
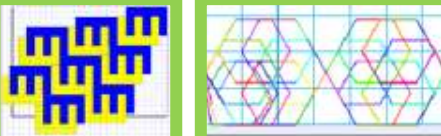



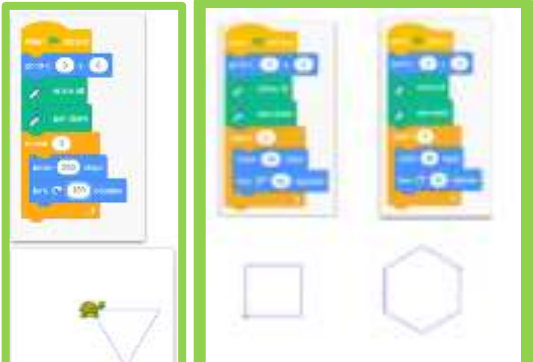




Knowledge Organiser – Year 4 Computing: We are Artists

Key Knowledge Unit 4.5: We are artists Fusing geometry and art	Key vocabulary		Cultural Heritage
<div data-bbox="203 424 439 568"> What is Inkscape?  </div> <div data-bbox="450 424 947 568"> Inkscape is a vector graphics (pictures made from lines instead of dots) drawing program. </div> <div data-bbox="203 576 439 727"> You will be using Scratch to create Islamic-style art. </div> <div data-bbox="450 576 947 727">  </div> <div data-bbox="203 743 947 911"> Artists that you will research: Escher    The Blue Mosque in Saint Petersburg, Russia </div> <div data-bbox="203 919 757 1086"> Changing opacity in Inkscape You can change the opacity of rows or columns using the blur and opacity tools in the 'Create Tiled Clones' menu. </div> <div data-bbox="203 1094 757 1473">  </div> <div data-bbox="768 1094 947 1473"> You would use the repetition block to create a pattern using these sets of instructions </div>	<div data-bbox="958 416 1144 520"> Abstraction a process of managing complexity by setting to the side irrelevant detail and concentrating on function rather than form </div> <div data-bbox="958 520 1144 616"> Bitmap an image represented by a large, rectangular grid of pixels, each having its own colour value, typically in the range 0 to 255 for each of red, blue and green </div> <div data-bbox="958 616 1144 711"> Fractal a self-similar repeating (or almost repeating) structure in which ever greater detail becomes apparent as the structure is examined more closely </div> <div data-bbox="958 711 1144 791"> Pixel picture element – one of the small, square dots that makes up a digital image </div> <div data-bbox="958 791 1144 887"> Repetition programming construct which allows a group of instructions to be repeated a number of times, or until a certain condition is met </div> <div data-bbox="958 887 1144 951"> Sprite a graphical character in a program that can be given its own sequence of instructions </div> <div data-bbox="958 951 1144 1046"> Tessellation a regular pattern of one shape that fills a space without overlapping or leaving spaces between </div> <div data-bbox="958 1046 1144 1110"> Transform to change the shape of an image or part of an image </div> <div data-bbox="958 1110 1144 1238"> Turtle a small floor robot (or a representation of one on screen) that draws by moving forward and turning, under the control of a program, for example in Logo or Scratch's pen commands </div> <div data-bbox="958 1238 1144 1481"> Vector graphics a way of representing an image by specifying the lines, arcs and regions from which it is made </div>		<div data-bbox="1686 416 2045 647"> Islamic art and architecture. Look at the famous mosque structures with the awe-inspiring dome designs. Look into the early stages of Islamic geometric art patterns which stemmed from the byzantine period. </div> <div data-bbox="1686 647 2045 767"> Introduction to Islamic art -Dome of the Rock, Jerusalem </div> <div data-bbox="1686 767 1944 951">  </div> <div data-bbox="1686 951 2045 1182"> - Blue Mosque – Istanbul  </div>

Knowledge Organiser – Geography: Weather Wise Y4

Key Knowledge

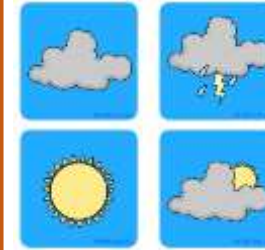
What is the difference between weather and climate?	Climate is a country's normal weather over a long period of time. The climate changes very slowly over thousands of years. The weather changes from day to day and even hour to hour. It includes the outside temperature, strength of the wind and whether it is raining, sunny, hailing etc
What is an anemometer?	An anemometer is an instrument that measures wind speed. The anemometer has a spinning wheel. The stronger the wind blows the faster the wheel rotates. The anemometer counts the number of rotations, which is used to calculate wind speed.
What does a meteorologist do?	Meteorologists are scientists who study the earth's atmosphere that cause weather conditions. From this they predict what the weather is going to be for the next few days. They are often known as weather forecasters.

Key vocabulary

monsoon	A monsoon is a seasonal shift in wind direction. It can cause heavy rainfall during the summer and dry spells in the winter. The word monsoon comes from the Arabic word "mausim" meaning season. It was first used by Arabic navigators.
drought	Droughts occur when a long period of abnormally dry weather leads to a severe water shortage.
Rain gauge	Precipitation is measured using a rain gauge. This is a container that collects rain. The depth of the rain in millimetres can be read from the side of the container.
Physical geography	Physical geography is the study of the natural world and how it can change eg the course of a river, weather.
Human geography	Human geography is the study of how humans have had an impact on the natural world eg building of houses and roads, deforestation.

Cultural Heritage

Weather Symbols



Weather symbols are "pictures" or "signs" to help understand a type of weather eg windy, cloudy. Weather symbols are used as a quick and easy way to show the weather that is happening in a particular place on a weather forecast.

Presenting the Weather



Weather Presenters such as Alex Beresford, Lucy Verasamy and Des Coleman use weather symbols when presenting the weather.

The Hemispheres

Southern Hemisphere

The part of the Earth south of the equator is called the Southern Hemisphere. Only 20% of the world's population lives in the Southern Hemisphere. 90% of the planet's water is in the Southern Hemisphere.



Northern Hemisphere

The part of the Earth north of the equator is called the Northern Hemisphere. 80% of the world's population lives in the Northern Hemisphere. 90% of land is in the Northern Hemisphere.

The Tropics



The **equator** is an imaginary line that divides the Earth in half. The equator is an equal distance between the North and South poles.

The **Tropic of Cancer** is an imaginary line in the Northern Hemisphere. It is the furthest north you can go and still have the sun directly overhead. This happens once a year in June. This day is called the solstice.

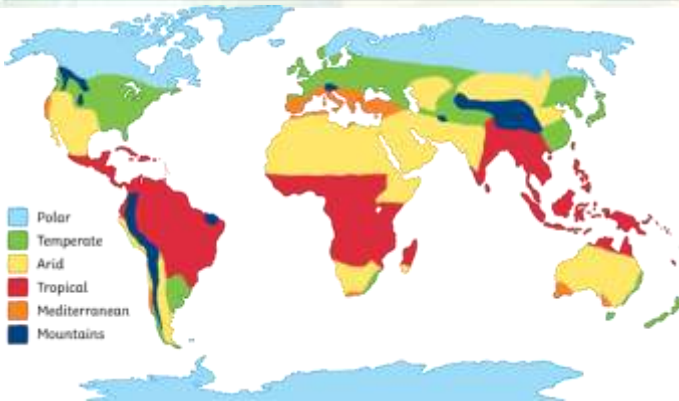
The **Tropic of Capricorn** is an imaginary line in the Southern Hemisphere. It is the opposite of the Tropic of Cancer. It is the furthest south you can go and still have the sun directly overhead. This happens once a year in December. This day is called the solstice.

Key Knowledge

Climate Zones

The climate of a location is often linked to its location in the world. Places near the equator will have a hotter climate than places near the North and South Poles which will have a colder climate.

Polar	Very cold and dry all year round	Antarctica
Temperate	Cold winters and mild summers	UK
Arid	Dry and hot all year round	Sahara Desert
Tropical	Hot and wet all year round	Brazil
Mediterranean	Dry, hot summers and mild winters	Spain
Mountainous	Very cold, sometimes wet, all year	Himalayas



P.E Knowledge Organiser – Striking and Fielding– Year 4

Key Knowledge

Fielder

When it is a teams turn to field the whole team at the same time become fielders. Fielders can use **any part of their body to field**, with **hands being the best option**. A fielder will need to use their skills to **prevent the batting side from scoring runs**. Remember the ball will move faster than you!



Batter



When a team is batting only **two members of that team are active**. This means that the rest of the team have to wait their turn. The batter 'on strike' may attempt to hit the ball to **score runs**, whilst the 'non striker' can not hit the ball, they may still need to run. Both of the active batters can out individually during a delivery, even the batter not on strike. In school/junior cricket players bat in pairs and if they are out then the team loses runs instead of not being allowed to bat any longer (as in adult cricket). All players usually bat.

Bowler - Underarm Bowl

Any of the team may bowl. Only **one player bowls at a time**. One of two ways to bowl the ball. It is not allowed in many grades of cricket unless agreed beforehand.

Underarm bowling is normally used for **beginners** and progresses into over-arm bowling.



Run(s)

Usually the team with the **most runs** wins. Runs are scored in many ways: by **running, hitting boundaries or extras**.

Running: during a delivery, when the two batters change ends without being out. Do this once (single), twice (two) etc.

Boundaries: running is not necessary if the ball hits the marked boundary. If the ball does this having made contact with the ground, **four runs** are scored. If the ball does not bounce before hitting or going over the boundary, **six runs** are added.

Extras: runs that are not scored by the batter or added to the batters individual score and only added to the teams total. Examples of extras are **wides, no-balls, byes, leg byes and penalty runs**.

Key vocabulary

Word	Definition
Batter	The player who is attempting to hit the ball bowled to score runs or prevent the loss of a wicket.
Bowler	The player who is delivering the ball towards the stumps defended by the batter. This player is on the fielding team.
Fielder	The rest of the fielding team use their fielding skills to limit the amount of runs scored by the batting side.
Bowl	Is the action of propelling the ball towards the wicket defended by the batter
Underarm Bowl	Combining a underarm throw and releasing the ball. The bowler's hand does not rise above the level of the waist and the ball ideally bounces once before the popping crease or batter.
Run(s)	The scoring method in cricket to (help) decide the result of a match.
Out/Dismissed	When a batters' period of batting is ended by the opposing team
Stumps	There are two sets in a game at either end of the pitch made up of three stumps and two bails on top of the stumps.
Wide	A ball that is too far away from the stumps or batter and deemed unable to hit.
No Ball	Multiple ways to get a no-ball: too many bounces, too high without bouncing and the bowler over stepping are examples.
Over	When 6 legal deliveries are bowled by the bowler

Cultural Heritage

Ben Stokes:



An English all rounder who was awarded the Sir Garfield Sobers trophy for 2019 (player of the year).

Shane Warne:



Retired Australian bowler. The greatest leg spinner of all time with over 1000 international wickets.

Sachin Tendulkar:



Retired Indian batsman and former captain of the Indian national team. He has scored the most international runs (34357) and the most international centuries (100).

Jofra Archer:



Jofra is a Barbadian born English fast bowler. Having played locally in Sussex he was signed by Sussex CCC and made a name globally playing short form cricket in Australia and India. In 2019 he qualified to play for England and won the Cricket World Cup and played in the Ashes, playing a starring role in both.

Skills I will Develop:

- I can hold the cricket bat correctly.
- I can throw the ball accurately.
- I can return the ball accurately.
- I can choose which type of fielding technique to use.
- I can develop an overarm technique to throw the ball.
- I can score 'runs' by running in between the wickets in a game situation.
- I can work as a team to improve my score.

School Games Values:

I will be respectful.
I will be passionate about my learning.
I will have self-belief.
I will be honest.
I will show determination.
I will work as a team to develop my teamwork skills.



Knowledge Organiser – Year 4 WW Respecting Rights – 2.2

Key Knowledge

1. Rights

- Human rights show that every person in the whole world is important.
- The rights of all children, no matter where they are in the world, should be respected by all people. It also means children should respect the rights of each other.
- Sometimes, people don't have their human rights met. This can make their lives incredibly hard.
- This is very sad but the good thing is that there are a lot of people working very hard to change this.
- We can also do our bit by making sure we treat all people with kindness and respect.



2. All Rights are Equal

All human rights are of equal importance

- The Universal Declaration of Human Rights was agreed to by the United Nations General Assembly in 1948.
- In 1959, the United Nations General Assembly agreed that the rights of children were very important and adopted the Declaration of the Rights of the Child.
- These encourage everybody to do all they can to build a fairer, safer and happier world for **all** children, where their rights are respected by everyone.



3. Rules

Democracy is a belief in freedom and equality between all people. Countries are a democracy when they have a government which supports the belief in freedom and equality between all people.

By following and respecting rules, we are helping our rights and the rights of others to be met – this can make a big difference.

Rules enable all people to have the opportunities to achieve their potential.



4. Rights without Responsibilities

- Responsibilities are things we should do – these might be practical tasks, such as making sure we get to school on time, or they might be behaviours, such as being honest.
- We can show responsibility through the actions we take and the choices we make.



5. Respecting Rights

Respect means that you think carefully about the feelings, wishes and rights of others.

If other people's rights are not respected, fear, anger and violence can spread. People can feel hurt, sad and unworthy.

Communities and individuals can become broken and unhappy. It is also against the law to make choices and act in a way that does not respect the rights of others.

- ✓ We can let people be who they want to be and not make fun of them or laugh at them.
- ✓ We can take time to learn about people who are different from us and we can learn from them.



6. Are we so Different? Action against discrimination

What choices could you make that challenge stereotypes? What actions could you take that support equality and fairness?

Key Vocabulary





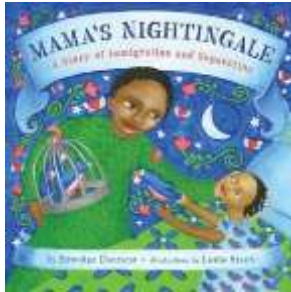
Word:	Meaning:
citizen	An inhabitant of a city or town who is entitled to all the legal rights and privileges granted by the state
consequence	a result. The consequence of your actions is what happens as a result of the choices you make
democracy	a form of government in which power rests with the people, either directly or through elected representatives
discrimination	The unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, or gender
equality	The state of being equal; ensuring individuals or groups of individuals are not treated differently or less favourably. Equality is one of our school values
Human Rights	A moral or legal entitlement that every human has regardless of race, gender, nationality, ethnicity, language or religion
stereotype	a mistaken idea or belief many people have about someone based upon how they look on the outside. Stereotyping people is a type of prejudice because what is on the outside is a small part of who a person is







Cultural Heritage

Which human rights are you most grateful for?

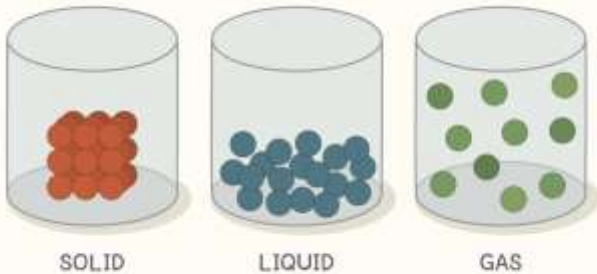




Knowledge Organiser – R.E Year 4 – 2.2

Key Knowledge		Key Vocabulary		Cultural Heritage	
Unit 7 – Disposition: Being Merciful and Forgiving				Unit 8 – Responding to Suffering	
<p>1. Can all mistakes be forgiven?</p> <ul style="list-style-type: none">To say sorry when we mean it is often very hard.Some situations are easy to forgive in, some are hard and in some situations it depends.Does forgiveness change for each person?There are lots of nice things we can do to help us say sorry e.g. <i>make a card or give flowers.</i>The Bible story The Unforgiving Servant reminds Christians of why it is important to forgive others.How can I show love through forgiving others? <p>2. What does a story from the Bible have to say about forgiveness? What do Jewish people and Christians think about forgiveness?</p> <ul style="list-style-type: none">The Bible teaches forgiveness. All things can be used by God for good purposes.In the story of Joseph and his brothers, Joseph saw God’s plans and purposes in what was intended as a wicked act. The Bible teaches to forgive, even though sometimes it is hard.		<ul style="list-style-type: none">There is teaching within Judaism that there are separate elements to forgiveness.<ul style="list-style-type: none">Repentance - showing that a person who has done harm is sorry.Forgiveness – the victim of the wrongdoing decides not to let that action hurt them anymore. It is not the same as forgetting.Judaism teaches that it is only the victim who can forgive the harm. Other people are not in a position to do so on their behalf. <p>Why might it be hard to forgive somethings?</p> <p>3. What do Christians believe about forgiveness as a result of Jesus’ death on the cross?</p> <ul style="list-style-type: none">The two robbers who were crucified near Jesus during his crucifixion deserved their punishment, yet Jesus did not. Jesus forgave one of them who asked for forgiveness (<i>Luke 23:13-25 and 30-43</i>)The Bible teaches that Jesus’ death made it possible for people to be forgiven by God; and Jesus’ death opened up the way for people to be friends with God.		  	 

Key Knowledge		Key Vocabulary		Cultural Heritage													
Unit 8 - Disposition: Responding to Suffering																	
<div>1. Can we recognise when others are in hurt or in pain?</div> <div>What causes you physical pain? Emotional pain?</div> <div><div><div><div></div><div></div><div></div></div><div>We often feel empathy for those who are suffering. Sometimes, people may have different emotional responses such as pleasure, indifference or sympathy.</div><div>How can we respond to other's hurt to help and support them?</div></div><div></div><div>Refugee crisis</div><div><div><div></div><div></div><div></div></div><div>Humanists believe that human beings are responsible for making the world a better place.</div><div>They believe that if we want to change the world, we need to work towards that ourselves. We need to take practical action to support others in need.</div><div>Because of this belief, Humanists are involved in lots of charity work in many different areas of life.</div><div>2. How do Muslims respond to the suffering of others?</div><div>Islam teaches Muslims to care for others.</div><div>For example, by giving money to Islamic Relief and/ or working with them as a volunteer.</div><div>Zakah (charity) is the fourth Pillar of Islam and means purification of wealth. Annual Zakah is distributed to the poor and needy using the rules in the Qur'an to prioritise the most needy, if there is not enough for everyone.</div></div><div></div></div>		<div><div><div></div><div></div><div></div></div><div>Muslims can pay Zakah at any time of the year, however a lot of Muslims choose to pay Zakah in the month of Ramada.</div><div>In addition to the annual Zakah, Allah (swt) encourages Muslims to be generous and give even more in charity, this is voluntary charity and called Sadaqa.</div><div>Abu Rabi reported that prophet Mohammad (pbuh) said: the one who visits the sick is like the one who is in the fruit garden of paradise until he returns" (Hadith)</div><div>How do you respond when others are hurt or in pain?</div></div> <div>Is it important to help people in pain? Is my involvement always helpful? When is it better to allow more experienced/skilled people to take charge?</div> <div><div>3. What do Christians learn about the reactions of witnesses to Jesus' crucifixion? How do some Christians today respond to the account?</div><div><div><div></div><div></div><div></div></div><div>There were various responses to the crucifixion of Jesus (Mary, mother of Jesus – very sad; Jewish leaders - triumphant; Roman Soldiers - indifferent; Disciples - lost).</div><div>The reaction of God included the three-hour darkness, which showed God's distress during the crucifixion.</div><div>Today, some Christians take part in an 'Easter Walk' to remember and think about how Jesus felt as he walked with his cross through the streets of Jerusalem.</div></div><div></div></div>		<table><tr><td>refugee</td><td>a person forced to leave his or her home or country to seek safety or protection</td></tr><tr><td>repentance</td><td>the feeling of sorrow or deep regret for something done in the past</td></tr><tr><td>respond</td><td>to answer or give a reply, in words or otherwise</td></tr><tr><td>suffering</td><td>the act of feeling pain or misfortune</td></tr><tr><td>sympathy</td><td>kind understanding and concern for others when they are sad, suffering, or having trouble</td></tr><tr><td>Zakah</td><td>annual charity given by Muslims. It is the forth Pillar of Islam</td></tr></table>	refugee	a person forced to leave his or her home or country to seek safety or protection	repentance	the feeling of sorrow or deep regret for something done in the past	respond	to answer or give a reply, in words or otherwise	suffering	the act of feeling pain or misfortune	sympathy	kind understanding and concern for others when they are sad, suffering, or having trouble	Zakah	annual charity given by Muslims. It is the forth Pillar of Islam	
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Knowledge Organiser – Science – ‘Weather Wise’ – States of Matter - Year 4

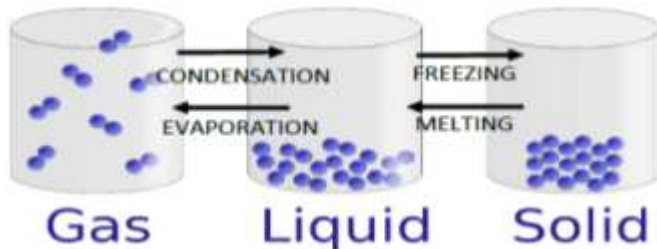
Key Knowledge	Key Vocabulary		Cultural Heritage
<p>Solids, Liquids and Gases</p> <ul style="list-style-type: none"> What is a solid? When materials hold their shape. Their particles are closely packed and form a regular pattern. Their shape is fixed and they will always take up the same amount of space. Examples - ice, wood, glass, diamond What is a liquid? When materials hold the shape of the containers they are in and so can change shape. Their particles are close together but can move over each other. Examples - water, milk, lemonade, orange juice What is a gas? Gases can escape from open containers. They often cannot be seen. They have particles which can spread it and move in all directions. Examples - hydrogen, oxygen, carbon-dioxide <div>  <p>SOLID LIQUID GAS</p> </div> <div> <p>The particles for solids, liquids and gases.</p> </div>	Word	Definition	<p><u>Liquids - Drinks -</u></p> <p>India - Mango lassi is made from yogurt, milk and mango pulp, and may contain added sugar.</p>  <p>Egypt - Lemonade -Lemons, water and sugar. This was first documented in Egyptian writings around 1,500 years ago.</p> 
	States of Matter	Materials can be one of 3 states - solid, liquid or gas. Some materials can change state to another and then change back again.	
	Solids	These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. They take up the same amount of space no matter what has happened to them.	
	Liquids	Liquids take the shape of their container. They can change shape but not the amount of space they take up. They can flow or be poured.	
	Gases	Gases can spread out to fill the container or room that they are in. They do not have any fixed shape but do have a mass.	
	Water Vapour	This is water that takes the form of a gas. When water is boiled it evaporates into a water vapour.	
	Melt	This is when a solid changes state to a liquid.	
	Freeze	Liquid turns to a solid during the freezing process.	
	Evaporate	Turn a liquid into a gas.	
	Condense	Turn a gas into a liquid.	
	Precipitation	Liquid or solid particles that fall from a cloud as rain, sleet, hail or snow.	

Heating and Cooling Materials -

- Some materials change state when they are heated or cooled.
- When water and other liquids reach a certain temperature, they change state into a solid or a gas. The temperatures that these changes happen at are called the boiling, melting or freezing point.

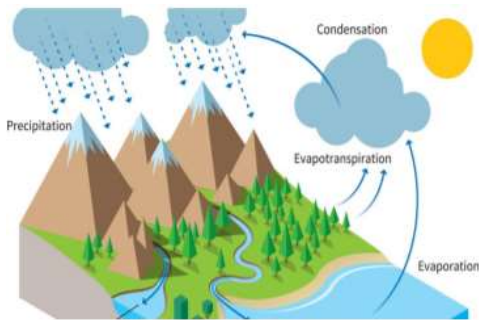
Example - Water -

- Warming solid ice makes it melt into liquid water.
- Adding more heat makes it evaporate, at 100°C , into steam (a gas).
- When it is cooled it condenses back into liquid water.
- If it is cooled to 0°C it freezes and forms a solid.



We measure temperature in Degrees Celsius ($^{\circ}\text{C}$)

The Water Cycle -



1. Water from lakes, puddles, rivers and seas is **evaporated** by the sun's heat, turning it into **water vapour**.
2. This **water vapour** rises, then cools down to form water droplets in clouds (**condensation**).
3. When the droplets get too heavy, they fall back to the earth as rain, sleet, hail or snow (**precipitation**).