Champion
the Researchers

THE INVENTION GAME

Maria works with touch screens. Part of her work involves finding the right materials to make touch screens flexible. Imagine the possibilities – phones that wrap around your wrist, GPS maps projected on the car windscreen, or electronic newspapers you can fold up in your pocket.

PUPILS IMAGINE A USE FOR FLEXIBLE TOUCH SCREENS AND PITCH IT TO THE CLASS

Method

Ask pupils to imagine a new use for touch screens. When they have an idea, ask them to stand up – but keep their idea a secret for now. Try to get a large number of the class standing.

Now run through some common research hurdles to see whose idea receives research funding.

For example: Explain that the pupils start to investigate their idea further. Use a simple yes-no question, such as "were you born in the summer?" and explain that – if the pupils answer "no" – it means they discovered that someone has already invented their idea. Ask them to sit down.

Other examples include:

"You decide to make a prototype. Did you eat breakfast this morning? If you did, then unfortunately you found that the prototype didn't work. Sit down"

"You take your successful prototype to your boss. Do you have a pet? If so, then you're told there is the specialist equipment available to support your idea. If not, then please sit down."

Continue until you have a few remaining pupils. Invite them to pitch their ideas to the class, and let the class vote for their favourite idea.

Extensions

Split the class into two groups; give each group a different case study or staff profile. Ask them to read their case study and research the engineering area. They can use the case study questions to help them. Ask pupils to come up with a new idea around this area of research (remember, the science doesn't have to be thought through – the key is for pupils to think of original ideas and possibilities). Share ideas on the whiteboard with a class spider diagram.

The research link

For every breakthrough idea, researchers often have many others that don't make the grade. Finding specialist equipment, getting work funded and preliminary work to support an idea are just some of the hurdles faced when taking their idea through the research process. Researchers need to be creative problem solvers, and sometimes need to persevere with research for many years before there is a substantial outcome.

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