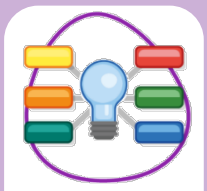
Purple Mash Computing Scheme: Knowledge Organiser

Year 6
Networks

Key Learning

- To understand what a computer network is and identify examples of networks at home, school and in the wider world.
- To understand the difference between the internet and the World Wide Web and explore the services they provide.
- To explore how the internet can be used for communication and collaboration, and how to do this safely and respectfully.
- To explore who is in charge of the internet and how rules and website blocking can affect people, society and online platforms.

Key Resources


2Connect


2Quiz

Key Vocabulary

Email
A method of sending messages over the internet.

Network
A group of connected computers and devices that can share information.

Web Browser
A program used to look at websites.

Internet
A global WAN that connects millions of computers and networks around the world.

Router
A device that connects networks together to allows them to communicate.

Website
A collection of pages of information on the Web.

Internet Chat
Instant messaging in real-time.

Video Call
Seeing and hearing someone live on your screen.

Wi-Fi
A wireless way to connect devices to a network.

LAN (Local Area Network)
A network in a small area like a home, school, or office.

WAN (Wide Area Network)
A network that covers a large area, like the internet.

World Wide Web (WWW)
A service on the internet that includes websites and web pages.

Purple Mash Computing Scheme: Knowledge Organiser

Year 6
Networks

Key Images


Local Area Network


Wide Area Network


Router


Chrome


Safari


Firefox


Edge

Key Questions

What is the difference between a LAN and a WAN?

A LAN (Local Area Network) connects computers and devices in a small area like one building, such as a school, office or home.

A WAN (Wide Area Network) connects computers across large areas, like different cities or countries, often using the internet to link them together.

What is the difference between the internet and the World Wide Web?

The internet is the global network that connects computers together.

The World Wide Web (WWW) is part of the internet and is made up of websites and web pages you can visit.

Why does a school network filter out access to some websites?

A school network filters some websites to keep children safe online.

It blocks harmful, distracting, or inappropriate content, helping students focus on learning and protecting them from dangers like scams or viruses.

Crime and Punishment: Design and Technology...

FABULOUS FAIRGROUND RIDES

Key Questions:

How can you alter the direction of a follower pulley?

How can you alter the speed of a follower pulley?

How can moving parts be joined to a pulley system?

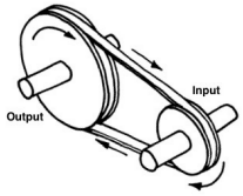
How can the plane of movement be altered from the driver?

Technical Knowledge

A **pulley** is a simple machine and comprises of a wheel on a fixed axle, with a groove along the edges to guide a rope or cable. **Pulleys** are used to reduce the time and energy taken to lift heavy objects.

A **pulley system** can be used to speed up, slow down or change the direction of movement.

A **cam mechanism** controls movement through converting a rotary motion into a linear motion (movement in a straight line)



Pulleys rotate in the same direction.

Key facts:

Design an appropriate electrical circuit for their ride.

Design a structure for their fairground using Tinker-CAD.

Follow a design to create a fairground ride with a rotating part.

Work accurately and safely with a variety of tools, materials and electrical components.

Identify ways of improving their fairground rides to create a finished product of a high quality.

John Wardley is a British developer for theme parks in the UK and Europe. He has created rides such as Nemesis and The Smiler.

Identify every day objects that use electrical motors to cause rotation.

How to make an electrical circuit.

Describe how to reinforce and strengthen structures.

Describe how to reinforce and strengthen structures.

Describe how an electrical circuit with a motor can be used to create rotating parts and how this is done in fair ground rides.

Pulley and belt systems can be used to transfer movement.

Vocabulary

Pulley systems, belt systems, rotation, motor, transfer, framework, electrical circuit, driver, program

Wheelwright Lane Knowledge Organiser for:

What on earth! Compass points and time zones.

Key questions:

What are the 8 compass points?

How do we use grid references to help us read a map?

How do time zones work?

Where are the tropics of Cancer and Capricorn?

What is the largest desert in the world?

Key facts:

The main compass points are north, south, east and west.

What is latitude and longitude?

We use imaginary lines to help locate where a place is in the world.

- We use lines of **latitude** to find out how far **north** or **south** a place is. Thes lines run **parallel** to the **Equator**.
- There are **five major lines** of latitude:
  - the Arctic Circle (the North Pole)
  - the Antarctic Circle (the South Pole)
  - the Tropic of Cancer
  - the Tropic of Capricorn
  - and the Equator.

What are hemispheres?

The **Equator** is at the centre of the lines of latitude and is at 0° latitude.

Anything lying south of the Equator is in the **Southern Hemisphere** and is labelled °S. Anything lying north of the Equator is in the **Northern Hemisphere** and is labelled °N. The North Pole is 90°N and the South Pole is 90°S.

Key vocabulary:

climate The usual weather conditions of an area.

equator An imaginary line drawn around the middle of Earth, dividing it into the Northern and Southern Hemispheres.

tropical Hot and humid.

temperate Mild weather. Neither very hot nor very cold.

Wheelwright Lane Knowledge Organiser for: Year 6 - Hockey

Key questions

- Can you think ahead and create a plan of attack or defence?
- Can you apply your knowledge of skills for attacking and defending in a game?
- Can you work as part of a team to develop fielding strategies that prevent the opposition from scoring?
- Can you make good passes and win back or keep the ball effectively?
- Can you use good hand-eye coordination during games and activities?
- Can you make a plan, lead others, and clearly explain complicated rules?
- Can you take part in competitive games with a strong understanding of tactics and team composition?

Key vocabulary:

Core Hockey Vocabulary

- **Hockey stick** – the equipment used to hit, push, or dribble the ball.
- **Ball** – the small, hard object used in play.
- **Pitch** – the playing area for a hockey game.
- **Goal** – the area players aim to score in.
- **Goalkeeper** – the player who defends the goal.
- **Opponent** – a player from the other team.
- **Team** – a group of players working together in the game.

Skills and Techniques

- **Dribble** – to control and move the ball using small touches with the stick.
- **Pass** – to send the ball to a teammate.
- **Receive** – to stop and control the ball when it is passed to you.
- **Tackle** – to try to take the ball away from an opponent.
- **Push pass** – a short, controlled pass made by pushing the ball.

- **Hit** – a strong strike of the ball using the stick.
- **Flick** – lifting the ball into the air with a quick wrist movement.
- **Reverse stick** – using the back side of the stick to control or hit the ball.
- **Possession** – keeping control of the ball.
- **Interception** – stopping or taking the ball from an opponent's pass.

Tactics and Strategy

- **Attack** – when your team tries to score a goal.
- **Defence** – when your team tries to stop the other team from scoring.
- **Formation** – how players are positioned on the pitch.
- **Space** – open areas on the pitch to move into or pass the ball through.
- **Marking** – staying close to an opponent to block or tackle them.
- **Support play** – moving to help a teammate with the ball.
- **Strategy** – a planned way to attack or defend during the game.
- **Tactics** – the small decisions and movements used to make a strategy work.
- **Transition** – changing quickly from defence to attack (or vice versa).

Teamwork and Leadership

- **Communication** – talking and signalling to teammates during play.
- **Leadership** – guiding and supporting others on the team.
- **Collaboration** – working effectively with teammates to achieve a goal.
- **Respect** – showing fairness and good sportsmanship towards others.
- **Responsibility** – understanding your role and position on the pitch.

Physical and Coordination Skills

- **Hand-eye coordination** – controlling the stick and ball accurately.
- **Balance** – staying steady while moving or changing direction.
- **Agility** – moving quickly and easily around the pitch.
- **Speed** – how fast a player can move.
- **Control** – keeping the ball close and steady while dribbling or passing.

Key facts:

- 🏑 **Team Game:**
  Hockey is a team sport played between two sides, each trying to score goals by hitting a small ball into the opponent's net using a hockey stick.
- 👣 **Using the Stick:**
  Players must use the **flat side** of the stick to control, pass, and hit the ball — using the rounded side is not allowed.
- 🚫 **Safety and Rules:**
  Safety is very important — the stick should always stay below waist height when playing the ball, and players must never lift the stick dangerously near others.
- ⚡ **Skills Needed:**
  Key skills include **dribbling**, **passing**, **tackling**, and **shooting**, as well as **good hand-eye coordination** and **quick decision-making**.
- 🤝 **Teamwork and Tactics:**
  Success in hockey depends on **teamwork**, **communication**, and understanding both **attacking** and **defensive** tactics to work effectively together.

Wheelwright Lane Knowledge Organiser for:

U2.3 What do religions say to us when life gets hard?

Key questions:

Is death the end?

Does it matter?

Why is there suffering?

Are there any solutions?

Is there a God?

How did the world come to be?

What do you think the idea of a soul looks like?

Key facts:

Christians believe if you repent- say sorry you will be forgiven for the things you do that are wrong. Many Christians believe that if you believe in God and his son Jesus Christ you have a place in heaven. All these religions teach that if we have made positive decisions something positive will happen - we will go to Paradise or Heaven. Each of these religions also teaches that if we have made bad decisions then we will suffer consequences. Muslims believe that all through life you have two angels on your shoulders who write down all the good and bad deeds that you commit during your life. After death your deeds are weighed. If you have committed more good deeds than bad you will go to heaven and if you have committed more bad deeds than good you will go to hell. Until judgement day Muslims believe that the soul waits in barzakh, the place of waiting for judgement day. On judgement day Allah will deal with everyone according to how they have lived their lives.

Key Vocabulary:

ceremony A formal religious or public occasion, especially one celebrating a particular event, achievement, or anniversary.

prayers A solemn request for help or expression of thanks addressed to God or another deity. suffering The state of undergoing pain, distress, or hardship.

community A group of people living in the same place or having a particular characteristic in common

life after death The hypothetical existence or survival of the soul after death.

bereavement The action or condition of being bereaved following the death of someone.

judgement The act or process of being judge by God based on their actions and beliefs.

salvation Through the death of Jesus people are saved from sin and forgiven by God reincarnation The rebirth of a soul in another body.

Heaven The place regarded in various religions as the abode of God (or the gods) and the angels, and of after death

soul The spiritual or immaterial part of a human being or animal, regarded as immortal.

Humanism The belief that it is possible to live a good and fulfilling life without following a traditional religion

karma Good or bad luck, viewed as resulting from one's actions.

Wheelwright Lane Knowledge Organiser for:

Categorising Living Organisms

Key questions:

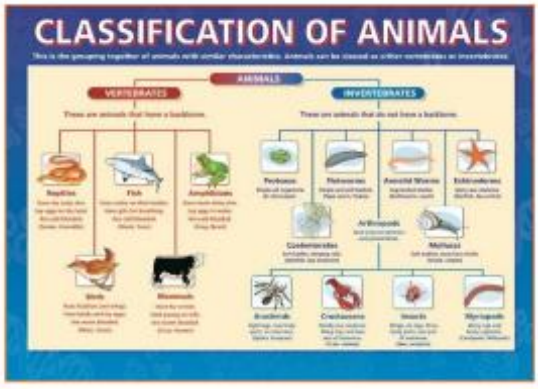
What are the eight types of Taxa?

Why do we need to categorise living creatures?

What are the main features of each taxa?

Who invented the categorising system?

How can you use a classification key?



Key facts:

Amphibian – A cold-blooded vertebrate animal that compromises frogs, toads, newts,

Arachnid – An animal that has eight legs and a body formed of two parts

Bird – A warm-blooded egg-laying vertebrate animal distinguished by the possession of feathers,

Crustaceans – Mostly live in water with a hard shell and segmented body Habitat –

Insect – A small animal that has six legs and generally one or two pairs of wings

Invertebrate – An animal lacking a backbone

Mammal – A warm-blooded vertebrate animal, Microorganism – A microscopic organism, especially a bacteria, virus or fungus

Reptile – A vertebrate animal that has dry scaly skin and typically lay soft-shelled eggs on land

Vertebrate – An animal with possession of a backbone/ spinal column

Scientists Use the Linnaean system to categorise the 10 million different species on Earth!

Key vocabulary: Linnaean, classification, taxonomy, species, microorganism, vertebrates, invertebrates, organisms, domain, kingdom, phylum, class, order, family, genus