



Make your own Benham's Top

Benham's Top or Benham's disk is named after the toymaker who popularised them in the 1800s. To make your own, you will need:

- A printer
- Printer paper
- Thin card (cereal packets work well)
- Scissors
- Glue Stick
- A sharp pin or needle (and adult help)
- Wooden toothpick
- Blue tac
- Optional- straws

How to

- 1) Print out the attached page- (if you have thin card that goes in the printer, you can print directly onto it and skip step 3).
- 2) Carefully cut out one of the disks.
- 3) Glue onto your thin card & cut around the disk again. This can be a bit tricky, so ask an adult if you need help.
- 4) Ask an adult to make a small hole in the centre of the circle with a pin.
- 5) Poke a wooden toothpick through the hole, so about 1/3 is below the disk and 2/3 sticking out the top. Be careful- the ends of toothpicks can be sharp!



- 6) Use blobs of blue tac above and below the hole to hold the toothpick in place.



- 7) Hold the toothpick at the top, and give your spinner a twirl, and release.
8) Optional: cut a short piece of straw and slide it over the top of the tooth pic- there should still be some toothpick sticking out the top.
9) To stop it falling over, hold the piece of straw gently- the toothpick should spin within it, twirling the disk with it.
10) Look at the black-and-white disk as it spins. Can you see any colours appearing? Ask someone else what colours they see- are they the same as yours?



The Science

No-one knows exactly why we see colours when certain black-and-white patterns move quickly, but it is thought to be something to do with the speed at which the colour-sensitive cells in our eyes respond. We also don't know why different people see different colours when looking at this illusion!

