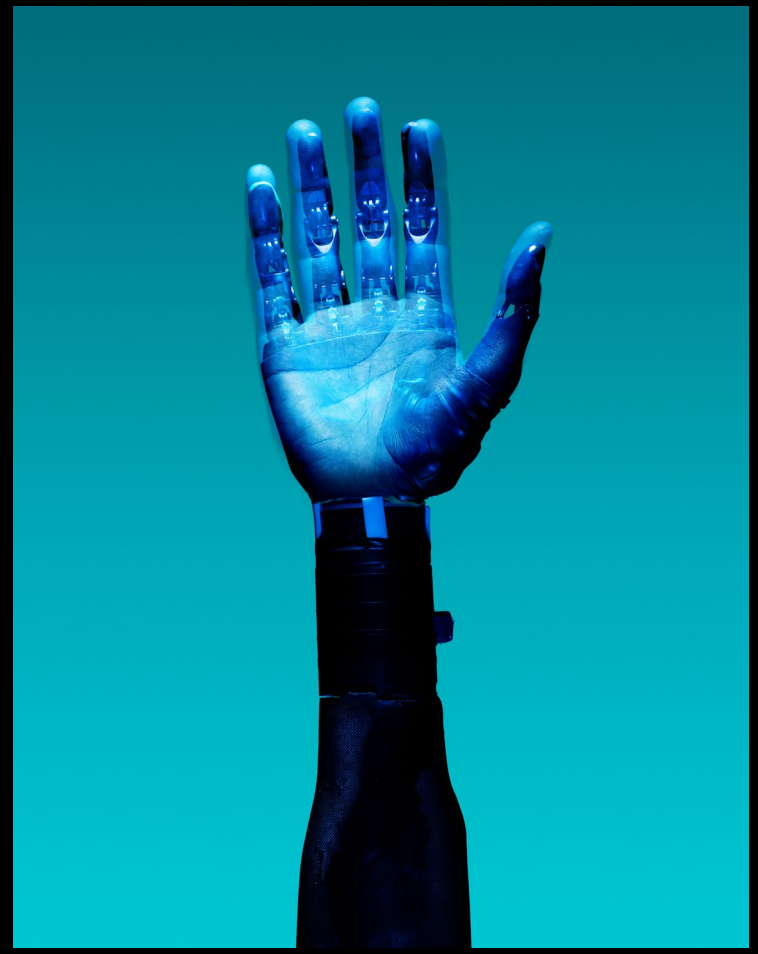
Technology is transforming the healthcare system by **enhancing patient outcomes,** improving access to care, and streamlining service delivery.

Companies like BT Group support the NHS with **cutting-edge research** and the development of new technologies, enabling **real-time, data-driven decisions** and **collaboration**. This is transforming the delivery of healthcare services into a **connected community of care.**

Big Thinking...

By the end of this module, you should be able to form an opinion on the ‘big thinking’ statement:

Is technology transforming our healthcare service for the better?



Module overview

01

Caring for our health in the digital age

Introduction to how technologies like VR, AR and AI are transforming our healthcare system

02

Bringing tech in healthcare to life

Explore the importance of imagery and animation in healthcare innovation through practical project-based work

03

Animation station

Use digital tools to create a visually impactful animation to support peers with their mental health

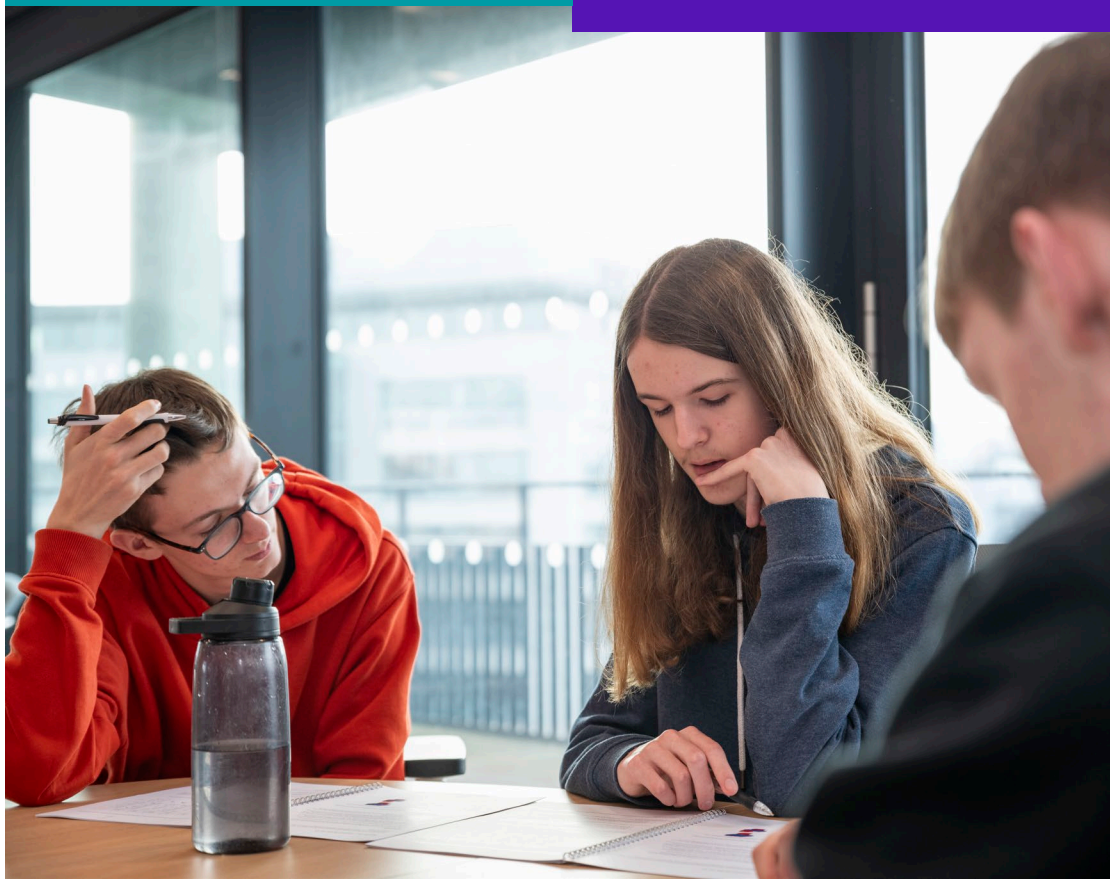
04

Presentations and reflections

Module objectives

Today's lesson is one part of a module of four lessons.

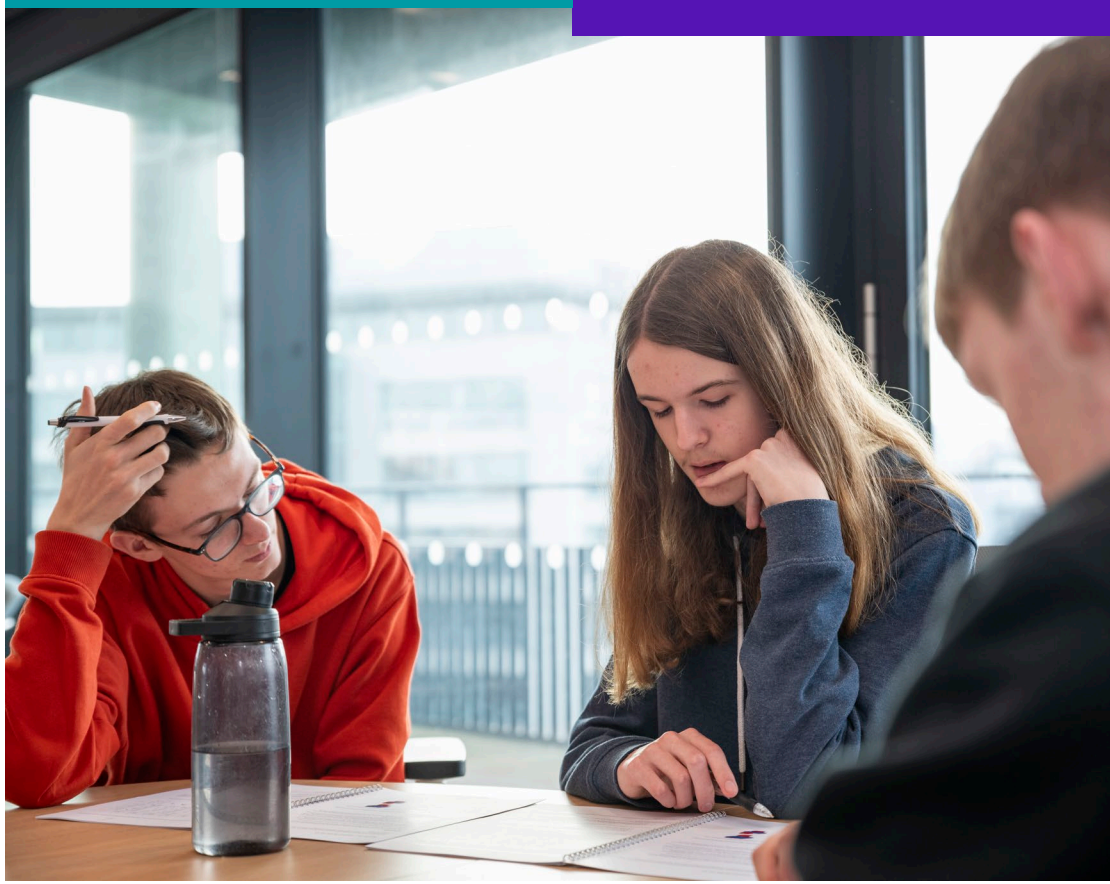
By the end of the module, you will be able to demonstrate different technical and human skills that will help you succeed in a future transformed by technology.



Module objectives

This module will focus on the following skills:

- Technical skills: using and managing digital devices, platforms and apps
- Human skills: critical-thinking and problem solving



Lesson objectives

By the end of this lesson, you will be able to:

- Understand more about cutting-edge technologies like AI, VR, AR and wearables
- Identify how these technologies are transforming healthcare and explain how they work

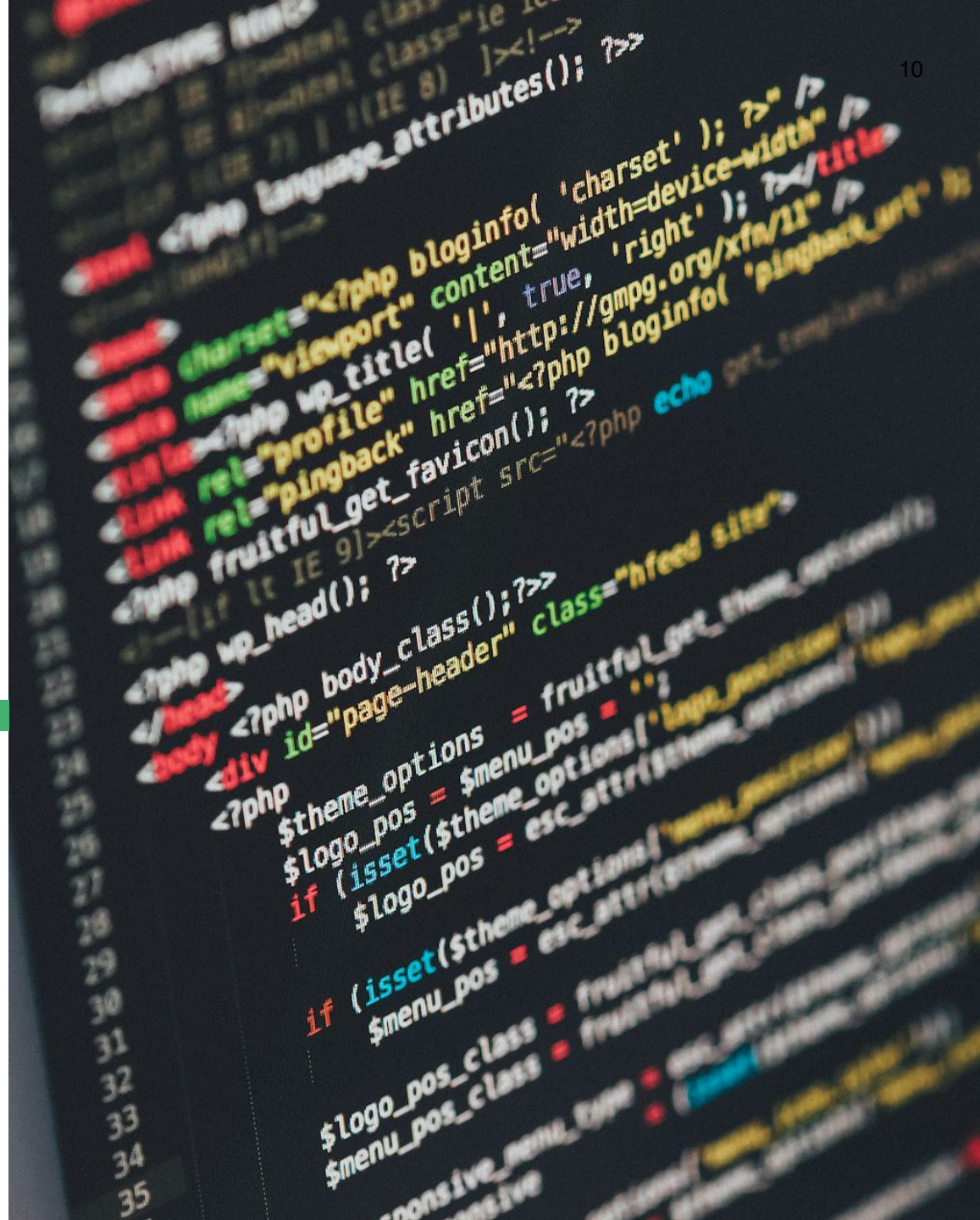
Animation in the world of healthcare

New ways to visualise healthcare

How are the following technologies used in the medical profession?

- Virtual reality (VR)
- Augmented reality (AR)
- Camera vision
- Holograms
- Educational and information films for patients and staff

How can technology help us to improve lives and care for people's health?

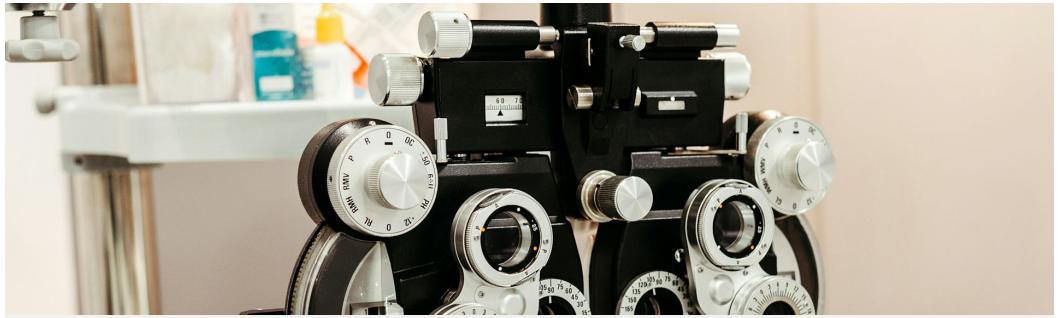


Virtual reality (VR):

- What it is: technology that creates a fully-immersive, simulated experience, using a headset with a 3D display which replaces our real environment with a digitised one.
- How it helps: can help therapists work with their patients to safely assess how they deal with potentially triggering situations (e.g. post-traumatic stress disorder of PTSD)

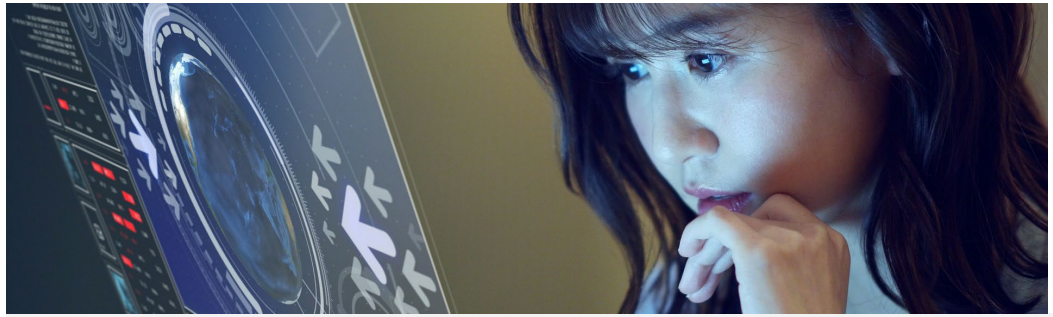
Augmented reality (AR):

- What it is: software that works by using a camera on our devices to allow us to and interact with digital information (text, images, animations) in our environment.
- How it helps: allows surgeons to get additional insights as they operate, improving the safety and effectiveness of the surgery.



Camera vision:

- What it is: technology which uses computer thinking to process and analyse visual data (e.g. Google Lens).
- How it helps: can help to detect illnesses, make early diagnoses and give real-time information that reduces complications during surgery.



Holograms:

- What it is: virtual three-dimensional images which use light and laser beams to project 3D images into our real environment.
- How it helps: can provide doctors with 3D maps of patients' bodies and vital organs. This can help them prepare for operations by allowing them to visualise procedures and practise different ways of operating before doing it on the real patient.

Educational and information films:

- What it is: Short films designed to get across messages in a memorable way, for example through an animation or simple explanation from a professional
- How it helps: they can put a patient at ease about a procedure or medication, or provide a way of training large numbers of staff via something that can be watched multiple times

This short animation was designed to help children and young people understand the difference between a local and general anaesthetic and know what to expect when they visit hospital.

Discuss...

Where are visuals and animation used in these examples?

What are the benefits of using visuals to share information (for example, in presentations)?

Animation project brief

Project brief

Animations can be important in the future of healthcare, enhancing treatment and playing a crucial role in educating people about illnesses and raising awareness.

Background:

Imagine you are the mental health representative for your school. Recently you have noticed a lot of younger students have been feeling stressed, anxious, or even angry about things happening at school or home and struggling to find ways to deal with their emotions.

Your challenge:

Create a 2-minute animation that could help young people understand their emotions better and learn how to develop ways of coping with challenging situations.

Start by thinking about some of the challenges young people might encounter – like their first day in a new school, preparing for a test or presenting in front of their class.

Project brief

Planning:

You will need to look at some different techniques that people can use to help regulate their emotions and deal with anxiety using the information provided. Then you need to come up with a creative way for the audience to learn about different emotions and ways of coping.

Start by making a storyboard, then create an animation, before editing and adding sound effects and/or music.

Follow up:

You will present your reflections on how you approached the task, why you made certain choices with the audience in mind, how you worked as a team and the skills you developed. Use the planning canvas to guide and record your reflections.

You will have 5 minutes in total to present your film and team reflections.

Reflect...

How might a young person benefit differently from watching a film or animation vs speaking to a person directly about emotions and feelings of anxiety?

Recap

What have you learnt today?

- What are some ways in which visual and animation technology is used in healthcare?
- Why is animation and visual information useful in healthcare and more widely?