



EARLY YEARS ACTIVITY PACK

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EVERYDAY JOURNEYS

Be seen, be safe

About this activity

In this activity, you and your group will investigate different reflective materials.

Time

20 minutes

Kit list

- ✔ A selection of different materials, e.g. fabrics, reflector armbands, foil, shiny paper, black paper, dark/light coloured objects (you may want to ask the children in advance to bring things that they think will help them to be seen in the dark)
- ✔ A paper version of a black t-shirt (try using black sugar paper)
- ✔ A torch
- ✔ Non-toxic glue

Instructions:

- 1 Introduce the activity using the story below about Cosmic and Gem. Ask the children what they think might help them to be seen in the dark.
- 2 Support the children to cut out different shapes of the materials they think will be best at reflecting.
- 3 Help the children to attach these materials to their paper t-shirt.
- 4 Get children to test the shininess of the materials by using the torch.

Think and talk about:

- ✔ What material do you think will be best at reflecting light?
- ✔ Why do you think it will be better than the others?
- ✔ What other methods can help you be seen in the dark?
- ✔ Try putting your paper designs in a dark place to see which ones stand out best.

One evening, Cosmic and Gem are out riding their bikes in their black tracksuits. Suddenly there's a loud knock, rat-a-tat-tat, on the door. Oh no! It's a police officer with Gem and Cosmic. They are looking very sheepish.

"I nearly knocked these two off their bikes," grumbles the police officer. "They were riding round, no lights, and just look at what they are wearing! No wonder I couldn't see them."



Watch out!

- ✔ Make sure children are properly supervised if using scissors



Our Diverse Planet

Rainbow collectors



About this activity

In this activity, children will celebrate the diversity of our environment and will create a rainbow of the colours that they can see around them.

Kit list

- ✔ Colour-collecting palettes - ideally one between two
- ✔ Coloured pens (red, orange, yellow, green, blue, purple)
- ✔ Double-sided tape
- ✔ Use a long white strip of paper divided up into 6 sections to represent a simple rainbow.

Time: 30 minutes

Watch out!

Remind children that they must stay near their helper.

Ensure that you meet your organisation's safety requirements for outdoor activity.

Children must wash their hands thoroughly after this activity. Some organisations may require the children to wear gloves.

Check the area for plants with toxic seeds or plants that might cause irritation.

Instructions

Mark each section of the white paper strips with a coloured dot (red, orange, yellow, green, blue, purple) or you could let children do this after their discussion.

Alternatively you can give each group a plate-sized circle of just one of these colours so that they focus on one colour.

You need to cover the palette with small pieces of double-sided tape. This is where they are going to stick their rainbow samples.

- 1 Choose somewhere for children to look for colour. The activity can take place in any location - ideally outside. It does not need a flower-filled garden or to be out in the countryside.
- 2 This activity helps children to be more aware of colour in their natural environment. Ultimately the activity should focus on natural materials, such as plants, but you can choose to let them add other materials to their palette as well.
- 3 Hand out the colour-collecting palettes, ideally one between two.
- 4 Tell the children about going to look for the rainbow. Make it sound like an exciting adventure.

- 5 Show them examples of the things to collect e.g. bits of flowers and leaves.
- 6 When they return they can share what they have found and create a rainbow by putting their palettes together. These can then be put on display.

Think and talk about

- ✔ Have you seen a rainbow?
- ✔ Which colours did you see?
- ✔ Do you think that you can find all the colours of the rainbow?

Next steps

Children could take some photographs or draw pictures of the different colours they can see around them.

At home

Children can try this activity at different times of the year, and could keep a record of how the colours change depending on this.



Our Diverse Planet

Take it home: Brilliant Bubbles



About this activity

In this activity children will discover the different states of liquids, solids and gases, by experimenting with bubbles. This activity has been specifically designed to be suitable as a take home sheet, using equipment most parents should be able to source easily and cheaply. Why not print this sheet and send children home with it to encourage parents to get involved during British Science Week?

Kit list

- ✔ Plastic trays or bowls
- ✔ Clean drinking straws (preferably reusable) - 1 per child
- ✔ Bubble wands
- ✔ Soft wire (e.g. florist's wire or pipe cleaners) to bend into different shape frames such as a triangle or square
- ✔ Bubble mixture
- ✔ Food colouring

Time: 30 minutes

Watch out!

Children will create a lot of mess with their bubbles, so be prepared for this.

You can colour the mixture with food colouring, but when the bubbles burst the children get sprayed with drops of food colouring, so this is VERY messy.

Instructions

- 1 Ask children if they have blown bubbles before - were they all the same?
- 2 Give out the equipment to children. Explain that they will be using it to test if they can make different shape, size and colour bubbles.
- 3 Put some bubble liquid in a bowl or tray and get children to use a straw to blow some bubbles. Remind them not to share their straw with anyone else and not to suck up any of the liquid.
- 4 Encourage children to try blowing gently and then blowing harder.
- 5 Encourage children to discuss their ideas and how to carry out their investigations on how to make different shapes, sizes and coloured bubbles.
- 6 Children could use the pipe cleaners to make different shape bubble wands. The food colouring can be used to make different colour bubbles.
- 7 Support children to conduct their tests and make their own records of their results. They could also take photographs or make drawings.
- 8 Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want - for example, why not try a bubble competition?

Think and talk about

- ✔ Do they think they can make bubbles with different shapes?
- ✔ How will they make sure their test is fair?
- ✔ How will they record their results?
- ✔ Have they ever blown bubbles? Do you think that they were all the same?

Next steps

Children could take this further by finding out how long they can keep a bubble before it bursts. They could also find out whether bubbles float or fall to the ground or how long they can keep a bubble in the air.



What you'll need

- White flowers (carnations, daisies or chrysanthemums)
- Water
- Food colouring of various colours
- Jar/bottle/vase
- Scissors

About this activity

This colourful activity demonstrates how plants take water from their roots, up their stem and into the different parts of the plant such as the leaves and petals.

Watch out!

Ensure that you protect your workspace and children's clothes when handling the food colouring.

Changing colours

Colourful carnations

Get colourful

Talk to the children about what plants need to grow and survive:

- How do they think the plants drink water?
- Where do they think the water goes when the plant drinks it?
- How can we test this out?

Fill your jars, bottles or vases with water and add a few drops of food colouring, so you can see the brightly coloured water clearly. Cut the bottom off the stems of your flowers and place them in the water.

Leave your flowers in the coloured water for a few hours and observe what happens over the course of the day. Revisit them frequently and have the children share what changes they can see, and why they think the petals are the same colour as the water.



Changing colours

Sensory play: mixing colours

What you'll need

- Ready mix paint
- Zip lock bags
- Paper

About this activity

This activity gets children hands-on and artsy, whilst thinking about colours and the changes that occur when you mix them together.

Watch out!

Ensure that you protect your workspace and children's clothes when handling paint.

Get colourful

Place a piece of paper into the zip lock bag (cutting it to size if needed).

Next, have the children squirt in different colours of ready mix paint, starting with colours at opposite sides of the bag.

Then, zip it up and encourage the children to push the paint around with their hands and mix the colours up.

Think about the colours

Ask children to think about what colours there are and what happens when you mix them.



Take a photo of
your colourful
creation.



What you'll need

- Large mixing bowl/tray
- Cornflour
- Water
- Food colouring (optional)

About this activity

Fancy making a weird slimy concoction that acts like a liquid but behaves like a solid when you hit it? This activity is hands-on and rather messy, so make sure you're not wearing your best clothes!

Watch out!

When you've finished, do not pour the slime down the sink as this could clog the pipes. Instead spoon the mixture into a zip-lock bag, fasten it tightly and dispose of it in a bin.

Changing states

Oobleck slime

Make some slime

Place some cornflour into a large mixing bowl or tray and little by little, add some water. Get the children to use their hands to mix it altogether until they get a good consistency for the oobleck slime gloop. They may not need a lot of water, so add it slowly and carefully.

You can also add food colouring if you want to make your oobleck slime more colourful.

Ask the children to talk about their senses and what they are feeling and seeing.

Put your slime to the test

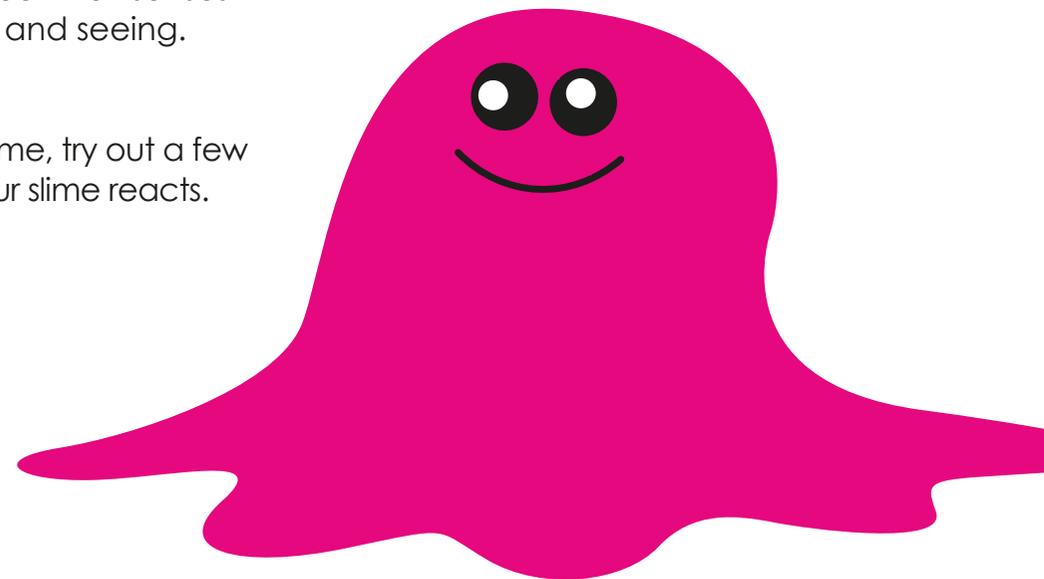
Once you've made your slime, try out a few experiments to see how your slime reacts.

Why not try the following? Test out:

- Touching the slime and drawing back your hand quickly
- Scooping some of the slime into your hand and rolling it into a ball between your palms

Next steps

Try setting your children a challenge by leaving the slime out over a few days or overnight and seeing if they can make it slimy again once it has dried out.



Changing weather

Wonderful weather (page 1 of 2)

What you'll need

- Plastic drinks bottles, plastic cups and plates
- Thermometer and stopwatch/clock
- Waterproof pens and pencils with erasers on the ends
- Modelling clay, straws, card, glue and waterproof tape
- Hole punch, drawing pins and scissors
- Clipboards, weather recording book and camera
- Pictures of different types of weather

About this activity

This activity explores how our weather changes and allows children to examine a number of factors such as rain and wind over a period of time.

What's the weather like today?

Talk to the children about what a weather station is, what weather they could measure and how they might go about setting one up. Use photos and pictures of different types of weather to give them some ideas.

It's raining, its pouring

Use an old fizzy drink bottle (preferably a two litre one) and cut off the top and put it to one side. Use some tape to cover the rough edges on both pieces.

Support the children in using a ruler and a waterproof pen to make a scale on the main part of the bottle, starting from the bottom. Help them to use a hole punch to put a few holes in the other part of the bottle.



Have the children place the hole punched top of the bottle upside down resting on the bottom part.

Add the rain gauge to the weather station. Have them think about the best location for this bottle – under a tree or out in the open?

Watch out!

Ensure that you are aware of everyone's safety when working outdoors and that children are supervised at all times, especially when using pins and scissors.

Changing weather

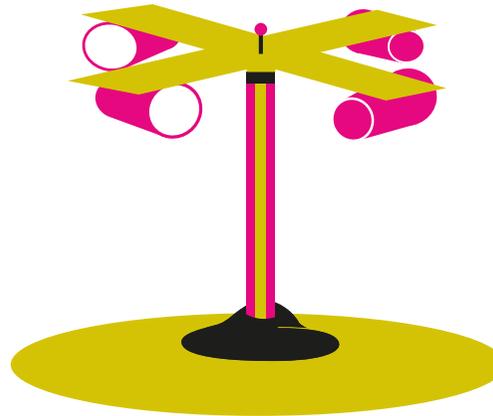
Wonderful weather (page 2 of 2)

Will it be windy?

Cut two triangles out of strong cardboard. Using waterproof tape, stick a triangle to either end of a drinking straw - this will form the arrow of the weather vane. Put a drawing pin through the centre of the straw and into the eraser on the end of the pencil, and ensure it balances nicely. Use modelling clay to stick the pencil upright in the centre of a plastic plate, and make sure the arrow can move freely around in a circle.

Draw a N, E, S and W letter on the plastic plate to represent north, east, south and west and so you know which way the arrow is pointing. What do the children think the N, E, S and W stand for?

Add the wind vane to the weather station. Have them think about the best location for it – sheltered or out in the open?



Speedy wind

Cut two equal length strips of strong cardboard. Next, glue or tape the plastic cups onto the cardboard strips on each of the ends.

Pin the two pieces of card in a cross with the cups on the underside of the strips. Put the drawing pin into the top of the eraser on the end of a pencil.

Use modelling clay to stick the pencil upright in the centre of a plastic plate and make sure the cups can move freely around in a circle.

Add your wind speed measuring tool next to the vane in the weather station.

Feeling hot, hot, hot

For a finishing touch, add a thermometer to the weather station.

Next steps

Using a weather recording book, each day:

- Use the rain gauge to see how much water has collected
- Use the wind vane to see which direction the wind is blowing in
- Use the wind speed measuring tool, and a stopwatch/clock to see how many times the tool turns in a certain amount of time (how many turns per minute)
- Use the thermometer to measure the temperature

