

What's this? Activity

In this activity, children will use tools to take apart old technology that isn't needed anymore. This is so they begin to see the reality of a computer - it's not magic it is just electricity passing through different circuits. The focus on the activity is not on understanding or recognising each thing - but instead on taking the time to predict, guess and question what they see. They are intrepid explorers investigating the unknown!

What do I need?

- Old tech that each group can open up and take apart
- Screwdrivers for children to get into the tech
- Trays to catch any loose bits of tech
- iPads to capture and record what they find and their thoughts

Teacher Background Information - Why are we doing this?

From the KS2 National Curriculum:

- work with various forms of input and output

When you don't understand how computers work inside, it is difficult to understand how inputs, outputs and other complex topics such as the Internet work. How does that computer show me what I type? How can my email get across the other side of the planet in seconds? Opening up technology and having a look starts to ground children's understanding in the physical rather than the whimsical. Whilst it's nice to imagine emails sent via fairies, the reality is just signals sent through wires and circuit boards!

The focus on this activity is not for children to be able to explain how everything works, but just to have a look, make some guesses and really just appease their curiosity of what things look like and do!

Setup

Look through: <https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939> [scroll down] for examples of tech that have been taken apart...don't expect the kids to be anywhere near that structured or organised.

What do I do?

5 minutes - introduce the task and explain they will be 'Hardware Heroes' and explore the hardware that makes technology work. To do this, they are going to use screwdrivers and old technology. Explain some safety rules about using tools and that we don't take working things and start bashing them!

10 minutes - children work in groups to take the technology apart and photograph what they find. They should use an app like PicCollage or Keynote to combine their photos with labels about what they think it does or what they have noticed in their observations.

5 minutes - each group talks the other group through what they have found and noticed in their piece of tech.