



## DT Knowledge Organiser—Year 3/4 (Autumn Term)

**Key enquiry Question:** *What is kinetic energy and which toys use it?*

*Investigate, design and make a slingshot car*

What children must know and remember:

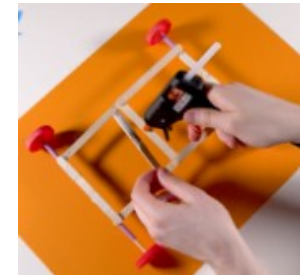
### Key Vocabulary:

- Chassis
- Net
- Kinetic energy
- Energy
- Air resistance
- Net
- Increase/decrease speed

### Key Knowledge:

- Know that kinetic energy is the energy that something has by being in motion
- Know that car designs have developed over many years
- Know that a chassis is the frame of a car on which everything else is built
- Know that all moving things have kinetic energy
- Know how to design a suitable car body to cover a chassis
- Know how to draw a net to create a structure
- Know which shapes increase or decrease the speed of the car as a result of air resistance
- Know that adding graphics will personalise a design

### Chassis



### Frame





## DT Knowledge Organiser—Year 3/4 (Spring Term)

### Cycle B

**Key enquiry Question:** *How do torches work?*

*Investigate, design and make a torch.*

What children must know and remember:

#### Key Vocabulary:

- Conductor
- Insulator
- Switch
- Static
- Attraction
- Repulsion
- Target audience
- Constructive criticism
- Justify
- Circuit

#### Key Knowledge:

- To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens.
- To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.
- To know that electrical conductors are materials which electricity can pass through
- To know that electrical insulators are materials which electricity cannot pass through
- To know that a battery contains stored electricity that can be used to power products
- To know that an electrical circuit must be complete for electricity to flow
- To know that a switch can be used to complete and break an electrical circuit

#### Circuit





## DT Knowledge Organiser—Year 3/4 (Summer Term)

### Cycle B

**Key enquiry Question:** *Where do my fruit and vegetables come from?*

*Investigate, design and make a seasonal tart*

What children must know and remember:

#### Key Vocabulary:

- Climate
- Imported
- Environment
- Seasonal
- Savoury
- Bake
- Grate
- Environmental impact

#### Key Knowledge:

- To know that not all fruits and vegetables can be grown in the UK in certain seasons.
- To know that climate affects food growth.
- To know that cooking instructions are known as a 'recipe'.
- To know that imported food is food which has been brought into the country.
- To know that exported food is food which has been sent to another country.
- To know that imported foods travel from far away and this can negatively impact the environment.
- To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre.
- To know that vitamins, minerals and fibre are important for energy, growth and maintaining health.
- To know safety rules for using, storing and cleaning a knife safely.
- To know that similar coloured fruits and vegetables often have similar nutritional benefits.

#### Imported/Exported

