



SILVER AWARD PROJECT IDEAS



typically 30 hours of project work



Are some jeans tougher than others?

Before you start your investigation, you should carry out a risk assessment and have it checked by your teacher. For help with this, read through our health and safety information and look out for health and safety warnings in the text.

Which properties do you think are most important for a pair of jeans? Do you buy jeans for their looks, or because you think they'll last a long time? In this project, you will test the strength of different pairs of jeans to investigate if some jeans are tougher than others.

Getting started

To start you will need to work out which properties you want to test, for example, you could test the strength of seams in a pair of denim jeans, the tear resistance of denim, or you could try to work out how easily denim wears down by rubbing it on a rough surface. This will involve some research into properties of materials, particularly strength.

Choosing your samples

You need to think about the different pairs of jeans you want to test. Do you want to test jeans that are different prices, colours or brands? The choice is yours! You should take a number of same-sized pieces of denim from each pair of jeans you are comparing. That way you can do the same tests more than once, giving you more accurate results. The size of the piece of denim may vary depending on which test you are going to carry out. For example, if you test strength, you may want thin strips of denim. You'll also have to measure the thickness of the denim. This may make a notable difference to your results. Remember - don't cut up someone's favourite pair of jeans! It's also worth noting the age of the jeans. You will, more than likely, use old pairs of jeans so they may already be a bit worn. Try to use the bits that are least worn.

Testing the samples

As mentioned earlier, it's up to you which properties you want to test - but you should test more than one property. You will need to design an experiment to test each type of property. For example, you might measure the strength of the seams by hanging weights from your denim samples until they break.



Make sure you complete a risk assessment. What are the hazards in your test? How can you reduce the risk from them? For instance, if you were hanging masses on the denim samples, how could you keep people's feet out of the way when the denim gives way?

Recording results

Make sure you conduct all of the tests on all of the denim samples. Think of a good way to show the results from each test.

