



Mechanical Systems

In Year 3 we designed and made pneumatic toys



In Year 3 we:

- 1) Understood that exploded-diagrams are used to show how different parts of a product fit together.
- 2) Developed design criteria from a design brief.
- 3) Understood that pneumatic systems operate by drawing in, releasing and compressing air.
- 4) Understood what a pneumatic system is and that it can be used as part of a mechanism.
- 6) Used syringes and balloons to create pneumatic systems.
- 7) Used the views of others to improve designs, testing and modifying suggested improvements.

Key vocabulary from Year 3:

Exploded diagram = a diagram which shows all of the parts of a product, including the internal and external parts

Function = how something works

Motion = the movement an object makes when controlled by an input or output (see year 2 vocabulary)

Pneumatic system = a mechanism that runs on air or compressed gas

Net = a 2D flat shape that can become a 3D once assembled

Mechanical Systems

In Year 4 we will design and make slingshot cars.



In Year 4 we will:

1) Understand that kinetic energy is the energy that something (object/person) has by being in motion.

2) Understand that air resistance is the level of drag on an object as it is forced through the air.

3) Draw a net to create a structure.

4) Personalise a design.

5) Use measuring, marking and cutting to assemble our cars.

6) Evaluate our final product looking at speed and distance travelled.

Vocabulary which will be new in Year 4:

Mechanism = the parts of an object that move together as part of a machine.

Aesthetic = how an object or product looks.

Design criteria = a set of rules to help designers focus their ideas and test the success of them

Function = the purpose of an object or how an object works.

Chassis = the body of a car.

Kinetic energy = the energy that causes an object to move.

Air resistance = the level of drag on an object as it is forced through the air.