



PRISM

Educational pack for schools

Introduction

This activity pack is to support home learning and play around colour and light. It has been designed for families who have come to see the theatre show Prism but anyone is welcome to use them. The activities in this activity pack have been created for children over the age of five.

5-8 years

These activities are designed for children aged 5-8 years.



The Show

Prism is a show about two friends Hue and Pop who investigate colour mysteries together. In the show, our characters don't speak at all, but they do explore what happens in a strange, colourful house by showing the audience what coloured light can do.

This show was inspired by the fact that coloured light behaves and mixes differently than coloured paints.

What do you remember?

After coming to see the performance together, it can be fun to talk about what you each remember. You can use these questions as a guide for your discussion.

Remembering

When we walked into the performance space, what could you see?

What was on the stage?

What did the characters look like?

Can you think of three things that the characters did?

Reflecting

What did the colours do in the house? Did anything surprise you?

What was your favourite bit of the show?

How did you feel when watching the show?

Were any parts funny, happy, sad, confusing?

Did you enjoy it?

Exploring

If you have a favourite part of the show, could you act it out or draw a picture so show people who haven't seen it? What colours could you use in your picture? In Prism we use a lot of red, blue and green but we also mix those colours to create new ones.



Colour unmixing

Craft activity (25 minutes)

Coloured inks are often made up of several colours. We can separate these colours using some common household objects.

For this activity, children can work in small groups to investigate together. Each child can choose a selection of different pens.

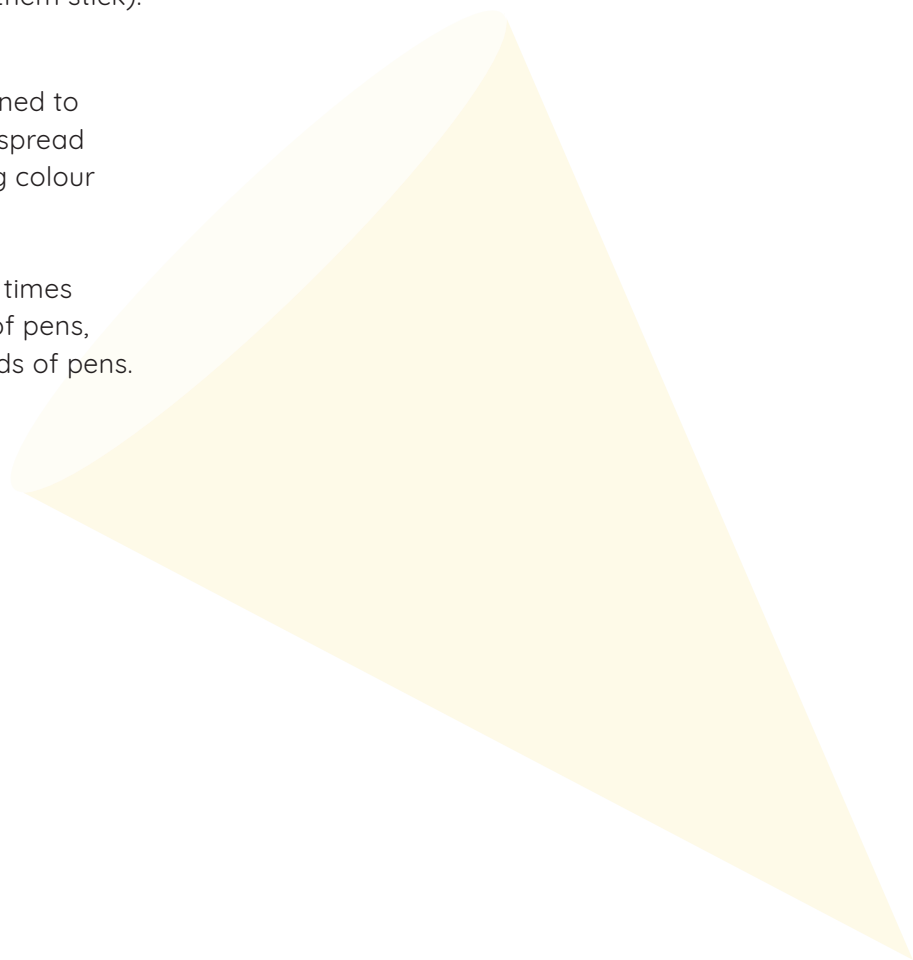
1. Taking one pen and one strip of paper at a time, make a round dot about 2cm from the bottom of one strip
2. Put a different pen-dot on each strip
3. Take note of which pen is on each strip
4. Stand the strips in the water, leaning them against the side (the water will help them stick).
5. Wait at least 15 minutes.
6. Look at your strips. What has happened to the colours? Which types of pen ink spread most easily? Are there any surprising colour combinations in your inks?

You can repeat this experiment as many times as you like, either with different colours of pens, or with similar colours but different brands of pens.

You will need:

- A selection of different pen types and colours
- A glass or tumbler each with just enough water to cover the bottom
- Kitchen roll - cut into strips roughly 5cm wide and 10cm tall

(We recommend at least 5 strips per child)



Creating colourful shadows

Science activity (20-30 minutes)

This activity uses three torches to create colourful shadows.

This activity can be done in small groups. Cover the top of each torch with clear sticky tape so that there are no gaps. Completely colour-in the sticky tape with the markers on each torch so that you have one that's red, one blue and one green per group.

In a dark room arrange the torches on a flat surface pointing at a white background. You could use a white piece of paper stuck on a wall or a box. Place the toy near the white background and turn on all the torches, placing them beside each other and shining them all towards the toy. You should see three coloured lights appear behind the toy. By moving the torches, but keeping them pointed at the toy, you can change the size and direction of the colourful shadow the toy makes.

What do you notice about the point where each colour overlaps with another one? By mixing the red, blue and green lights they mix to make white light. This is called additive colour mixing and gives a different result than mixing paint because the more light you add, the lighter the colour gets.

The additive (light) primary colours are

You will need:

- Three torches that are a similar brightness
Phone torches or finger lights will also work.
Enough for three per group.
- Sticky tape
- Red, blue and green sharpie-style markers
- A small toy or action-figure that stands up

different to when we use paint. These are red, blue and green.

Mixing red and green makes yellow.

Mixing green and blue makes cyan (which is like turquoise).

Mixing red and blue makes magenta (which is a pink-y purple).

There is a video link in the further resources section which may help.

Variation 1: You can do a whole-class exploration of this topic using three larger torches and coloured acetates in red, blue and green. One child at a time can stand in front of a white background while three children stand in front of them and shine a coloured torch at them. By moving and making shapes with their body the child at the front can make interesting shadows, just like Hue and Pop do in Prism! Swap roles so that everyone has a turn to make their own shadows.

Further resources

Books

If you would more stories about colours together we recommend these books:

Mouse Paint by Ellen Stoll

“Mouse Paint” is a lighthearted introduction to color concepts for young children. (Houghton Mifflin)

Mixed by Arree Chung

The Blues, Reds and Yellows lived in harmony. However when one of the colours proclaims they are the best, discord breaks out and eventually the colours decide to live in different parts of the city. (MacMillan Children’s books)

Illuminature by Rachel Williams

Explore ten of the world’s most diverse environments and reveal their hidden secrets with a magic coloured lens that illuminates each page in a kaleidoscope of colour. (Wide Eyed Editions)

Online resources

Here are some online resources you might enjoy together too.

Colour Mixing Sensory Bags

Play with colour mixing without getting paint everywhere!

<https://www.learning4kids.net/2015/08/25/primary-colours-squishy-bag-experiment>

Roy G Biv, They Might Be Giants

A fun science song about the spectrum of colours

https://www.youtube.com/watch?time_continue=3&v=Gf33ueRXMzQ&feature=emb_logo

Three torches video

A video explanation to support the Coloured Shadows activity

<https://www.youtube.com/watch?v=u5DW6wJT3b8>

Draw your favourite moment from the show here!





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**SCOTTISH
THEATRE
PRODUCERS**



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