

COLOURFUL COLOUR SPINNERS

What you will need

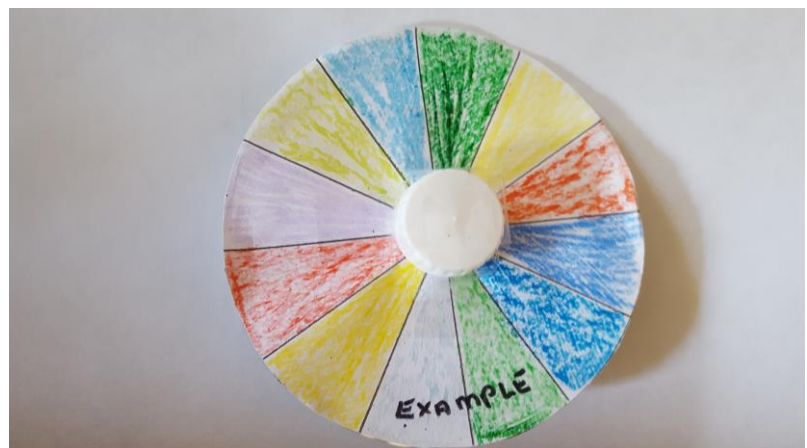
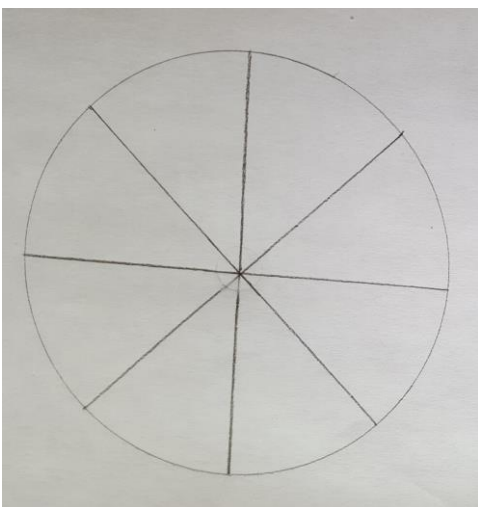
- A blank piece of white or card
- A ruler
- An old CD or DVD
- Pencil
- Coloured pencils, felt tips or wax crayons
- A marble
- A bottle top
- Sticky tape or glue
- Scissors

Health and Safety

- Take care when you are using scissors. Get an adult to help you.
- Make sure the glue is safe to use. Ask an adult for advice.

Instructions

1. Place the CD on the paper or card, draw around it and then cut out the circle.
2. Using the ruler, mark out equal sized sections on your circle as in the picture; you can make more sections if you like).
3. Colour in each section. It is often a good idea to repeat the blocks as in the example.



4. Using sticky tape loops (to end up with sticky on both sides) or glue, stick the coloured circle to the CD. This is now the TOP of the CD. You can use double sided sticky tape if you have it.

5. You can cut a hole in the centre of the circle (as shown in the video) if you want but this is not necessary.
6. Tape or glue a bottle top to the coloured circle to cover the hole in the CD (see example above). Try and make it as central as you can.
7. Put the marble into the hole underneath and tape or glue it to the bottom of the CD (see the picture below). If you are using glue make sure it is completely dry first before doing the next step.



8. Spin your CD as fast as you can and see what happens.



Colours

If you create a disc that has three equal sections of the primary colours (red, yellow and blue) you should see secondary colours: purple, green, and orange.

If you have used felt tips the colours may be quite strong. Experiment with softer coloured pencils or wax crayons and see if it makes a difference to the colours that you see when you spin your CD.

What is it all about?

You are obviously not actually mixing the colours together but when the disc is spinning fast enough, your eyes cannot see each individual colour. Instead, they combine the colours allowing your brain to see mixed colours. This is called persistence of vision. Experiment with different colour combinations and see what you come up with.

Persistence of vision is used in many different products. The one you probably are most familiar with is the television. If your eyes did not naturally blend fast moving images together, you would not be able to watch your programmes.