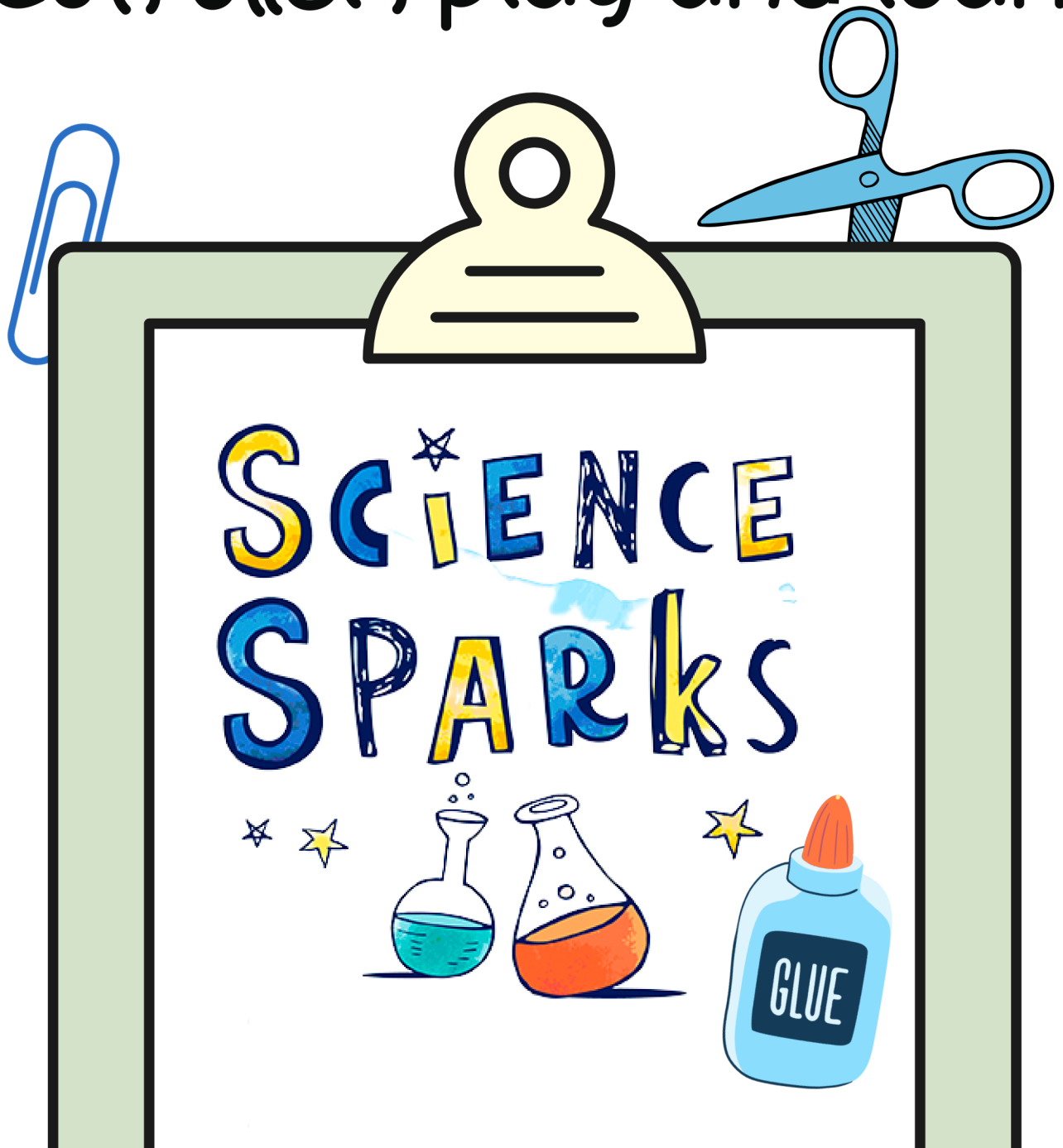


PAPER SCIENCE EXPERIMENTS

Cut, stick, play and learn!

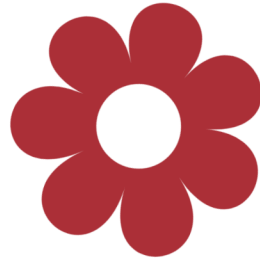


What's in the pack?

1. Paper Spinners

Scissors

Paperclips



2. Magic Opening Flowers

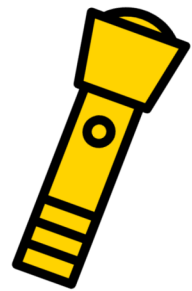
Scissors

Container of water

3. Shadow Puppet

Scissors

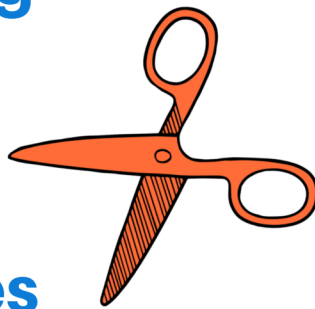
Torch



4. How Strong

Glue/tape

Books



5. Liquid races

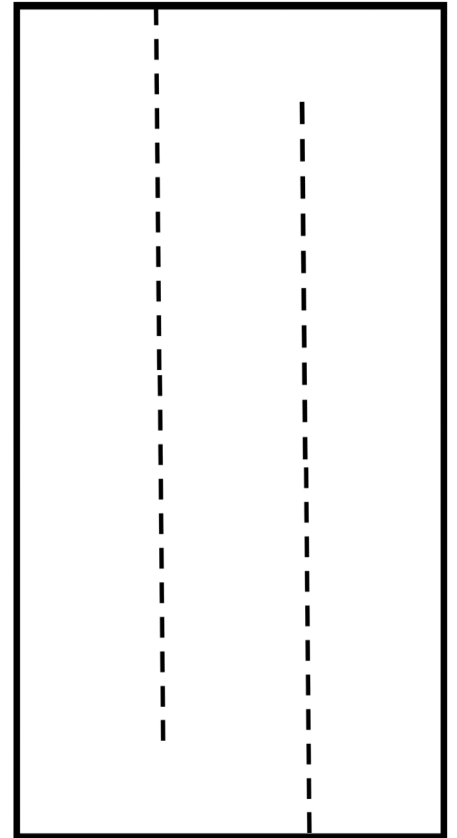
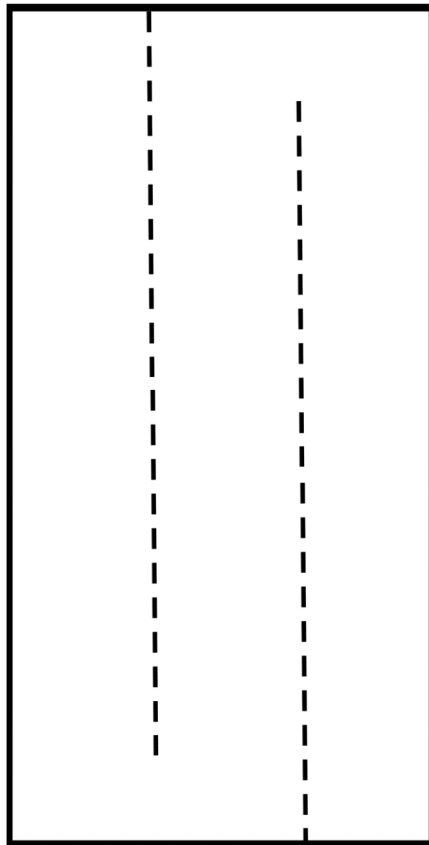
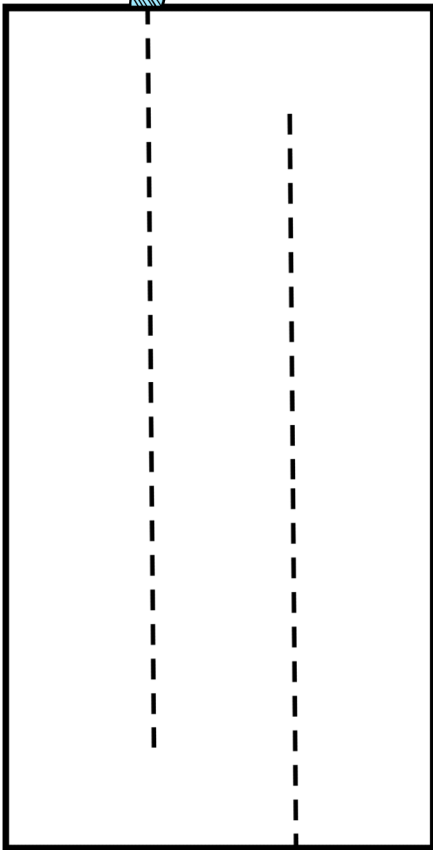
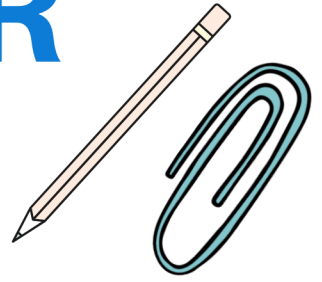
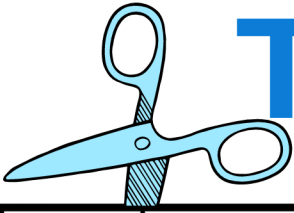
3 different liquids, ketchup, syrup, water etc

6. Water Drop Maze

Water

Adult supervision required. You are responsible for your own safety.
www.sciencesparks.com

PAPER SPINNER TEMPLATE



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.

MAGIC OPENING

FLOWER



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

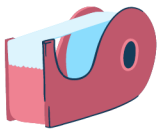
Carefully cut around the hand.

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

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

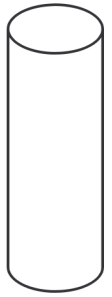
Cut along here

Fold, glue or tape and
stack books on top



How Strong?

Circular Column



Cut along here

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

Cut along here

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.

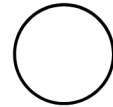
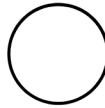
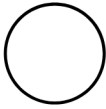
Choose three different liquids (ketchup, water, syrup etc). Place a drop of each in a separate circle and watch to see which reaches the finish line first!!



Thicker (more viscous) liquids move more slowly!

Fold here

START



FINISH



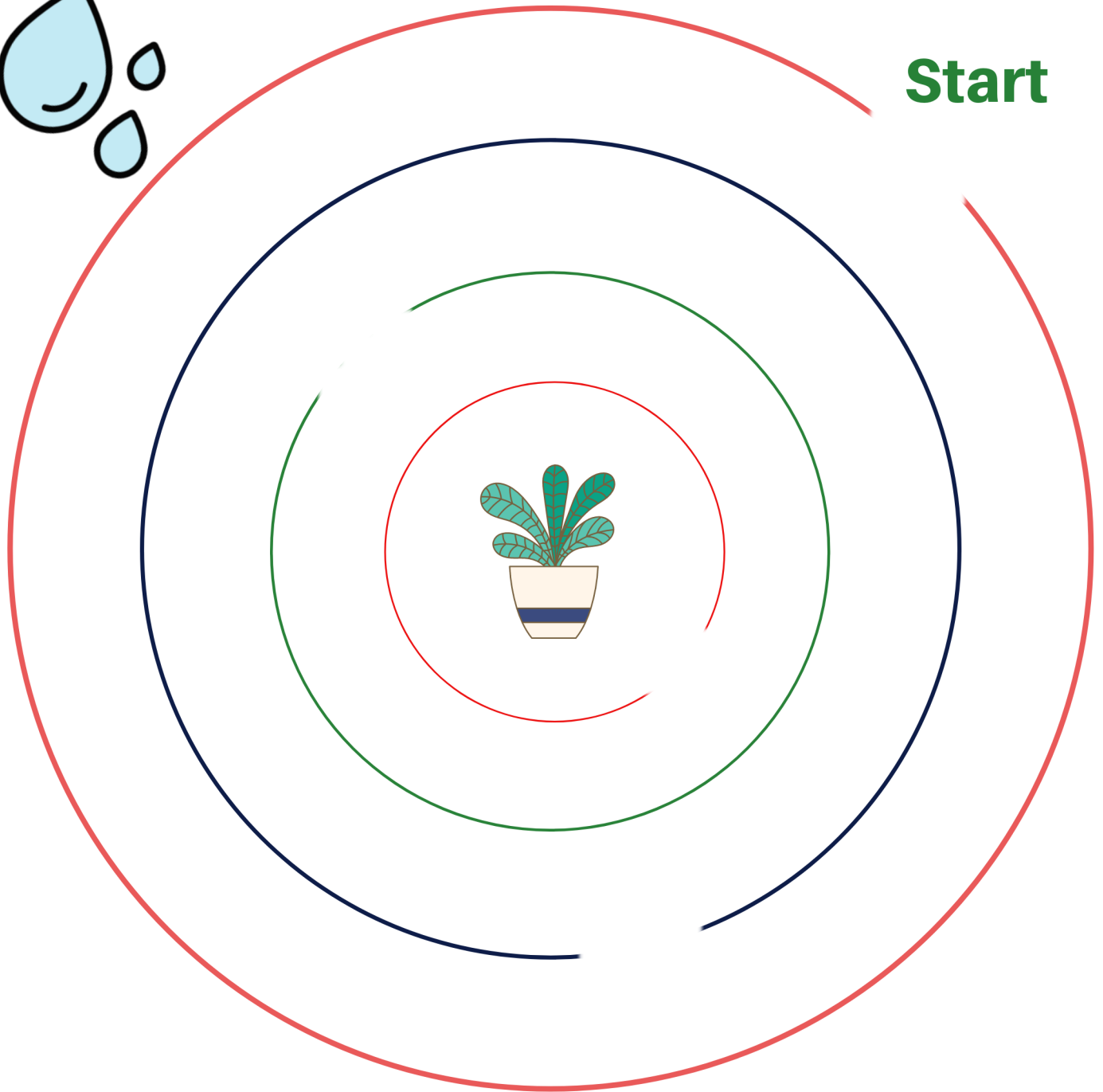
THE WINNER IS.....



Water Drop Maze



Start



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?