



y5

Properties and Changes of Materials

I can investigate the thermal insulation of different materials.

Science

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Grammarsaurus

Last Lesson Recap

Can you think of any words to describe the properties of metal?

Talk with your partner before we discuss as a class.



Last Lesson Recap

Can you think of any words to describe the properties of fabric?

Talk with your partner before we discuss as a class.



What if.....?

What if all the pavements were made out of the same material as trampolines are?

Think if three pros (good things about it) and three cons (bad things about it).



What if.....?

What if our classroom tables were flexible?



Think if three pros (good things about it) and three cons (bad things about it).

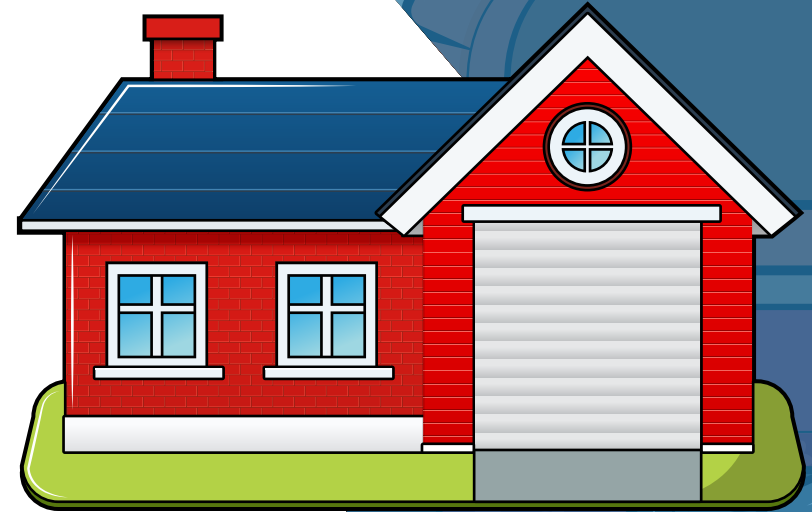


What if.....?

What if all bricks were transparent?



Think if three pros (good things about it) and three cons (bad things about it).





Hi, I'm Kate and this is my coffee shop.
I've had some customer complaints recently
because the cups I use for my hot drinks
aren't keeping the drinks warm!
I wondered if you could help me?





Your teacher told me you were learning about materials and their properties so I thought you could investigate how I could keep my hot drinks hot!

Kate has a few ideas about what she could do, but she needs us to investigate! In order to keep things warm, we will be investigating thermal insulation. Some materials are better at insulating than others. Can you think of some materials that might be good at insulating?

Dictionary Corner

Thermal insulation – the reduction of heat transfer

Kate has some ideas that she would like us to investigate.

In small groups, choose one of the questions to investigate and plan out how you can investigate it.

Think about what equipment you will need such as cups, thermometers, timers, hot liquid and other materials.



- Are some cups better than others at keeping a drink warmer for longer?
- What is the best material to wrap a cup in, in order to keep drinks warmer for longer?
- Are two cups (one inside another) better at keeping a drink warmer for longer?
- Does having a lid on a cup affect how long it stays warm?

Investigation Time!

Next, we need to carry out our investigation.

This may need to be done on a different day so your teacher can gather all the resources you need.



Independent Activity

Finally, we need to communicate our results. We need to let Kate know what we have done and what we have found out

This could be done in a number of ways;

- A letter
- Poster
- Email

Which scientific words should we include in our writing?

Write a list on your whiteboards.

What did we find out?

Find yourself a partner who wasn't in your investigation group.

Explain to them what your group found out using scientific vocabulary.

