



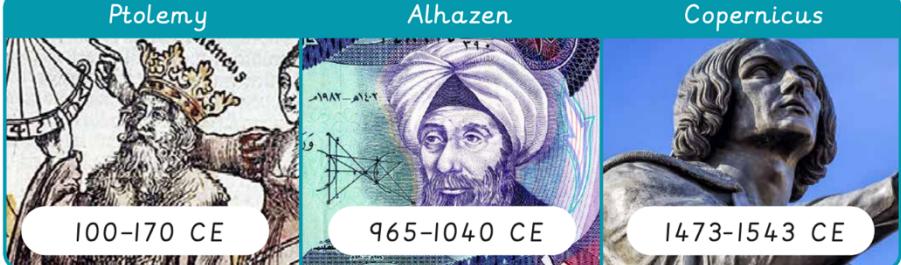
# Science Knowledge Organiser

## Year 5 Spring 1

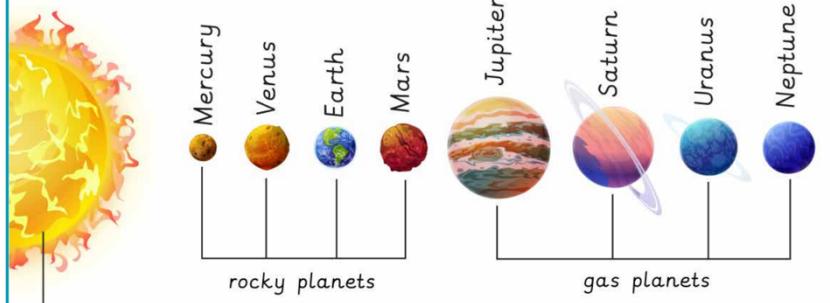
### Forces and Space: Earth and Space

The solar system is a group of celestial bodies, including the Sun, planets, asteroids and moons, held together by gravity.

The Sun, Earth, moons and other planets are spherical in shape.



#### Our Solar System



Sun - a star at the centre of our Solar System

The heliocentric model was developed by Copernicus (1473-1543 CE) and theorized that the Sun was at the centre of the Solar System with the Earth and other planets orbiting around it.

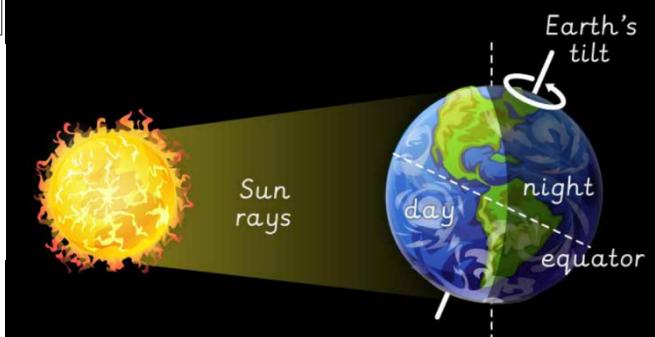
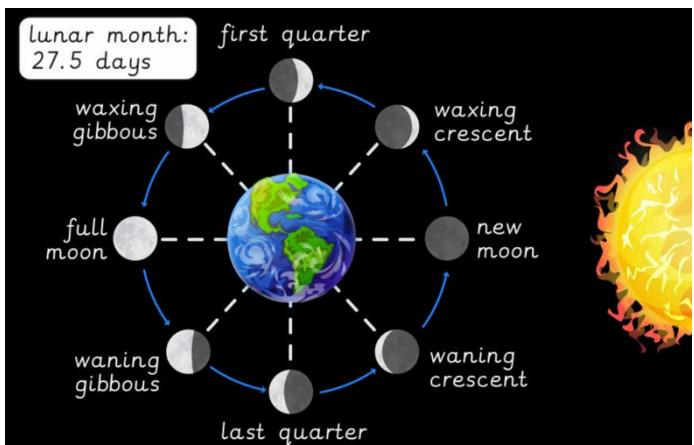
The geocentric model was developed by Ptolemy (100-170 CE) and theorized that the Earth was at the centre of the Solar System with the Sun and other planets orbiting around it.



Artificial satellites are human-made objects that orbit planets. They have many uses, including gathering data, communications and taking images.

Day and night: the Earth rotates on its axis every 24 hours, creating periods of daylight and nighttime.

Phases of the Moon: the Moon appears to change shape as it orbits the Earth, because we see different amounts of its lit-up side (the side reflecting light from the Sun).



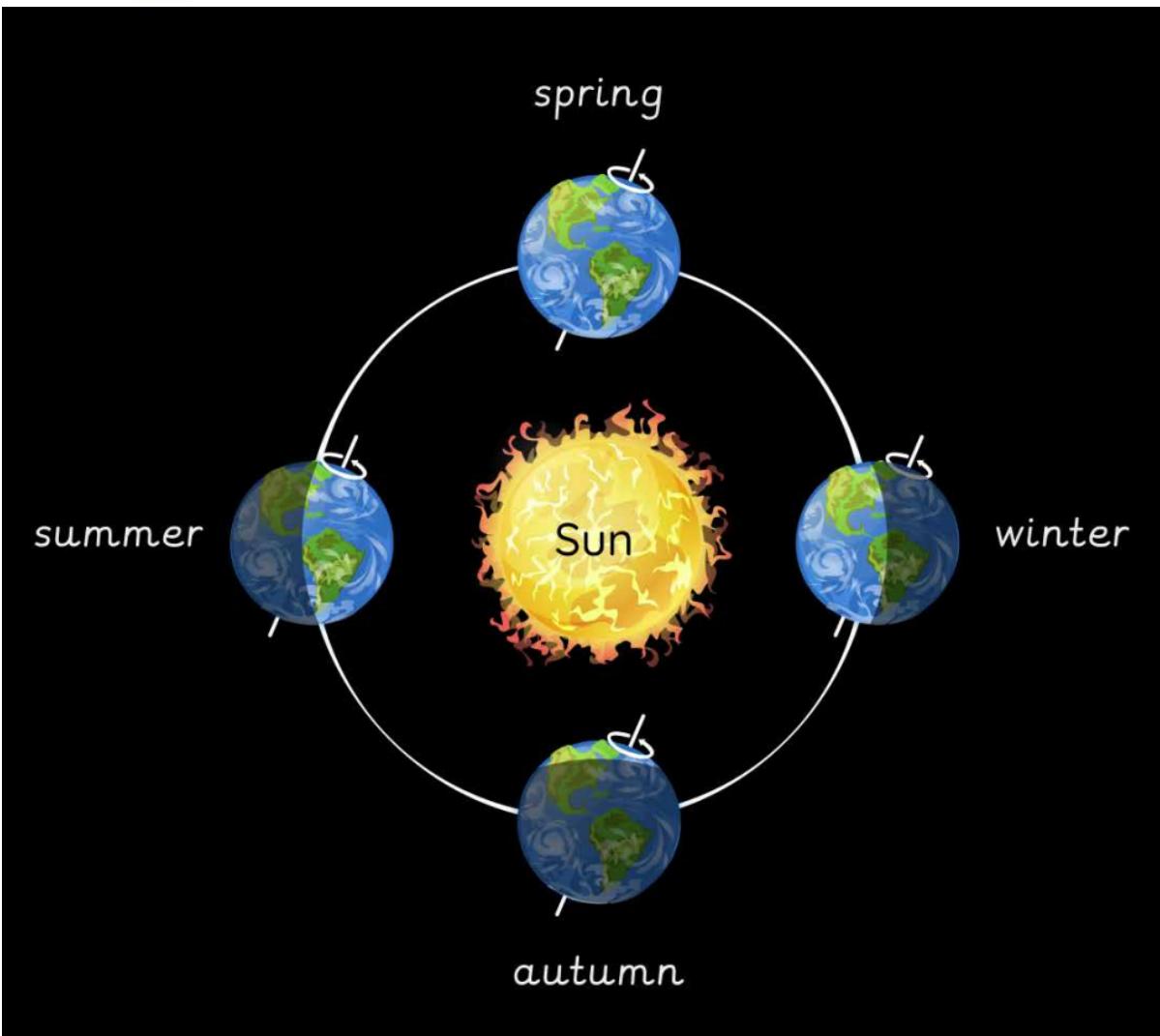
Moons, also called natural satellites, are celestial bodies that orbit planets. The Earth has one moon. Some planets, like Mercury, have no moons and other planets, like Saturn, have many moons (the current count is 146).



## Science Knowledge Organiser

### Year 5 Spring 1

#### Forces and Space: Earth and Space



The Earth orbits the Sun once every 365.25 days (one year). When the Northern Hemisphere is tilted towards the Sun, it receives more light for longer so it is summer. When it is tilted away from the Sun, it is winter in the Northern Hemisphere.



# Knowledge Organiser

## Art Year 5 Spring 1

### Sculpture and 3D

Key vocabulary	
Atmosphere	The mood of an artwork, for example, mysterious or joyful.
Concept	The idea behind an artwork.
Location	The place where an artwork is displayed.
Performance art	Artwork that is an event rather than an object.
Scale	The size of an artwork.
Viewer	The people who look at, or visit, your installation.

Cai Guo-Qiang
<ul style="list-style-type: none"> <li>- Guo-Qiang was born in 1957 in the Fujian Province, China.</li> <li>- He grew up during China's Cultural Revolution, when explosions were part of everyday life.</li> <li>- Guo-Qiang took part in demonstrations against political changes.</li> <li>- He creates sculpture, drawings, installations and performance work.</li> <li>- His art explores culture, politics and science and sometimes features explosions.</li> </ul>

Interactive art			
	'The Weather Project' by Olafur Eliasson aimed to recreate a sunset using lighting, mirrors and artificial mist.		
see	hear	touch	smell

### Installation art

**Three dimensional art that aims to transform a particular place**

- Often large in scale
- Location is important
- Often made using everyday objects in new ways
- Can be interactive





# Knowledge Organiser

## Geography Year 5 Spring 1

### Biomes

#### The six major biomes

Tropical Rainforest	
Hot all year (25-30°C)	
Wet all year (2,000mm of rainfall a year or more)	
Dense forests with several layers of trees	

Temperate deciduous forest	
Four seasons: hot in summer (25°C) and cool in winter (5°C)	
Rainfall all year (around 1,000mm)	
Deciduous trees (trees that lose their leaves for winter)	

Savanna	
Hot all year (25-35°C)	
500-1,000mm of rainfall a year with a dry season (no rain)	
Grasses, some shrubs and some trees that can cope with drought	

Coniferous forest	
Mild summers (10-20°C) but very cold winters (below 0°C)	
Low rainfall (500mm a year or less), usually in summer	
Evergreen trees (trees that keep their leaves throughout the winter)	

Desert	
Very hot during the days in summer (35-40°C)	
Very low rainfall (250mm a year or less)	
Very few plants; only those that can survive without rainfall	

Tundra	
Cold winters (below -30°C) and cool summers (around 10°C)	
low rainfall (around 200mm a year)	
very few plants; only those that can survive freezing temperatures and drought	

# Chez moi

sound in:

- appartement



phonics

sound in:

- bureau



&

**silent letters**

There are many last consonant silent letters in French. The final letter 's' is silent in the word 'dans' and 'mais'. The 't' is also silent in the conjunction 'et'. Pronounced almost like the English sound 'leh'.

**elision**

Elision is a type of contraction. The last letter of a word is dropped and replaced with an apostrophe. It is attached to the word that follows beginning with a vowel, so je becomes j' as in j'habite as the 'h muet' in habite acts like a vowel.

## What I will learn:

- Objective 1: I will learn how to say where I live using the first person high frequency verb 'j'habite' (I live).
- Objective 2: I will learn 5 nouns and their determiners for rooms of the house.
- Objective 3: I will learn 5 more nouns and their determiners for rooms of the house.
- Objective 4: I will learn how to say I do not have a particular room in the house using a key negative structure.
- Objective 5: I will use all my new knowledge in French to describe where I live.

The nouns and determiners for house & apartment.



vocabulary

The nouns and determiners for rooms of the house.



Key linguistic structures:

**Chez moi,  
il y a...**

*In my house there is...*

**Chez moi,  
il n'y a pas de...**

*In my house there is not...*

To fully understand the role of gender in the choice of determiners:

**un salon**



**une cuisine**



*Singular determiner  
'a' for masculine nouns*

*Singular determiner  
'a' for feminine nouns*

To understand better how to use the negative in French:

**Chez moi, il y a  
un salon.**



**Chez moi, il n'y a  
pas de salon.**



1st person conjugation of high frequency verbs.

**j'habite**

*I live*

grammar

# Handball Knowledge Organiser - Year 5



**Prior Learning:** In Year 4 children recapped techniques including controlling and moving with the ball in various ways, catching and using a range of passing techniques including the chest and bounce pass. Children also recapped shooting while on the move. Children continued to play small sided games and were encouraged to embrace the rules, fair play and be gracious in victory and defeat.

## Physical Me

**Throw**

**Agility** **Power**

**Catch**

**Balance**

**Dodge**

**Co-ordination**

**Run**

**Jump**

**Dribble**

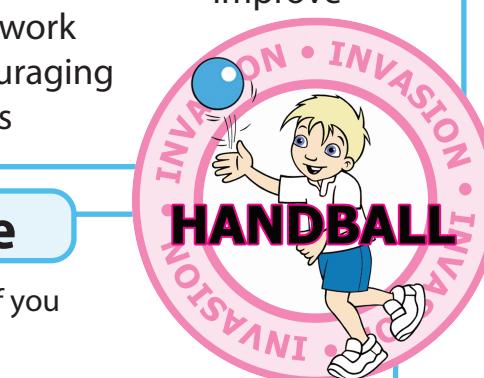
**Speed**

## Value Me:

- Fair Play
- Determination

## Thinking Me

- To make decisions in the game
- How can I improve

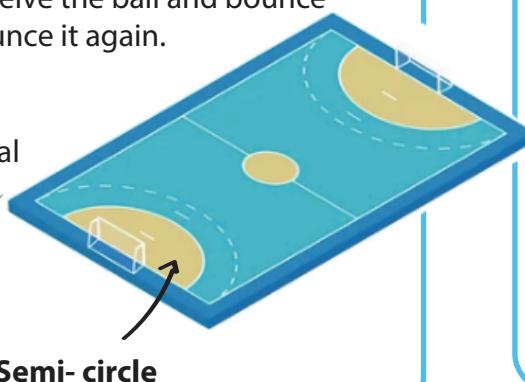


## Key Knowledge

**Dribbling-** You can dribble the ball. However if you catch it you must pass or shoot

**Double dribble-** Handball players cannot receive the ball and bounce it, then hold the ball, and bounce it again.

**Foot fault-** When a player (other than the goal keeper) stands in the **semi circle**,  
- A free throw is awarded to the other team



## Key Skills

## Our Handball Rules:

**Number of players:** 5v5

**You have 5 seconds to hold the ball:** then you must pass or shoot

**Courts:** Only allowed goal keeper inside the semi circle

**Start of play:** Game is started by a 'throw off'

**Scoring a goal:** A goal is scored by throwing the ball into the oppositions net

After a goal is scored play is restarted by the GK

If the goal keeper saves a ball, play is restarted by the GK

Players are allowed to take 3 steps with the ball.

**Traveling-** taking more than 3 steps. Free-throw given to the other team.

**Dribbling- No double dribble**

**No Contact-** can intercept or block

## Key Vocabulary

Foot faults

Receiver

Overhead throw

Dribble

Techniques

Focus

Passive defender

Opposing

Double Dribble



## Year 5

# Databases

### Key Learning

- To understand what a database is.
- To design and create a database.
- To build queries to find information.
- To solve problems using a database.

### Key Resources



2Investigate

### Key Vocabulary

#### Condition

A condition is a rule you give to a database to help it find the right information.

#### Filter

Filtering what information is shown according to any filter rules applied.

#### Query

A user will run a query to find specific information in a database.

#### Data

A set of facts or information that help us learn something or make decisions.

#### Group

Putting similar pieces of information together in a database so it is easy to read and understand.

#### Record

A collection of related data or information that is stored together as a single unit.

#### Database

A set of data that can be held in a computer in a format that can be searched and sorted for information.

#### Edit

To change, add or remove data from a record.

#### Field

A heading in a database record against which data is entered.

#### Linked Tables

A database can contain more than one table which can be linked together so a query can include information from the linked tables.

#### Sort

Organising data by a rule such as alphabetical or numerical.

#### Validation

A field can have specific data types such as numbers, letters, dates and times which helps minimise input errors.

#### Operator

An operator tells a database what to do with data when someone is making a query. Such as: Find everyone whose score 'is equal to' 10.



# Year 5

## Databases

### Key Images



Add record



Edit record



View mode



Create query



Database Design



Report

### Key Questions

#### What do databases help us do?

Databases help organise data into one place. Data can be added, stored and retrieved by more than one person. When data is retrieved it can be combined to form information that someone might wish to find out. It is much quicker, more convenient and can be used by many people.

#### What is a query?

A query is the word used instead of question when using databases. Someone will create a query to find the answer to something they want to know.

#### What does a record contain?

A record contains fields of data that form information about something or someone. A database will contain lots of records. For example, a database record could be a record on one child at a school that has fields: name, age and class.

#### What does the AND operator help someone do?

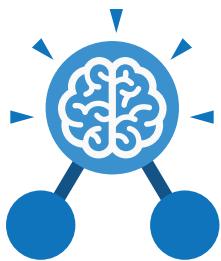
The AND operator joins rules (conditions) together. Using AND means all the conditions have to be met. AND helps someone find specific information (records).

#### How can errors be kept to a minimum when entering data into a database?

Fields can have the data types entered into them set. Additionally, constraints such as always required or has options can be used.

#### Why might a database need more than one table?

It can get very messy and confusing for users of a database if all data is kept in one table. For example, a vet surgery might need a table on the pets and a separate table on the customers.



## Unit: 5.5

# Game Creator

### Key Learning

- To plan a game.
- To design and create the game environment.
- To design and create the game quest.
- To finish and share the game.
- To self and peer evaluate.

### Key Resources



### Key Vocabulary

#### Animation

Creating an illusion of movement.

#### Image

In this case, a picture displayed on the computer screen.

#### Texture

High frequency detail or colour information on a computer-generated graphic.

#### Computer game

A game played using a computer, typically a video game.

#### Instructions

Detailed information about how something should be done or operated.

#### Perspective

Representing three-dimensional objects on a two-dimensional surface to give the right impression of their height, width, depth, and position in relation to each other.

#### Customise

Modify (something) to suit an individual or task.

#### Interactive

Responding to a user's input on a computer or device.

#### Evaluation

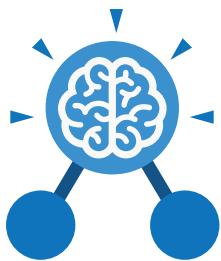
The making of a judgement about the value of something.

#### Screenshot

An image of the data displayed on the screen of a computer or mobile device.

#### Playability

A measure of either the ease by which a video game may be played, or of the overall quality of its gameplay.



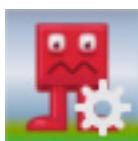
## Unit: 5.5

# Game Creator

### Key Images



Open, close and share work



Change the settings of your game



Insert treasure into your game



Insert enemies into your game



Drag to set the start position of your game



Play your game



Add images to your game

### Key Questions

#### What is the 2DIY3D tool on Purple Mash?

2DIY 3D allows users to create a playing area, such as a maze, in 2D and then turn it into a 3D computer game. The aim is to avoid the 'baddies' and collect 'treasure'.

#### What makes a good computer game?

A good game designer gives the player continuous challenges in a visually stimulating environment, each of which leads to another challenge, to keep the game challenging and fun.

#### Why is it important to continually evaluate your game?

Evaluating your game as you make it allows you to think about ways in which it can be improved. Evaluation may also involve the views of other people who play your game.