


Mini Science project - Spring 1 DUE 23.02.23

Here are 3 experiments linked to our science topic 'Forces'. You can either choose 1 to do or try all 3.

Activity: Helicopters (WS)				
Equipment: Helicopter template, broom handle, Stopwatch, Paper clips, Black Marker				
<p>Cut out the template and fold as instructed. Colour one of the rotors with the marker. Using the broom handle, hoist the helicopter high into the air. Starting the stopwatch at the same time, pull the ruler away and observe the helicopter descend. Record the time it takes to reach the ground. You could count the number of revolutions the helicopter makes before it lands.</p>				
Size of Helicopter	Time(s)			
	Attempt 1	Attempt 2	Attempt 3	Average
Small				
Medium				
Large				

Science Questions


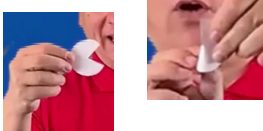

How is air resistance measured in this experiment?
 Is there a relationship between the size of a falling object and the air resistance shown?
 Did mass of the helicopter change the rate of descent?



Activity: Straw Rockets (WS)				
Equipment: Paper, Straws, Scissors, Sticky Tape, Ruler				
<ol style="list-style-type: none"> 1. Make straw rocket; you will need to make a square 12cm by 12cm, 3 triangles 2.5cm by 5cm and a circle. 2. Take a pencil and roll the paper into a cylinder shape, make sure it is really tight around the pencil. Make sure its taped really tight. Remove it from the pencil. Fold one end, this is where the cone will be. Test it is air tight. 3. Take the circle (one part cut out) and fold to make a cone. Then tighten the cone around a finger to get the best shape. Test it against the rocket, if you need to, cut off some of the bottom. You need the tip to be as aerodynamic as possible. Once it is ready tightly stick it on with tape. <p>* Now to launch the rocket; bend one end of the straw, place the straw into the rocket and blow.</p> <p>* You can also add the fins step by step to see the changes in distance.</p>				
Number of Fins	Distance (m)			
	Attempt			
	1	2	3	Average
0				
1				
2				
3				
4				

Science Questions

Which shape of rocket was best for distance i.e. which shape was most aerodynamic?
 What was the ideal number of fins for the rocket?

Activity: Balloon Powered Cars (WS)

Equipment: Sticky Tape, Straws, Balloons, Bottle Caps, Bamboo Skewers, Cardboard, Paper, Foil, different surfaces



Once you've made your car. Chose which surfaces you want to check and write them into the chart.

Then measure how far the car travels across each surface.

Surface	Distance (m)		
	Attempt 1	Attempt 2	Attempt 3

Science Questions

- Which was the roughest surface you tested? How do you know this?
- Did mass affect how far the car travelled?
- How could you make the car travel further?