


SCIENCE SPARKS



EGG EXPERIMENTS



Emma Vanstone

EGG PARACHUTE

You'll need

Bin bag/plastic sheet/paper or other flat material.

4 pieces of string
sellotape or masking tape

2 eggs (boiled or chocolate)



Instructions

Lay the bin bag out flat and cut out a large square.

Make a hole in each corner, thread a piece of string through the hole and tie a knot.

Tie all 4 pieces of string together and sellotape the egg to the bottom

Extension Ideas

Create a basket for the egg to sit in.

Experiment with different materials for the parachute.

Try dropping the parachute from different heights.

A egg dropped without anything to slow it down will fall fast and smash. The parachute adds air resistance which slows the fall of the egg, hopefully stopping it from breaking as it hits the ground.

Science Sparks™

Adult supervision required. You are responsible for your own safety.

www.sciencesparks.com



TOOTH DECAY

EGG EXPERIMENT

You'll need

Eggs
Container
Water
Teal/Coffee
Fizzy flavoured drink
Vinegar
Toothpaste



Instructions

Pour the same amount of fizzy drink, vinegar, water and tea or coffee into your containers.

Add a whole raw egg still in it's shell to each container.

Leave for approximately two day.

Remove the eggs and record how their appearance has changed.

Rinse the egg kept in vinegar and rub gently until the shell comes away.

Why does this happen?

Egg shell is made from a similar substance to the enamel on our teeth.

Tea is rich in tannins which stain teeth if they're not cleaned properly.

Cola and fizzy drinks are acidic as well as containing staining products.

Vinegar (which is acidic) dissolves the calcium carbonate in the egg shell, allowing it to be washed away. You should find just the membrane of the egg is left behind as the egg shell is dissolved.

Imagine if that was your tooth!

Challenge

Cover half an egg with toothpaste before placing it in the coffee or fizzy drink. Does the toothpaste protect the egg?



Science Sparks™

Adult supervision required. You are responsible for your own safety.

www.sciencesparks.com



EGG ZIP LINE

You'll need

String/rope

Pipe cleaners

Plastic eggs/chocolate eggs/boiled eggs

Timer



Instructions

Tie the string or rope between two points, one higher than the other.

Use the pipe cleaner to create a simple harness for the egg.

Time how long the egg takes to travel down the zip line.

Experiment with different size eggs, different types of string or rope and by changing the incline of the zip line.

REMEMBER - only change one variable at a time

Extension Ideas

Build two zip lines and have an egg race!

Experiment with different types of egg harness.



Science Sparks™

Adult supervision required. You are responsible for your own safety.

www.sciencesparks.com



CRASH TEST EGGS

You'll need

Egg - boiled is less messy
Construction materials
Elastic bands
Cotton Wool
Bubble Wrap
Test track area



Instructions

Design and build a vehicle to protect a boiled egg.
Add protective materials: bubble wrap, cotton wool, paper etc.
Try an air bag, a balloon might work for this.
Can you add some suspension?

Test your car!

Extension Ideas

Try a different method of protecting the egg and design a test to investigate which method of protecting the eggs works the best.

Does your solution still work if you release the car down a ramp?

Science Sparks™

Adult supervision required. You are responsible for your own safety.

www.sciencesparks.com



ROLLING EGGS

You'll need

Egg - boiled is less messy

Timer

Pen or pencil

Materials to wrap around the egg -

bubble wrap, cotton wool,

cardboard etc

Ramp



Instructions

Draw a start line near the top or your ramp and a finish line near the bottom.

Wrap an egg in one of your test materials and time how long it takes to travel between the start and finish lines of the ramp.

Repeat for each test material and record the time.

Extension Ideas

Try covering the ramp with different materials instead of wrapping the egg. Are the results the same? Which material slows the egg down the most?

Top Tip - think about friction!

Science Sparks™

Adult supervision required. You are responsible for your own safety.

www.sciencesparks.com

