



Welcome to Bishop Vesey

# What is Science?





What do you notice about this picture?

Which gas do you think was in the  
airship?

# Why did this happen?



Have you changed your mind on the gas you predicted it contained? Why?

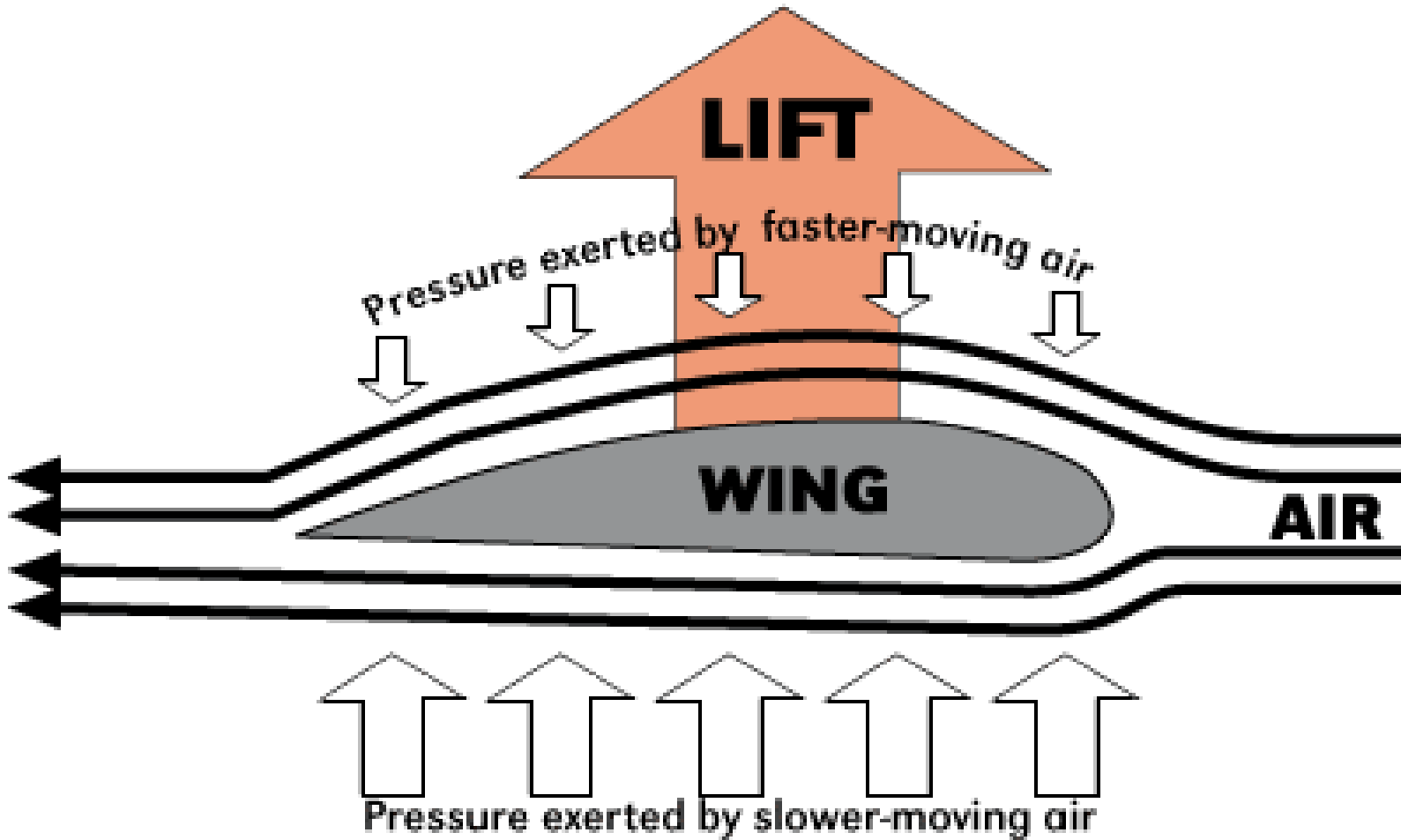
# What causes things to fly?

- Things move because of \_\_\_\_\_ acting on them .
- One force is known as \_\_\_\_\_.
- Examples of things which generate this are
- Anagrams
- SWING
- PRPOORSELL
- HERTPOLICE STOORR

# What causes things to fly?

- Things fly because of **F O R C E S** acting on them.
- This is known as **L I F T**
- Examples of things which generate this are
- Anagrams
- **WINGS**
- **PROPELLORS**
- **HELICOPTER ROTORS**

# Lift.



# Investigation time





# Investigation time

You will need

**A wooden skewer**

(Some Blu tack or Play-Doh to make the sharp end safe!)

**Some card**

(A4 cut lengthways and widthways works well with a width of 50 mm)

**Scissors**

**Glue/sellotape**



# Factors or variables?

- **Independent Variable** – The thing we will change.  
Number of hoops? Hoops at top or bottom? Size of hoops? Width of hoops?
- **Dependent Variable** - The thing we measure.  
Distance (M) – How far does your Hoopster fly?
- **Control variables** – things which are kept the same.  
(same force of throw, same skewer, same mass of play doh, same amount of cellotape)

# Investigation time

You will need



A wooden skewer/non bendy  
plastic straw

(Some blue tac or play doh to make the sharp end safe)

Some paper or card

(A4 cut lengthways and widthways works well with a  
width of 25-50 mm)

Scissors

Glue/sellotape

# Method

- Cut the card or stiff paper into 3 separate pieces that measure 1 inch (2.5 cm) by 5 inches (13 cm.)
- Take 2 of the pieces of paper and tape them together into a. Be sure to overlap the pieces about 1 cm so that they keep a nice round shape once taped.
- Use the last strip of paper to make a smaller hoop, overlapping the edges a bit like before.
- Tape the paper loops to the ends of the straw as shown below. (notice that the straw is lined up on the inside of the loops)
- That's it! Now hold the straw in the middle with the hoops on top and throw it in the air similar to how you might throw a dart angled slightly up.

Youtube link for extra help if needed -

<https://www.youtube.com/watch?v=krFEUOvJcwA>

# Extension tasks

- Put a paper clip at the bottom of the small hoop. How does this effect the flight?
- Make a really long Hoopster with two straws: cut a little slit at the end of one straw and pinch it so it fits inside the other straw, then tape them together. How does this effect the flight?
- Make a double Hoopster with two little hoops side-by-side on one end and two big hoops side-by-side on the other end. How does this effect the flight?

# How did you get on?

- We hope you enjoyed making and flying your hoopsters.
- Have a lovely summer.
- Stay safe.
- See you in September!