



## St Paul's C of E Primary School – Knowledge Organiser

Name of Topic

Forces in Action

Year Group

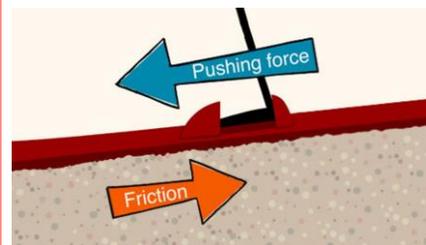
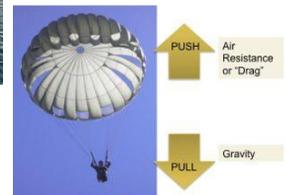
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### Key Vocabulary and Spellings

|    |                  |   |
|----|------------------|---|
| 1  | gravity          | The force that pulls things to the centre of Earth (and other planets.)   |
| 2  | friction         | A force between 2 surfaces that are sliding, or trying to slide, across each other                                  |
| 3  | Air resistance   | A friction force that occurs between air and another object.  |
| 4  | Water resistance | A friction force that slows things down in water, sometimes called drag.  |
| 5  | streamlined      | An object that is shaped to travel through air or water with as little resistance as possible.                      |
| 6  | forcemeter       | A piece of equipment used to measure the forces acting on an object. Also known as a Newtonmeter or spring balance. |
| 7  | variables        | An element of a test that can be changed, sometimes called factors.   |
| 8  | analyse          | To study closely, examine and explain.  |
| 9  | Upthrust         | An upward force.  |
| 10 | force            | A push or a pull that can move an object, speed up, slow down or change the direction of something.                 |

### Top 5 Topic Facts

|   |  |
|---|--|
| 1 | 1 Newton is equal to approx. 100g in weight.   |
| 2 | Leonardo da Vinci was the first person to study friction systematically, over 500 years ago.         |
| 3 | Friction can generate static electricity   |
| 4 | When forces are unbalanced an object will move, change direction, speed up or slow down.             |
| 5 | The Black Marlin- the fastest fish, can reach a maximum speed: 129km/h, due to its streamlined body. |



### Key Investigations/Questions

|   |   |
|---|---|
| 1 | How can we modify surfaces to reduce and increase friction?           |
| 2 | Which shapes create the least water resistance?                       |
| 3 | What variables can be changed to create the most effective parachute? |