

3D Snowflake

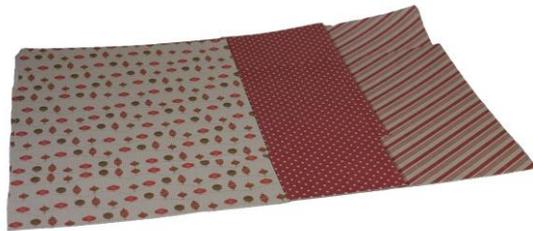
Make your own unique snowflake out of coloured paper.

What you need

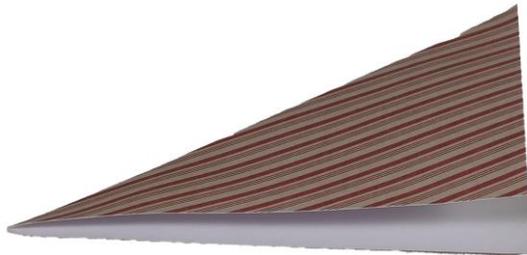
• Coloured paper • Ruler • Scissors • Pencil • Sellotape/glue • Thread



- 1.** Measure and cut out six identical squares of paper 10cm by 10cm.



- 2. Make an arm (6x).**
Take a square and fold it in half, corner to corner, diagonally to form a triangle.



- 3.** Take your triangle and fold it in half again to make a smaller triangle.



- 4.** Make 3 equally spaced vertical cuts in the short side of the triangle, parallel to the long side. Do not cut all the way to the end of the paper.



- 5.** Unfold the paper and rotate so that you have a diamond shape with a point at the top and bottom.



- 6.** Lay a pencil over middle of the paper and bring the innermost flaps together over the pencil, into the middle and tape/glue in place.



7. Flip the paper over and bring the second flap over into the middle and join (opposite side to 1st fold in step 6).



8. Flip the paper over and bring the third flap around and into middle above 1st fold of step 6 and join.



9. Flip the paper over and bring the outside edges up and over into the middle above the fold of step 7 and join. You have now made an arm.



10. **Tape the six arms together to form a snowflake.** Attach two arms together by taping /gluing at the base and where arms touch at the mid-point. Work round until all six arms are joined in one piece.



The Science

Snowflakes are formed when water vapour freezes to dust or other matter in clouds. Each snowflake can have 100,000 water vapour molecules, so it is probably true that each design is unique. All snowflakes have six sides. Snowflakes are not frozen rain drops; frozen rain is called sleet. Snowflakes only form when water vapour freezes, this happened inside the clouds. Water vapour inside the cloud freezes and comes together to form an ice particle, more water vapour in the cloud collects onto the ice particle, causing it to stretch into a basic hexagonal prism. Eventually branch's form (arms) to create the complex shape of each snowflake. Snowflakes come in six different styles: plate (flat), stars, dendrites, lacy, needle and columns (these sometimes can be capped). When the temperature is extremely cold, the snow is fine and powdery, the snowflake shapes tend to be needle or rod-shaped columns with simple designs. At about freezing point (0°C) snowflakes are much larger and variable in style and have a more complex design.

