

# Year 6 Knowledge Organisers



# Key concepts covered: Outdoor and Adventure (OAA)

## Key Knowledge

### Motor competence

- Increasing stamina

**Stamina-** *the ability to sustain prolonged physical or mental effort.*

- Improving running and efficiency



### Rules, Strategies and Tactics

**Problem solving:** To know that solving problems is an important life skill.

**Navigational skills:** to know that having good navigational skills are important.

**Communication:** know that good communication skills are key to solving problems and working effectively as a team.

**Rules:** understand the rules and think creatively to solve the challenge whilst abiding by the rules

### Healthy participation

Team building games are a great tool for helping you work together, listen carefully, communicate clearly and think creatively through challenges.

As a class you will get to know each other better, build trust and develop vital life skills.

Not only will you be completing physical activities, these skills can be transferred in different areas of life. Can you think where you might use them?

### Key Vocabulary

- Boundaries
- Location
- Critical thinking
- Symbol
- Co- operation
- Strategy



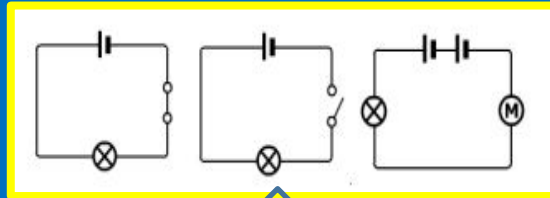
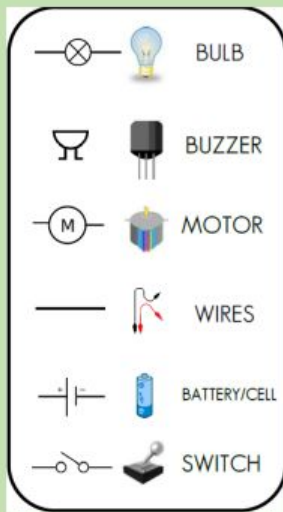


## Key knowledge

### How does a circuit work?

In a series circuit all the components are joined together and the electricity can only flow in one direction - You must learn the different symbols for the different components. Switches can be used to open and close circuits. However, a circuit will not work properly if:

- the cells aren't connected correctly
- a component isn't working or there's no bulb
- the circuit has gaps
- one of the components acts as an insulator.



## Series circuit

### Key concepts

- Components connected in series are connected along a single conductive path.
- The same current flows through all of the components; voltage is dropped (lost) across each element that is added to a circuit such as a bulb or buzzer.
- In a series circuit, every device must function for the circuit to be complete. If one bulb burns out in a series circuit the entire circuit is broken.

### Key vocabulary

electricity	a form of energy that can be carried by <b>wires</b> and is used for heating and lighting, and to provide power for devices.
bulb	the glass part of an electric lamp, which gives out light when <b>electricity</b> passes through it.
battery	a container of one or more <b>cells</b> in which chemical energy is converted into electrical energy and used as a source of power.
buzzer	an electrical device that is used to make a buzzing sound.
cells	a single unit used for converting chemical or solar energy into <b>electricity</b> .
circuit	a complete path which an electric <b>current</b> can flow around.
switch	a small control for an electrical device which you use to turn the device on or off.
wires	a long thin piece of metal that is used to fasten things or to carry electric <b>current</b> .
motor	a device that uses <b>electricity</b> or fuel to produce movement.
conductors	a substance that heat or <b>electricity</b> can pass through or along.
insulators	a non-conductor of <b>electricity</b> or heat.
amps	the measurement of how much <b>electricity</b> is flowing through a <b>circuit</b> measured using an Ammeter.
volts	a unit of electrical force.
component	the parts that something is made of.
current	a flow of <b>electricity</b> through a <b>wire</b> or <b>circuit</b> .
energy	the power from sources such as <b>electricity</b> that makes machines work or provides heat.



Stafford Leys  
Primary School

# Knowledge organiser for Tag by

*Inspiring confidence, compassion, character and fun*



## Rules, strategies and tactics

Tag rugby is an **invasion game**. In this segment of learning, you will develop your understanding of attacking and defending principles of invasion games.

Player cannot physically push off a defender when they are attempting to go for a tag in any way.

When tagging, hold up the tag and shout 'tag' followed by the number tag, then give the tag back.

A player can not be tagged when taking a free pass.

Forward passes are not allowed, the ball must be passed sideways or backwards.

## Healthy participation

**Tag rugby** helps with your ability, balance, co-ordination, speed and stamina.

**Social** - this segment helps you to develop your communication skills, supporting others and working together as a team.

**Thinking** - tag rugby helps you to make decisions, reflect on your learning, and plan.

**Emotional** - this sports helps you to become more confidence, to trust and to ply fairly.

## Motor competence

Throw

Catch

Run

Change speed



## Key Vocabulary

**Abide** - act in accordance with the rules

**Ball carrier** - person in possession

**Consecutive** - in a row

**Dictate** - to give order

**Offside** - when a tag is made, all defending players must get into an onside position

**Onside** - when the defender is in front of the ball carrier.

**Tactic** - a plan to help you attack or defend

**Track** - to move your body to get in line with a ball that is coming towards you.



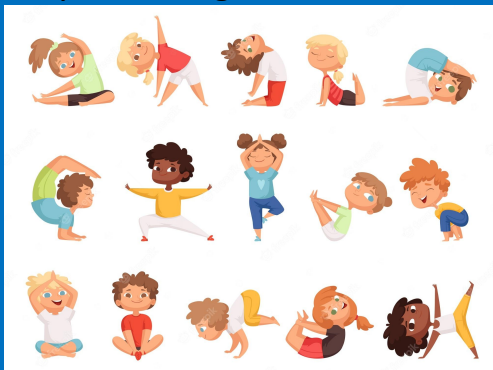
Stafford Leys  
Primary School

Inspiring confidence, compassion, character and fun



# Knowledge organiser for gymnastics

## Key Knowledge



## Motor Competence

Building on your core strength and physical movement. Developing the ability to carry out a movement safely and confidently. You will also broaden your skill set and learn how to link them to other actions and sequences of movement.

Bridge

backwards roll

handstand

Shoulder stand  
headstand

vault

straddle roll

## Rules, Strategies and Tactics

**Thinking:** observing and providing feedback to your peers. Evaluating how you've done and improving sequences of movement.

**Social:** collaborating with others, respecting your boundaries and others and communicating with the people you are working with.

**Emotional:** building your confidence through movements.

## Healthy Participation

Gymnastics helps improve your concentration through focusing on different balances and movements.

Gymnastics helps improve your mental health, through problem solving and thinking independently. Your brain is stimulated through achieving different movements!

## Key vocabulary

Counter balance

Formation

Synchronisation

Counter tension

Progression

Stability

Momentum

Inverted

Aesthetics

## How could you improve your gymnastics skills?

# Knowledge organiser for light.

## Key concepts covered:

### Key Knowledge

#### **LIGHT AND DARK**

We need light so that we are able to see.

**Dark** is the absence of light.

A **light** source can emit light by burning, electricity or chemical reactions, some examples include:

Burning – sun, flames from a fire, stars.

Electricity – lamps, car headlights, street lights.

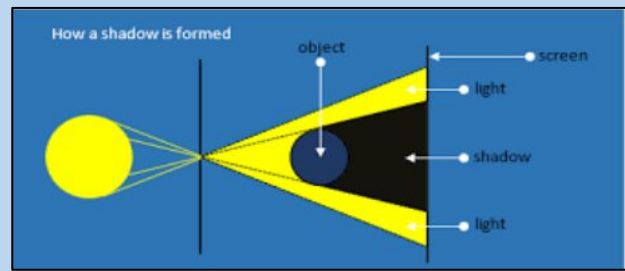
Chemical Reactions – light is a product of the reaction e.g. glow sticks.

#### **REFLECTION**

When light from an object is reflected by a surface, it changes direction. It bounces off at the same angle it hits it.

Smooth, shiny surfaces such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.

**SHADOWS** - Light travels in straight lines. This leads to shadows being formed because, if an object is in the way, the light will move in a straight line past it rather than surrounding it.



The shadows shape will be the same as the object which has blocked the light.



Key vocabulary	
light	A form of energy that travels in a wave from a source.
light source	Reflection is when light bounces off a surface, changing the direction of a ray of light.
reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light.
refraction	This is when light bends as it passes from one medium to another. E.g. light bends when it moves from air into water.
shadow	An area of darkness where light has been blocked.
transparent	Objects that let light travel through them easily, meaning you can see through the object.
translucent	Objects that things let some light through but scatters the light so we can't see through them properly.
opaque	Objects that do not let any light pass through them.





Stafford Leys  
Primary School

Inspiring confidence, compassion and character.



# Knowledge Organiser for Art and Design

## Key Knowledge

**George Stubbs** is an English painter  
**Born : 1724 in Liverpool**  
**Died : 1806 Marylebone London**



**Stubbs' output includes history paintings, but his greatest skill was in painting animals, perhaps influenced by his love and study of anatomy.**



**This painting is called 'Whistlejacket' hung in The National Gallery**

**George Stubbs was classified in his lifetime as a sporting painter. He is best remembered for his paintings of horses and his conversation pieces. His style of art work was known as realism and he painted throughout what was known as the Romanticism movement.**

## The Felting Process



**Hot water, sometimes with added soap, is soaked into layers of wool, while repeated agitation and compression causes the fibres of the wool to hook and weave together into a single piece of fabric.**

## Key Vocabulary

**blending** - the action of mixing or combining things together.

**Realism** - a nineteenth century art movement characterised by subjects painted from everyday life

**Romanticism** - a movement in the arts and literature that originated in the late 18th century. Romantic artists were inspired by feelings, emotions and moods.

**agitation** - brush stirring or disturbance of a liquid.

**Fibres** - a thread or filament from which a vegetable tissue, mineral substance, or textile is formed



# Knowledge organiser for badminton

## Key Knowledge



## Key vocabulary

### Rules, Strategies and Tactics

**Thinking:** understand that I need to outwit the opponent by identifying strengths.

**Social:** I can work collaboratively with others.

**Emotional:** I can develop character and control through engaging with coping strategies when exposed to competition.

- **serve**
- **return**
- **rally**
- **backhand**
- **forehand**
- **outwit**
- **ready position**

### Motor Competence

**forehand grip** - this is mainly used for overhead shots

**backhand grip** - this is mainly used when the shuttle is in front of you

**backhand serve** - this is used to start the game

**rally** - this is a defensive shot as it is a high shot which gives your opponent more time to return it and also you more time to return to the centre of the court

**forehand serve** - this is a serve below your waist

### Healthy Participation

Badminton is a great activity to help with health and wellbeing. It gives you confidence, helps you to make friends and develop patience. Badminton is great for developing your fine motor skills. Badminton allows you to get active and develop physically, mentally and socially.

## How could you improve your badminton skills?





# Key concepts covered: Dance

## Key Knowledge

### Motor competence

Building on your core strength and physical movement. Developing the ability to carry out a movement safely and confidently. You will also broaden your skill set and learn how to link them to other actions and sequences of movement.



### Rules, Strategies and Tactics

**Social:** share ideas, collaboration, support, communication, inclusion, respect, leadership

**Emotional:** confidence, self-regulation, perseverance, determination, integrity, empathy

**Thinking:** creativity, observation, provide feedback, comprehension, use feedback to improve, select and apply skill

### Healthy participation

Dance helps all to stay fit and healthy. It can also improve your muscle tone, strength, endurance and fitness.

Dance helps improve your mental health, through problem solving and thinking independently. Your brain is stimulated through achieving different movements and working with others!



### Key Vocabulary

Choreography – the sequence of actions or movements

Dynamics – how an action is performed e.g quickly, slowly, gently

Formation – where performers are in the space in relation to others

Inspiration – to take ideas from

Motif – a movement phrase that relates to the stimulus that is repeated and developed throughout the dance.

Style – type of dance



# Knowledge organiser for Design and Technology

*Inspiring confidence, compassion, character and fun*



## Using stitches as a finish for the product.

The children could design their finish for their product using a variety of appropriate stitches. They could draw enlarged examples of e.g. insects, flowers, animals and then decide which stitch would be best for each part. Use square paper for a grid to ensure the stitches are in the right place and are the right size.



Appliqué



## Key Knowledge

### Key concepts covered:

**Design** – research and develop a design through annotated sketches and discussing ideas with peers.

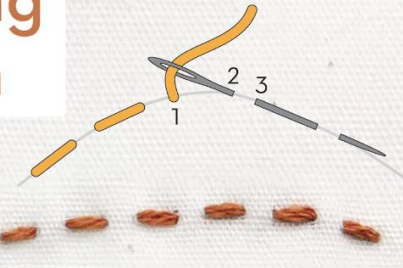
**Make** – using a wide range of tools and practical tasks such as prototypes and exploded diagrams.

**Evaluate** – investigate and analyse a range of existing products. Evaluate your own ideas and products against your own design criteria and consider the views of others.

## Key vocabulary

- **Mock up** – quick 3-D modelling using easy to work and cheaper materials and temporary joints. Useful for checking proportions and scale.
- **Pattern or template** – a shape drawn to exact shape and size, used to assist in cutting out.
- **Seam allowance** – extra fabric allowed for joining together - 15mm for domestic patterns.
- **Specification** – describes what a product has to do.
- **Tacking** – large running stitches to hold pieces of fabric together temporarily.
- **Working drawing** – detailed drawing contains all information needed to make a product but is updated as changes are made.

## Running stitch





# Knowledge organiser athletics



## Healthy participation

**Athletic** training helps strengthen bodies, develops coordination, and promotes physical fitness.

**Emotional:** mental and emotional well-being. It can also boost **self-confidence**,

**Learning** new abilities and provides a physical outlet for stress.



## Motor competence

This is a person's ability to make a range of physical actions which include coordinating fine and gross motor skills.

**Running:** demonstrate a clear understanding of pace and use it to develop their own and others sprinting technique.

**Jumping:** develop power, control and technique in the triple jump.

**Throwing:** develop power, control and technique when throwing discus and shot put.

## Rules, Strategies and Tactics

**Running:** understand that I need to prepare my body for running and know the muscle groups I will need to use.

**Jumping:** understand that a run up builds speed and power and enables me to jump further.

**Throwing:** understand that I need to prepare my body for throwing and know the muscle groups I will need to use.

**Rules:** understand and apply rules in events that pose an increased risk

## Key vocabulary

**Control** - breathing, strides and movement

**Force** can be internal and external. Internal, the muscles moving together. External: the force behind throwing or jumping

**Trajectory** - the path followed by a n object flying or an object moving under the action of given forces

**Momentum**- the greater the force produced by the back leg, the greater the force of acceleration

**Continuous pace** - repetitive movements over a long period of time e.g. long distance running

**Stride**- a step or distance covered by a step