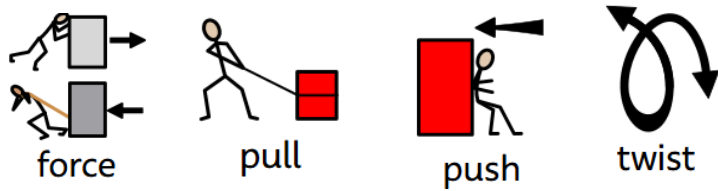


Science Knowledge Organiser: Forces

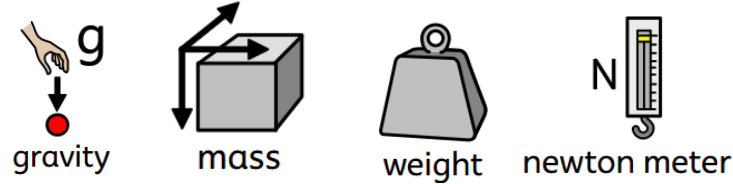
Lesson One: What are forces

- Forces are pushes, pulls, or twists.
- Forces can cause an object to start moving or change its speed.
- Forces can change the direction of an object.
- Forces can change the shape of an object.



Lesson Two: What is gravity?

- Gravity is the force that pulls objects towards each other.
- Gravity keeps the planets in orbit around the Sun.
- Gravity has always existed but was officially discovered and described by Isaac Newton.
- Weight is the force of gravity on an object and is measured in newtons.



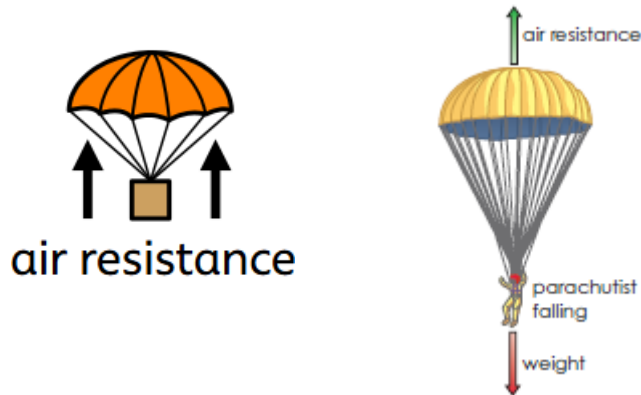
Lesson Three: What is friction?

- The force of friction acts when two objects rub against each other.
- Friction produces heat.
- Friction always slows something down.
- Sometimes friction is useful and other times it is not useful.



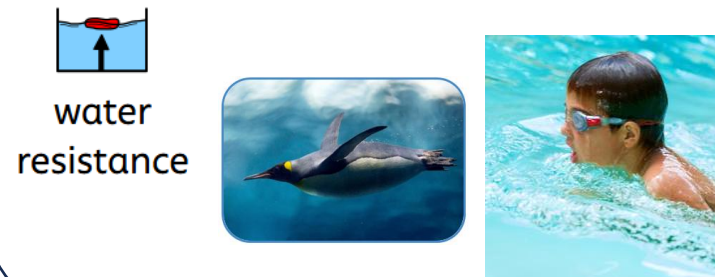
Lesson Four: What is air resistance?

- Air resistance is a type of friction that acts on objects moving through air.
- Air resistance slows down moving objects.



Lesson Five: What is water resistance?

- Water resistance is a type of friction that acts on objects moving through water.
- Water resistance slows down moving objects.
- Streamlining reduces the effects of water resistance.



Lesson Six: What can simple machine do to forces?

- Levers, pulleys, and gears are all simple machines.
- Simple machines can make forces bigger.
- Simple machines can change the direction of forces.

