Changing Materials! Year 2 Science at Home

You can help! Your child is learning that we can change the shape of materials without changing what they are made of. There are great examples all around the home!

Why are we learning this? Changing materials on Country

People have been changing materials for tens of thousands of years up here. Pandanus leaves are woven and twisted to make baskets. Bark is bent and shaped into containers. Beeswax is moulded into adhesives. Clay is pressed and shaped into objects. All of these involve physically changing a material without changing what it is made of — the same science your child is learning in Year 2. Understanding physical change helps them connect their classroom learning to the knowledge and skills of their community.

My child will learn to:

✓ Know what a physical change is
Understand that bending, twisting, stretching or breaking a material changes its shape but not what it is made of.

✓ Explore physical changes
Experiment with different ways of changing materials.

✓ Compare materials
Notice that different materials change in different ways.

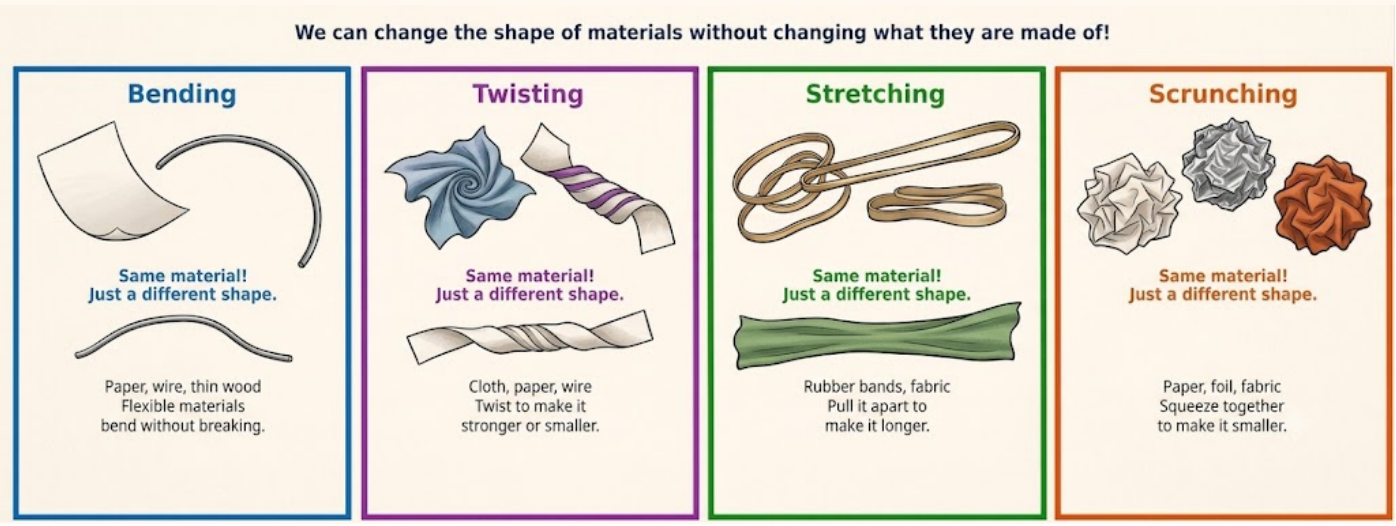
✓ Describe changes
Use words like bend, twist, stretch, scrunch, tear and fold to describe what they do.

Big ideas to know:

Physical change
A physical change changes the SHAPE of a material but not what it is made of. Paper that is folded is still paper — it has just changed shape.

Ways to change
We can change materials by bending, twisting, stretching, scrunching, folding, cutting and tearing. All of these are physical changes.

Same material
Even after a physical change, the material is the same. Torn paper is still paper. Stretched fabric is still fabric. The change is just to the shape.



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Ways to physically change materials

Change	What it means	Try it with...
Bending	Changing the angle of the material without breaking it	Wire, cardboard, a green twig, plastic ruler
Twisting	Turning parts in opposite directions	Cloth, paper, a wet tea towel
Stretching	Pulling the material to make it longer or wider	Rubber band, fabric, playdough
Scrunching	Squeezing into a smaller, irregular shape	Newspaper, aluminium foil, paper bag
Cutting / tearing	Separating into smaller pieces	Paper — still paper even when cut!

Think Like a Scientist — Change a Material

Take a piece of paper. Fold it, scrunch it, tear it, cut it, roll it into a tube. Each time, ask: "Is it still paper? Has the material changed or just the shape?"

Key question to explore: "Even though it looks different, is it still the same material? What has changed and what has stayed the same?"

You will need: *(Materials)*

- Several sheets of paper
- Rubber band
- Aluminium foil
- Pipe cleaner or flexible wire
- Damp cloth or tea towel

Try these physical changes:

1. Fold a piece of paper — then unfold it. Is it still paper?
2. Stretch a rubber band. When you let go, does it return?
3. Scrunch aluminium foil into a ball. Unscrew it. Is it still foil?
4. Twist a wet cloth or tea towel. What happens to the water?
5. Bend a pipe cleaner into different shapes

Questions to ask your child

1. What happened to the material when you bent/twisted/stretched it?
2. Is it still the same material? What has changed?
3. Can you change it BACK to its original shape? Why or why not?
4. Which material is easiest to bend? Which is hardest?
5. What would happen if you tried to bend metal vs fabric?
6. Why do we twist cloth when we wring out a wet towel?
7. How do First Nations people change materials to make useful objects?

The key idea is that the material does not change — just its shape. Paper is always paper, even after you fold, cut or scrunch it!

Key words to know:

Physical change	Changing the shape of a material without changing what it is made of
Bend	To curve or angle a material
Twist	To turn parts of a material in opposite directions
Stretch	To pull a material to make it longer or wider
Scrunch	To squeeze a material into a smaller, crumpled shape
Material	What an object is made from
Composition	What something is made of — physical changes do not change composition

Key words to look up

Physical change · Bend · Twist · Stretch · Scrunch · Material · Composition

What school will check

Your child needs to identify ways to change materials without changing their material composition, and describe the effect of bending, twisting, stretching and breaking materials.

Try it at home!

Get a piece of playdough or bread dough. Make it into 5 different shapes. Ask each time: "Is it still playdough? What has changed and what has stayed the same?"