



SCIENCE



SCIENCE WORKSHOP OVERVIEW

Heart Beats

Start with them learning how to measure their pulse, and counting it at rest for 15 seconds.

Why do our hearts beat?

Our blood contains oxygen and the more our cells work the more they need.

Why do our hearts beat faster when we exercise?

We do some exercise to raise the heart rate and measure it again, talking about how our cells are crying out for oxygen so we breathe harder too.

Marshmallow catapults



I think its easier to see the image than try to describe how to make it. It's been great making a target, a bucket or even a human mouth to try and aim them into.

We talk about what catapults are, how different elastic bands can change the force to firing, and tweak the designs based on how well they work. These are exercises in engineering.

Milk in a saucer

Add a drop of each colour and talk about how the drops stay where they are. Now place a drop of washing up liquid in the middle of the milk – using a Q-tip or a rolled up paper towel to hold the washing up liquid helps. Watch how the colours mix and talk about surface energy and how washing up liquid breaks up fat, which milk has and dirty dishes have which is why we use it to clean things.

Can you put a skewer in a Balloon without it bursting?

Two ways to do this, one place a piece of tape on the top of the balloon (where the nipple bit is), and poke the skewer through the tape, the tape holds the hole together so it can't grow. A growing hole is what bursts the balloon.

Way 2 is to blow the balloon up only half way and gently put the skewer through the bottom, close to where the knot is tied. Balloons have big stress in the middle where its stretched the most and not so much stress at the top and the bottom which is why this works.