

Introduction to sense: Touch

Humans and animals use **touch receptors** in their skin to understand the different sensations they feel. Touch receptors can help us to know whether we are too **hot** or **cold**, for example, or whether a stone is **smooth** or **rough**.

There are different **types** of touch receptors. Some receptors detect **vibrations** and **movement**, while others can detect different **textures** and **temperatures**, or if something is **wet** or **dry**. Touch receptors can also tell us if something is **hurting** us (for example, if someone is standing on our foot!).

Touch receptors are **very sensitive** and send **messages** to the **brain** to help understand the environment and how we are interacting with it. The brain only **takes notice** of **some** of these messages though, for example, it doesn't keep reminding us that we are wearing clothes unless they become uncomfortable!



A human's **hands, feet** and **lips** are the body parts **most sensitive** to touch, as they have a very high number of **touch receptors**.



Humans use their hands to **feel** all the time when picking things up or reaching out to touch something. These sensations help to keep us **safe and well**.

Spiders!

Spiders are different to us when sensing touch. They have a large number of **special hairs** on their **legs** called 'trichobothria'.

Spiders can feel different sensations using these hairs on their legs. **Messages** are then sent to their **brain** to tell them if something is on their web. Their sense of touch is **so sensitive** they can even tell exactly **what** and **where** something has landed on their web!



Humans and animals also use touch to communicate

Some examples include:



Elephants linking their trunks to show each other that they are there.



Monkeys hugging and kissing to greet one another,

Humans shaking hands, hugging, kissing and high-fiving with others.



Using touch in this way shows others that **we care about them** and it makes us **feel better** too!

Checkpoint! What have you learnt so far?

Why is touch so **important** to humans and animals?

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What kind of **sensations** can we **feel** through our **skin**?

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What are the most **sensitive parts** of our bodies?

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How do humans and animals use **touch** to **communicate**?

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Challenge: Create a 'Feely Box'!

You will need: Access to different rooms in your home, a cardboard box, a blindfold, a pair of scissors

1. Search around your home and collect a selection of **items** which have **different textures**.

(Please don't use pets/insects as part of this activity as they may get scared!)

2. Ask a grown-up to help you to **cut a hole** in the top of the cardboard box - just big enough for a **hand** to fit through.

3. Place one of the **items** you found **into the box**.

4. Secure the **blindfold** on a family member (or someone else who can help you) and ask them to put their **hand into the box** to **guess** what the item is, just by touching it!

5. **Repeat** this for all the items you have, can the other person guess even when you place an item on their arm/leg, instead of using their hands to feel?

Questions to think about

Does **not being able to see** make you **more aware** of your sense of **touch**?

How do **animals** use their sense of **touch** to **stay safe**?

How do you think **animals** have **changed** over time to get better at using **touch** as a way of **surviving**?

Did you know?



Animals use their **whiskers to feel**: they can sense other animals and the environment around them, feel textures and currents in water.

The **star-nosed mole** has more than **100,000 touch receptors** in its nose - that's **6x more** than we have on our hands!



Alligators and **crocodiles** have **10,000 touch receptors** just under their **jaw** bones, these receptors detect small **movements** in/under the **water** so they know when and where there is an **animal nearby**.