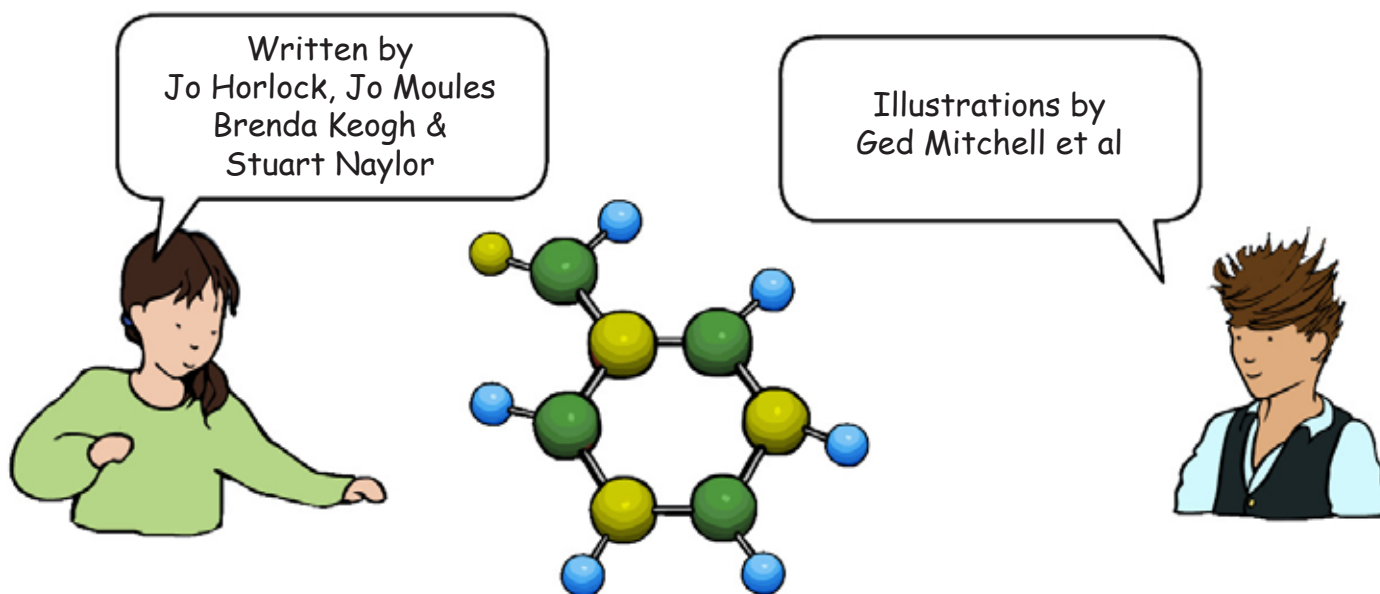


Science Concept Cartoons®

Set 2 - Sample Set



Produced by Millgate House Education

Science Concept Cartoons® Set 2 - Sample Set

Concept Cartoons® are cartoon-style drawings that put forward a range of viewpoints about a particular situation. They are designed to intrigue, provoke discussion and stimulate thinking. Concept Cartoons make concepts problematic and provide a stimulus for developing ideas further.

Each Concept Cartoon can be used to stimulate a free standing discussion and enquiry. Alternatively, the Concept Cartoons can be linked together to form a larger topic or to create a project related to science.

Some Concept Cartoons may look as if they are too easy for some learners, but their deceptive simplicity can stimulate discussion about more challenging concepts and can often reveal some basic misunderstandings. Learners can create their own Concept Cartoons as a way of assessing and reviewing their current understanding.

Concept Cartoons do not always have a single right answer.

Each Concept Cartoon has support material, including ideas for follow up and some possible answers.

- * Concept Cartoons are normally used to promote a group discussion.
- * Ask learners to discuss why each character in the Concept Cartoon might hold their particular idea. Do they have any other ideas that might go in the blank speech bubble?
- * Avoid being judgemental when learners are sharing their ideas. The uncertainty created by Concept Cartoons is productive.
- * Provide an opportunity for learners to explore, challenge or consolidate the ideas raised through the Concept Cartoon(s).
- * Provide time for learners to share their ideas.
- * Have they changed their minds and why?

To learn more about Concept Cartoons and how they are used, visit:



www.millgatehouse.co.uk

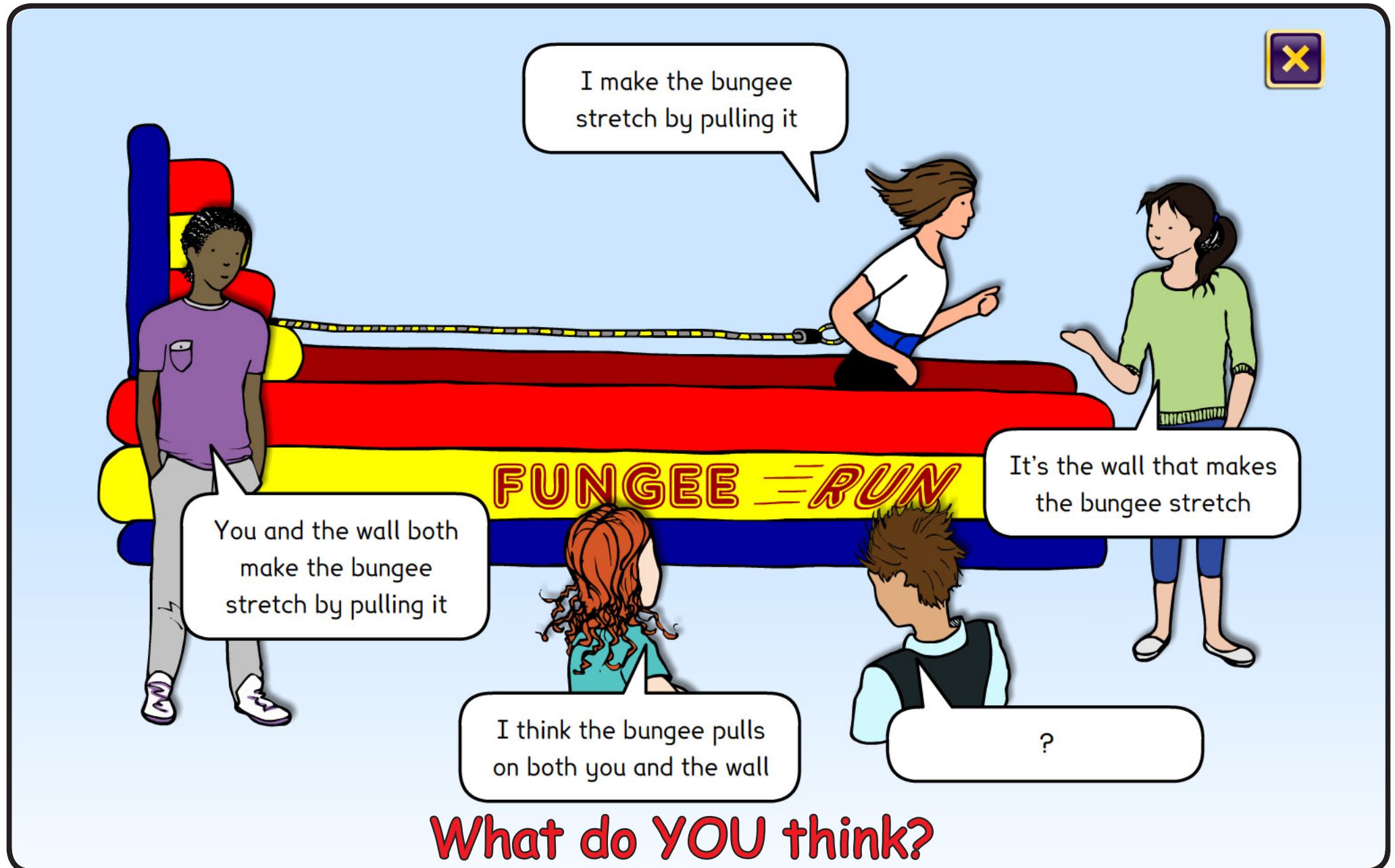


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When printing out the Concept Cartoons please select the landscape setting on your printer options

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7.8 What forces act in stretching?



Follow up

Use both hands to stretch an elastic band. Feel how the elastic band pulls your hands. Observe what happens if you let one end go suddenly. Find out what happens if you try to pull one end with more force than the other. Talk about how Newton's Laws help you to understand what is happening. If action and reaction are equal and opposite, how can one side ever win in a tug of war?

Safety note: If stretching an elastic band, use a small one to avoid any risk of hurting yourself.

Ideas

To make a bungee stretch, you need to have equal and opposite forces at each end. If you attach one end to a wall, when you pull the force is transferred through the bungee to the wall. The atoms in the wall get pulled a tiny bit further apart, and the bonds that hold them together get stretched and provide a force that resists the pull (a bit like a spring does). By doing this the whole wall pulls on the bungee with a force equal and opposite to the force at the end being pulled. This makes the bungee stretch. As the bungee stretches, the atoms that make it up get pulled further apart, and the bonds get stretched and provide a force that resists the pull in both directions. You and the wall pull on the bungee, and the bungee pulls back on you and the wall. Use these ideas to work out what happens when you drop a tennis ball onto the ground. Draw some diagrams to illustrate how the tennis ball responds in this situation.