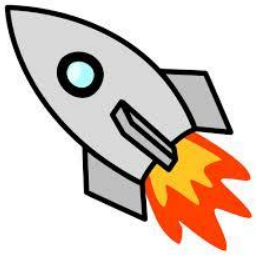
Scientist Name: _____

Today Science Club are going to be ..... _____



ROCKET SCIENTISTS!

We are going to make our own rockets & launch them.

Forces:

A force is either a **PUSH** or a **PULL**. You can't see forces but you see their effects, something speeding up, slowing down or changing shape. Common forces include **magnetics, friction, gravity** and **air resistance**, we will look at the last two.

Forces are measured in Newtons (N).

Air resistance slows down moving objects.To travel faster through air things need to be streamlined.

Gravity is a force you may have heard of; it **PULLS** things down to the centre of the Earth. It is why we don't fall off the Earth.

Why do spacemen float on the moon?_____

_____

Air resistance and gravity will act on our rockets. How?_____

_____

Experiments:

We will be trying a range of rocket experiments, each working in a different way with a different amount of THRUST:

1) **air rockets**
2) **matchstick rockets**
3) **chemical rockets and**
4) **explosive ones!**

Note to parents: If you want to try the matchstick rockets at home, use foil/bamboo skewers & goto: **http://youtu.be/WFyKgmnCF-8**. Any questions please email: HassellScienceClub@gmail.com

Forces Quiz

1. If you roll a **ball** across the carpet, **which forces** will cause it to **slow down and then stop**?
    a. The push from your hand and gravity?
    b. Magnetic pull and upthrust?
    c. Gravity, friction and air resistance?
    d. Upthrust and air resistance?
2. Which of the following is **not a force**?
    a. Electricity
    b. Gravity
    c. Upthrust
    d. Friction
3. Which of these would **not** be a result of **applying force** to a material?
    a. The material is stretched?
    b. The material is compressed?
    c. The material is twisted?
    d. The material is changed into a new material?
4. Which forces are acting on a child who is going down a slide?
    a. Gravity, air resistance and friction
    b. Gravity, air resistance and water resistance
    c. Gravity, magnetism and friction
    d. Gravity only
5. Catapults are designed to provide a push which will be stronger than the force of gravity. The object which is being catapulted should be aerodynamic to minimise which force?
    a. Air resistance
    b. Upthrust
    c. Magnetism
    d. All of the above