



Let's Talk About Reindeer.

**STEM Education worksheet provided by
Dundee Science Centre.**

These worksheets work in conjunction with our **Let's Talk About** video series that can be found on our Instagram @dundeesciencecentre.

They are designed to engage and educate on interesting science topics to support the curriculum for learners of all levels.



Reinder Vision

Every year, reindeer's eyes change colour! In summer, part of their eyes is yellow, but in winter, it turns deep blue. This special change helps them see ultraviolet (UV) light - a type of light that humans can't see at all.

In snowy places, many animals try to hide by blending in with the white snow. But reindeer have a clever advantage. To them, snow glows brightly under UV light, while some white animals and plants look dark instead. That makes it much easier for reindeer to spot things that are hiding!

Animals like polar bears and wolves are a threat to reindeer, but because they look much darker than snow in UV light, reindeer are able to see them much more easily than us which helps them avoid danger!

The Activity

We're going to use suncream to paint a snowy winter scene, showing the difference between human and reindeer vision.

Even though it looks white, suncream absorbs UV light - so if we could see UV light, it would be more black. We can use it with a UV light to create a landscape painting that shows us a little how Reindeers see the world!



Reindeer Vision Painting - Using a UV Light

Take caution when using UV lights; they can harm eyes. Do not shine directly in the eyes and avoid prolonged exposure.

You will need

- Suncream (at least SPF30)
- Paper
- UV light or torch
- Items for painting (brushes, sponges, cotton buds)

Instructions

Step 1: Squeeze a small portion of suncream out of the bottle onto a plate or similar.

Step 2: Using your painting tools, dip into the suncream and lightly paint it onto the paper (you may need to have the UV light on to see what you are painting). Paint in thin layers for the best effect; you can always add more.

Step 3: Sponges are good for painting bushes and reindeer moss, which is a kind of Lichen reindeers love to eat.

Step 4: Brushes or cotton swabs are great for adding animals.

Step 5: You should now have a beautiful picture of snow that looks just like a blank piece of paper. Shine your UV light onto the page to reveal all the animals hiding in the snow!



Reindeer Vision Painting - Without a UV Light

If you don't have access to a UV light at home, you can use the sun!

You will need

- Suncream (at least SPF30)
- Paper (for this dark coloured craft paper is best)
- Items for painting (brushes, sponges, cotton buds)
- Rocks or similar heavy objects

Instructions

Step 1: Squeeze a small portion of suncream out of the bottle onto a plate or similar.

Step 2: Using your painting tools, dip into the suncream and lightly paint it onto the paper (this may be tricky as you won't be able to clearly see what you're painting). Paint in thin layers for the best effect; you can always add more.

Step 3: Sponges are good for painting bushes and reindeer moss, which is a kind of Lichen reindeers love to eat.

Step 4: Brushes or cotton swabs are great for adding animals.

Step 5: Place paper outside, weighted down in the corners with heavy objects, in a sunny spot for 3-4 hours. The UV light from the sun will fade and lighten all of the paper not covered by suncream revealing the hidden inhabitants.