



# Science

## Year 2

# Mixtures and Materials

### How can I change the shape of an object?

Shakespeare Primary School and Nursery



## Properties of Materials

Materials have properties which may include being: flexible, rigid, **stretchy**, squashy, elastic, stiff.

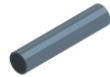
If a material is flexible, that means it can bend easily without breaking.

Rigid materials are unable to bend without breaking.

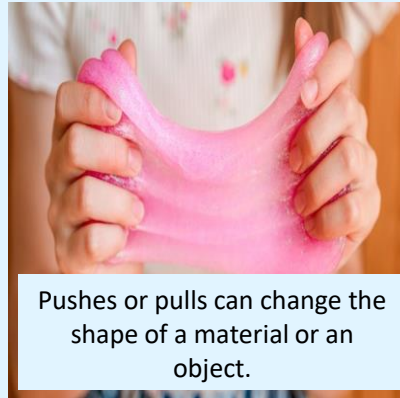
If a material is **squashy**, that means you can crush or squeeze it, without it breaking or tearing.

**Elastic** materials can bend, stretch or **twist** without it breaking and then it will return to its original form.

**Stiff** materials cannot be stretched or squashed.



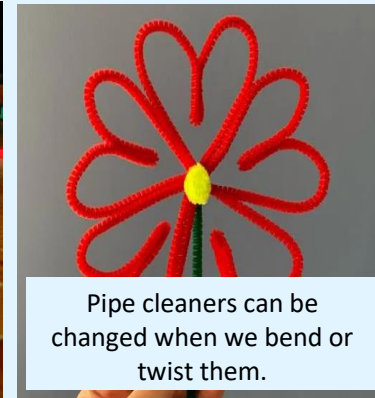
## Changing Materials



Pushes or pulls can change the shape of a material or an object.



Play-Doh can be changed when we squash or stretch it.



Pipe cleaners can be changed when we bend or twist them.

## A Scientist Just Like Me!



Haydn Francis is a materials scientist from the Caribbean who works at the University of Cambridge. He works in the chemistry department trying to improve batteries (such as the ones you find in your phone, laptops and electric cars) so that they can last longer.

## Working Like a Scientist and Working Scientifically

Scientists carry out tests on the properties of materials and then decide the most suitable use of that material. They use their eyes to look, gather information and think about why we use different materials for certain jobs. Scientists use what they have found to help them answer questions.

**Careers:** materials scientist, science teacher or researcher

If you want to be a materials scientist, you need...

- to be **creative** when using different materials
- enthusiasm** – you have to enjoy working with materials
- to share ideas** – you need to be able to share what you have found out with others



## Speak Like a Scientist

**Previously learned vocabulary:** bend, flexible, material, property, rigid  
**New vocabulary:** twist, stretchy, stiff, squashy, elastic

## Project Questions

- Name two different types of materials. What can we do to change the shape of an object? Name two things.
- What can pushes or pulls do to a material or object?
- How can we choose which material is best for a purpose?
- Why do we remember William Harbutt?

Properties	Materials/Objects
Flexible	
Rigid	
Stretchy	
Squashy	
Elastic	
Stiff	