PAPER SCIENCE EXPERIMENTS

Cut, stick, play and learn!

Science Sparks

[Image of a clipboard with a paper clip, scissors, and glue bottle]
What's in the pack?

1. Paper Spinners
   Scissors
   Paperclips

2. Magic Opening Flowers
   Scissors
   Container of water

3. Shadow Puppet
   Scissors
   Torch

4. How Strong
   Glue/tape
   Books

5. Liquid races
   3 different liquids, ketchup, syrup, water etc

6. Water Drop Maze
   Water

Adult supervision required. You are responsible for your own safety.
www.sciencesparks.com
Supplies needed:
Scissors
Paperclip

Instructions
Carefully cut out the three rectangle shapes above. Cut down the scissor lines and fasten the two ends together with a paperclip.

More fun
Experiment with bigger and smaller spinners and different types of paper.
Supplies needed:
Scissors
Container of water

Instructions
Carefully cut around the large flower.
Fold up the petals.
Place on the surface of the water and watch as the petals open!

What's happening?
Paper is made of lots of fibres, as they absorb the water they swell and the paper expands, which makes the flower open up.
Shadow Puppet

Supplies needed:
Scissors
Torch

Instructions
Carefully cut around the hand.
In a dark room hold the torch behind the shadow puppet.

What's happening?
Shadows are made when an object blocks light. The object blocking the light must be opaque or translucent for a shadow to form.
How Strong?

Build a square, triangle and circular column. Stand them upright and add books one by one to the top of each until they collapse.

Square Column

Cut along here

Fold here

Fold here

Fold here

G L U E / T A P E H E R E

Cut along here
How Strong?
Triangle Column

Cut along here

Fold here

Fold here

GLUE / TAPE HERE

Cut along here

Fold, glue or tape and stack books on top
What's happening?
You should find the circular column can hold the most weight. This is because it doesn’t have any edges so the weight of the books is shared evenly by the circle.

The square and triangle support the books on their edges and corners meaning they collapse sooner.
Liquid Races

Instructions
Fold the paper along the line to make a ramp.
Choose three different liquids (ketchup, water, syrup etc.). Place a drop of each in a separate circle and watch to see which reaches the finish line first!!

Thicker (more viscous) liquids move more slowly!

START

FINISH

THE WINNER IS...............

Fold here
Water Drop Maze

Instructions
Place a drop of water at the start point and rotate the paper to move the water through the maze towards the plant!

More ideas
Try with a thicker liquid, is it easier?