

Touch Screens



Years 3-4
Years 5-6



Groups of 3



15 minutes



Pens/paper
Sheet of polystyrene
A circle counter

Student Instructions

Take turns to assess the material you have been given for it's potential to act as a touch screen, similar to the screen on a tablet. Describe its **properties** on the scale below

When you swipe across a rough surface there will be grip and it will be harder to move

Rough

Smooth



Problem or use in touch screens and why?

When you swipe across a smooth surface there will be no grip and it will be easier to move

When you push down on an elastic surface it will not leave a mark

Elastic

Plastic



Problem or use in touch screens and why?

When you push down on a plastic surface a mark will remain

When you bend a brittle surface it will break

Brittle

Malleable



Problem or use in touch screens and why?

When you bend a malleable surface it will not break



The perfect material

Imagine you could design a material to make the perfect touch screen device.

Research the properties below and decide which of these properties would suit your touch screen

Rough	Light	Thick	Malleable	Plastic
Smooth	Heavy	Thin	Brittle	Elastic

Can you find any other properties you might want in your perfect touch screen?

Brainstorm below the properties of your material and explain why this property would make it a good touch screen.

Properties

Why it would make a good touch screen?

Draw and label your device below explaining the properties of your touch screen

Touch screen: extension

Michael Seo

Check out digitalcareers.csiro.au/MichaelSeo

Michael created a material that can be used to filter very tiny impurities out of water. The applications of this sort of material could be huge in creating clean and safe sources of drinking water.



Regine Chantler

Regine Chantler is a scientist working with CSIRO's flexible electronics laboratory. She is working to develop new materials that are thin, flexible and semi-transparent that can also act as solar panels capturing electricity from sunlight! Her new materials differ from traditional solar panels because they are lightweight, flexible, portable and can be used in many different ways to produce electricity.

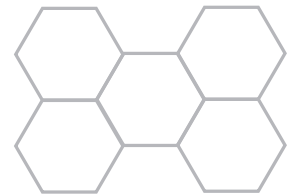
Find out more about Regine's work at digitalcareers.csiro.au/links



Improving materials

Pick a material that you think could be improved using nanotechnology. Research what this material is currently made of and decide which properties you might want to improve.

digitalcareers.csiro.au/links



Design a model for an improved material to improve a solution in your world

Use a design thinking process to create a model of your improved material



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