

Inheritance and Variation

Something to get you thinking...



What if we all looked the same?

What would be a **positive**, **negative** or an **interesting way** to think of this question? You could consider the following questions to help you:

- *How would we identify one another if we all looked the same?*
- *What if all animals of the same species were identical in size?*
- *What if we weren't interested in technology or science? Would the world be able to advance?*
- *Would humans become extinct? What would kill them off?*

Inheriting key characteristics

We are all unique and we all look different. We share the same features as each other such as eyes, ears, nose, hair, skin and our faces. But the features themselves such as the colour, shape and texture of our eyes, skin and hair can **vary** a huge amount between individuals. We do share similarities with our parents and siblings - maybe the same eye colour, hair or the ability to roll or tongues but we still do not look exactly like them.

This is because we get a mixture of characteristics from our mums and dads. The characteristics we **inherit** are due to chance and, unless we are identical twins, are unlikely to be the same as our siblings.

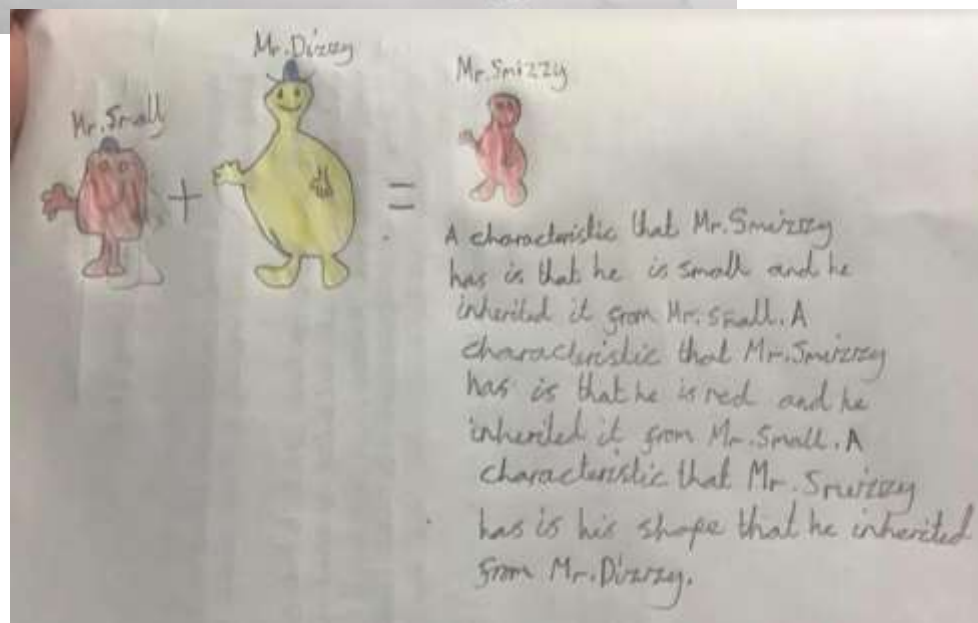
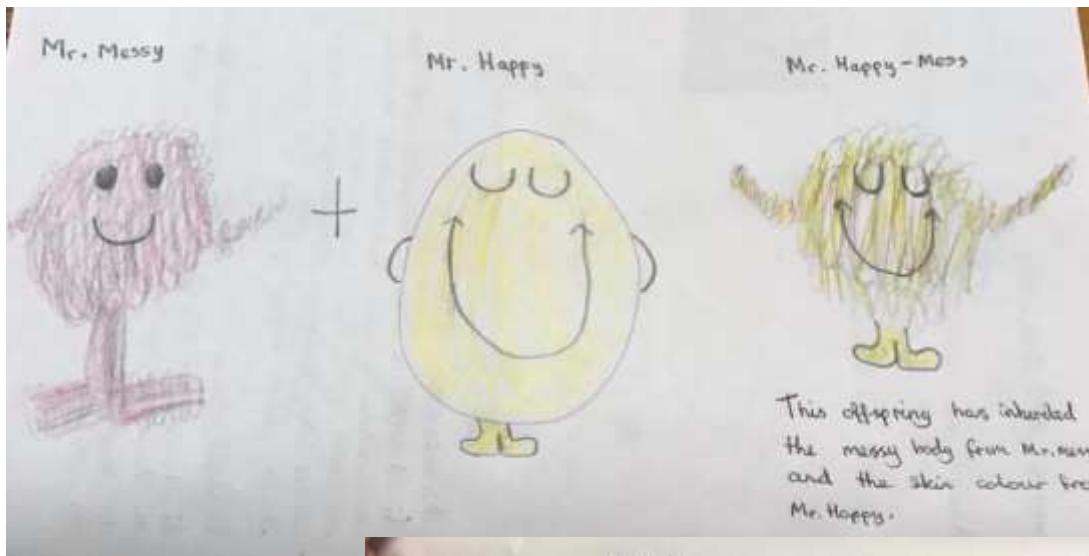
Watch the following film clip to see this being explained:

<https://learn.genetics.utah.edu/content/basics/inheritance/>

Explore some family photographs more closely. What characteristics have you inherited from your parents? What have they inherited from your grandparents?

Mr Men and Little Miss Families

Imagine if one of the Mr Men and one of the Little Miss's produced offspring! What would their offspring (children) look like? See the examples below and then have a go at producing your own Mr Men children. Use the PDFs online to help you observe the **characteristics** of each character and remember **variation** - the offspring won't look exactly like it's parents, but it will have characteristics from each.



Which characteristics can vary between parent and offspring that are NOT a result of natural inheritance and variation? What about hair colour? Tattoos? Intelligence?! What causes these types of variation?

If you want, you can also read a Mr Man or Little Miss story for fun here:

<https://www.readstoriesforkids.com/Mr-Men-and-Little-Miss.html>