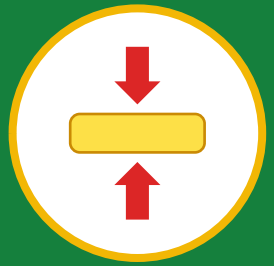
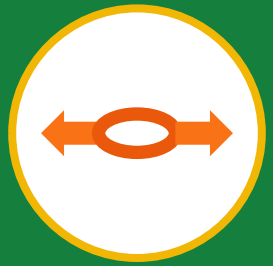
Can we change its shape?

Science · Year 1/2 · Materials

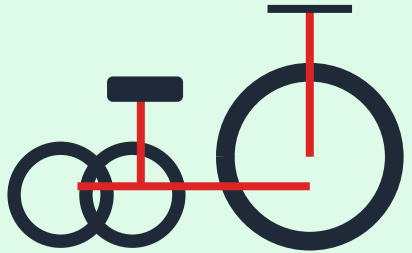



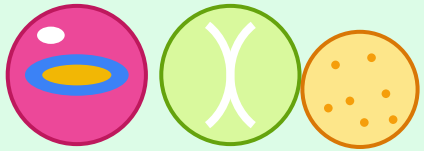


Science	I can find out how the shapes of solid objects can be changed by squashing, bending, twisting and stretching.
Working scientifically	I can record data from a test in a table.
Science enquiry	I can look for patterns in my results.

Remember last time?

1. What is a material?
2. Which ball was the bounciest? What was it made of?
3. How did we keep our test fair?
4. What did John Dunlop make his tyres from?





Show me on your whiteboard!

Can you solve my tricky problems?



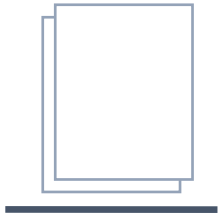
My T-shirt won't fit in this little bag!

I could...



My sheet is too small for the table!

I could...



This wire won't hold my paper together!

I could...

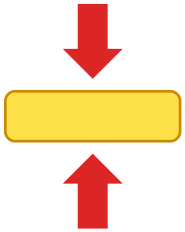


This string is too thin and weak!

I could...

How could we change the SHAPE of the material to fix each problem?

Four ways to change a shape



Squash

press it to make it smaller or flatter

Push your hands together, hard!



Stretch

pull it to make it longer or bigger

Pull your hands apart slowly.



Twist

turn the two ends opposite ways

Wring out a wet cloth!



Bend

make it curve or fold

Bend your arm at the elbow.

We use our HANDS only. No tools, no breaking!

Watch me test: the foil

1. **THINK** Can it squash? stretch? twist? bend? Write ✓ or ✗ in the yellow I think boxes.
2. **TEST** Try each one gently with your hands.
3. **RECORD** Write ✓ or ✗ in the grey I found boxes.



foil is made of metal

Stretch? I was wrong! That's OK.

Object	Squash		Stretch		Twist		Bend	
	I think	I found	I think	I found	I think	I found	I think	I found
foil	✓	✓	✓	✗	✓	✓	✓	✓

Your turn, scientists!

Year 1

- ★ Test 4 objects.
- ★ Think → test → record ✓ or ✗.
- ★ Finish the sentence: The ____ could be squashed.

Year 2

- ★ Test 6 objects. Write what each one is made of.
- ★ Think → test → record ✓ or ✗.
- ★ Does it go back to its shape?
- ★ Look for a pattern in your table.



sponge



elastic band



play dough



pipe cleaner



lolly stick



metal spoon

Gentle hands • one object at a time • fill in I think BEFORE you test

What patterns did we find?

Soft and stretchy materials like _____ could be _____.

Hard materials like _____ and _____ could not be changed.

The _____ went back to its shape, but the _____ did not.

How did I do?

not yet · getting there · got it!

I can say how to change the shape of an object. 

I can record my results in a table. 

I can spot a pattern in my results. 

Can we change its shape?

Year 1

Name: _____

Write ✓ or ✗. Fill in **I think** first, then test, then fill in **I found**.

Object	Squash		Stretch		Twist		Bend	
	I think	I found	I think	I found	I think	I found	I think	I found
foil *example*	✓	✓	✓	✗	✓	✓	✓	✓
sponge								
elastic band								
play dough								
lolly stick								

What did I find out?

The _____ could be squashed.

The _____ could not be bent.

Squash Stretch Twist Bend

Can we change its shape?

Year 2

Name: _____

Write ✓ or ✗. Fill in **I think** first, then test, then fill in **I found**.

Object	Material	Squash		Stretch		Twist		Bend		Does it go back to its shape?
		I think	I found	I think	I found	I think	I found	I think	I found	
 foil *example*	metal	✓	✓	✓	✗	✓	✓	✓	✓	yes (no)
 sponge										yes no
 elastic band										yes no
 play dough										yes no
 pipe cleaner										yes no
 lolly stick										yes no
 spoon										yes no

circle one ↑

Look for a pattern

Materials like _____ could be squashed and stretched.

_____ and _____ could not be changed because they are hard.

I noticed that _____.