Cornerstones Curriculum: KS2 Knowledge Building Across Year A

Outlined below is what KS2 children are expected to know, remember and retain at the end of Year A of our rolling programme. Children's learning in our mixed age classes is knowledge rich due to its cyclical design and teacher's skill at encouraging retrieval year on year. Threads

Subject	Autumn	Spring	Summer
Learning threads leading the curriculum	Local history Our locality	**Victorians** **Water**	**Rainforests,** **climate change,** **American culture**
English	Miracles	Time	Explore
	Key texts: The Miraculous Journey of Edward Tulane – by Kate Dicamillo The Red Tree by Shaun Tan **Key themes:** Miracles .	**Key texts:** Clockwork by Philip Pullman Cogheart The Railway Children **Key themes:** Time .	**Key texts:** The Explorers by Katherine Rundell Journey to the River Sea **Key themes:** Explore
Science	Plants Living things and their habitats	Rocks Sound Evolution and Inheritance	Animals including humans
	<u>Plants Y3</u> **I know the names of different parts of the plant and can describe the function of these parts (stem/trunk; leaves and flowers).** **I know that plants have roots to provide support and to draw moisture from the soil, through stems to take water to the rest of the plant.** **I know that seeds/bulbs require the correct conditions to germinate and grow and that these differ from plant to plant (air, light, water, nutrients from soil, room to grow).** **I know that flowering plants have evolved specific parts to carry out pollination, fertilisation and seed production.** **I know that seed dispersal improves a plants chances of successful reproduction.** I know that plants are producers and that they make their own food. I know that the leaves absorb sunlight and carbon dioxide. **<u>Living things and their habitats Y4</u>** **I know that living things can be divided into groups based on their characteristics e.g., flowering and non-flowering plants, vertebrate and invertebrate etc.** **I know that classification keys can be used to help group and name livings things** **I know that environmental change affects habitats differently.** **I know that different organisms are affected by environmental change differently.** I know that human activity can significantly affect the environment (both positively and negatively). **<u>Living things and their habitats Y5/6</u>** **I can compare the differences in the lifecycle of a mammal, an amphibian, an insect and a bird** **I know the reproductive process of animals.** **I can explain the reproductive process of a flowering plant.** **I know the reproductive process of non-flowering plans such as ferns and fungi.** **I know the work of key scientists such as David Attenborough and Marie Clark.** **I know what a micro-organism is and can name some examples.** **I know the characteristics of different micro-organisms, plants and animals** **I know how to group micro-organisms, plants and animals and can justify** I can explain the impact of climate change on plants and animals. I know the different animal groups and can explain how this helps me to better understand them. I know the impact of invasive species on an eco-system such as the Florida everglades.	**<u>Rocks</u>** Y3 **I know that there are different types of rock.** **I know that fossils are made when things that have lived are trapped within rocks.** **I know that soil is made when things that have lived are trapped within rocks.** **I know that there are different types of soil.** **I know that fossils provide evidence that living things have changed over time** I know that palaeontologists use fossils to find out about the past. **<u>Sound</u>** Y4 **I know that sound is produced when an object vibrates.** **I know that sound travels through the air in soundwaves to the ear which vibrates our ear drum.** **I know you can change the volume and pitch of a sound.** **I know bigger vibrations produce louder sounds and smaller vibrations produce quieter sounds** **I know faster vibrations produce higher pitched sounds** **I know that the further away a sound is produced, the fainter it sounds to us (sound travel can be blocked || sound spreads out as it travels)** **<u>Evolution and inheritance Y6</u>** **I know about how a palaeontologist works and how evidence is gathered.** **I know that family traits are inherited/passed down from parents and grandparents.** **I know how animals are specifically adapted to suit their habitat.** **I know that scientists believe humans evolved from apes to modern homo sapiens.** **I know that Charles Darwin discovered evolution of the species through his observational work.** I know about the importance of the finds of Mary Anning (the mother of palaeontology) I know that dogs can be bred to select the most desirable genes from different breeds I know how the peppered moth changed during the industrial revolution to ensure its survival. I know the shape of the beaks of finches can affect the types of seed/nut it eats.	**<u>Animals including humans - Y3</u>** **I know that all animals, humans included need nutrients to survive and that foods are organised into food groups.** **I know that many animals have skeletons to support their bodies and protect vital organs.** **I know that muscles are connected to bones and move when they contract and that movable joints connect bones.** **I know what makes an invertebrate and a vertebrate.** **I know the names of some of the main bones of the human skeleton.** I know that different foods have different nutritional values and that the correct amount of each constitutes a balanced diet. I know that different animals are adapted to eat different foods. **<u>Animals including humans - Y4</u>** **I know the names of internal organs linked to the digestive system and can use these to describe how the body digests food.** **I know the names of the different types of teeth in our mouths and know the different jobs that these teeth do.** **I know how to sort animals into different groups to classify them and use this to construct a food chain**. **I know what producers, predators and prey are.** **<u>Animals including humans Y5/6</u>** **I know and can describe the changes that we go through as we age.** **I know the names of the main parts of the circulatory system.** **I know what the function of the heart, blood vessels and blood is.** **I know how our body uses the food and water we intake in terms of nutrients in our body and how these are transported around the body and the body of other animals.** **I know the impact of diet and exercise on the body.** **I know the impact of drugs and alcohol on the human body** I know how we use the oxygen we breathe in. I know the nutritional value of some food and the impact of an unhealthy diet.
History	Heritage at home – Local history	Victorious – The Victorians	The Mayan Civilisation
	I know how Richmond has changed over time **I know that Richmond castle was built by Alan the Red as a northern outpost.** **I know that Richmond Castle has been used for different things.** **I know the Legend of the Drummer Boy** Know that the castle was the town initially with the market place part of the bailey.	**I know where the Victorian Period fits on a timeline and how it compares to other periods studied.** **I know what life was like for rich and poor children in Victorian times and can identify the similarities and differences to life now.** **I know the Victorian period was renowned for advancement in agriculture and industry and the change to a more industrial nation.** **I know that the actions of Lord Shaftesbury became the cause of change.**	**I know where the Maya period fits on a timeline and how it compares to other periods studied.** **I Know how the Maya worshipped and the impact this had on their everyday life.** **I know some of the major achievements of the Mayans (trade, maths and a number system, written language system (glyphs), architecture (elevated roads and aqueducts), sophisticated art, harvesting cocoa and developing chocolate drinks.**

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	Richmond has other famous locals for example Robert Willance.	**I know the impact the Victorian period has had on life today (sewers, education)** Queen Victoria was a long reigning monarch who had many children who married much of European royalty. The industrial revolution was the move from farming to industry as the main vocation and the rapid expansion of cities. The railways meant faster and easier travel for Victorians	The Mayan empire was in modern Mexico and stretched beyond. Identify the food the Maya ate and draw comparisons between what we eat now. Identify Chichen Itza and its importance to the Maya. Know how the Maya communicated with other civilisations.
Geography	A Local Dilemma	From Source to Sea	Amazonia
	I can use an OS map to locate places local to me and some geographical features. I can use 4 and 6 figure grid references, symbols and keys. **I know an issue that is specific to our locality.** I understand the impact this will have on both humans and the physical geography of the area I know how gather first hand evidence (eg by conducting a survey) **I know how to evaluate my research and draw conclusions.** R – A66 B – designer outlet EC – new housing development	**I understand and can explain the water cycle** **I know that rivers erode, transport and deposit materials** **I know how a river finds its way from source to sea** **I know that rivers are important for humans and animals** **I know what causes river pollution and the impact on the environment** I know about the river Swale/or Tees and how it is important in our local area	**I know some of the countries which are in North and South America** **I know key physical characteristics of the North and South American continents (environmental regions, mountains and highlands, river basins, and coastal plains)** **I know the location of Brazil and where it is in relation the equator and other significant lines of latitude.** **I know the climates and biomes found in Brazil** **I know the key geographical features of Brazil and some of the similarities and differences between Brazil and the UK.** I know why the rainforests are so important I know what urbanisation is and why this is happening is Brazil I know that there are some positive impacts of deforestation
Art	Typography and Maps	Making Animated Drawings	Working with Shape and Colour
	I know that when designers work with fonts and layout it is called Typography. I know that we can use the way words look to help us communicate ideas and emotions. I know that we can create our own typography and combine it with other visual elements to make artwork about chosen themes.	I know that artists can make animations by creating drawings which move in a sequence. I know that we can use all our mark making skills and imagination to make our drawings visually engaging. I know that we can use our moving drawings to share narratives.	I know that we can be inspired by key artworks and make our own work in creative response. I know that we can use shape and colour as a way to simplify elements of the world. I know that shapes have both a positive and negative element. I know that we can arrange shapes to create exciting compositions. I know that we can build up imagery through layering shapes. I know that we can use collage to inspire prints. I know that screen prints are made by forcing ink over a stencil. I know that screen prints can be used to create prints which use thicker lines and / or shapes.
Music	Local musical stories	Water music	The sounds of the rainforest
		I know how to sing in tune and in harmony with others, with developing breath control. I know how a piece of music makes them feel with some use of musical terminology. I know how to perform a vocal ostinato in time. I know how to listen to other members of their group as they perform. I know how to create an ostinato and represent it on paper so that they can remember it. I know how to create and perform a piece with a variety of ostinatos.	I know that deciding the structure of music when composing can help us create interesting music with contrasting sections. I know that combining different instruments and different rhythms when we compose can create layers of sound we call 'texture'. I know that a 'loop' in music is a repeated melody or rhythm. I know that changing the dynamics of a musical phrase or motif can change the texture of a piece of music.
Computing	Networks and communication	Creating media	Data overload!
	Connecting Computers (Painting Program) I know that digital devices accept inputs and produce outputs I can describe a simple process I know how digital devices can change the way we work. I know how a computer network can be used to share information. I know how digital devices can be connected. I know the physical components of a network. **Communication and Collaboration** (Microsoft PowerPoint or Padlet)) • I know the importance of internet addresses • I know how data is transferred across the internet • I know how sharing information online can help people work together • I know different ways of working together online • I know how we communicate using technology • I know what information should and shouldn't be shared • I know that communication on the internet may not be private • I know how to report inappropriate content.	**Stop Frame Animation** (iMotion) • I know that animations follow a storyboard • I know how to ensure movement between frames is smooth • I know how to add additional media such as music and text. **Vector drawing** (Microsoft PowerPoint) • I know how to add and remove objects to create a drawing of a chosen artefact • I know how to use copy and paste to maintain consistency within the drawing • I know how to manipulate an object's size, colour, and proportion to represent a chosen artefact • I know how to purposefully position and rotate objects • I know how to move objects to different layers to create a specific aspect of a drawing I know how to group objects to make them easier to work with	**Branching databases** (J2data branch and Pictogram) • I know how to create a branching database on the computer. • I know why it is helpful for a database to be well structured. • I know how data bases are useful for real-world uses. **Spreadsheets** (Microsoft Excel) • I know how to input data into a spreadsheet • I know how to format a cell • I know how to create and apply a formula • I know how to duplicate a formula • I know a suitable way to present data using IT
RE	Festivals Hinduism	Good Friday Jesus the Saviour	Creation and science
	What are the deeper meanings of festivals? (DL2.9) • I know the names of some religious festivals (Christmas (Christianity), Eid al fitr (Islam), Diwali (Hinduism), Hanukkah (Jewish)) • I know how different festivals are celebrated • I know festivals can be celebrated in different ways.	**Why do Christians call the day Jesus died 'Good Friday'? (UC 2a.5)** • I know Christians see Holy Week as the culmination of Jesus' earthly life, leading to his death and resurrection.	**What do Christians learn from the creation story? (UC 2a.1)** • I know Christians believe God the Creator cares for the creation, including human beings.

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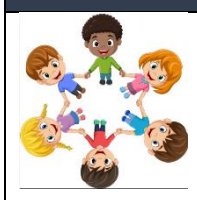
<table>
<tr><td></td><td>• I know Diwali is a festival of light and joy
• I know the stories that are recalled at Christmas and Diwali.

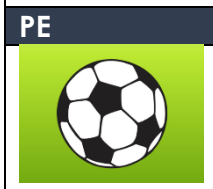
What does it mean to be a Hindu in Britain today? (DL2.7)
• I know the names of some Hindu deities
• I know the deities describe Hindu beliefs about God
• I know the links between Hindu beliefs and the aims of life.
• I know how Hindus show their faith within their families (home puja)
• I know how Hindus show their faith within their communities (arti and bhajans at the mandir; Diwali)</td><td>• I know the various events of Holy Week, such as the Last Supper, were important in showing the disciples what Jesus came to earth to do.
• I know Christians today trust that Jesus really did rise from the dead, and so is still alive today.
• I know Christians remember and celebrate Jesus' last week, death and resurrection
2b.6 What did Jesus do to save human beings? (UC 2b.6)
• I know Christians read the 'big story' of the Bible as pointing out the need for God to save people. This salvation includes the ongoing restoration of humans' relationship with God.
• I know The Gospels give accounts of Jesus' death and resurrection.
• I know The New Testament says that Jesus' death was somehow 'for us'.
• I know Christians interpret this in a variety of ways: for example, as a sacrifice for sin; as a victory over sin, death and the devil; paying the punishment as a substitute for everyone's sins; rescuing the lost and leading them to God; leading from darkness to light.
• I know Christians remember Jesus' sacrifice through the service of Holy Communion (also called the Lord's Supper, the Eucharist or the Mass).
• I know Christians believe that Jesus calls them to sacrifice their own needs to the needs of others, and some are prepared to die for others and for their faith.</td><td>• I know Christians believe as human beings are part of God's good creation, they do best when they listen to God.
• I know Christians believe The Bible shows that God wants to help people to be close to him — he keeps his relationship with them, gives them guidelines on good ways to live

Creation and Science: conflicting or complementary? (UC 2b.2)
• I know there is much debate and some controversy around the relationship between the accounts of creation in Genesis and contemporary scientific accounts.
• I know these debates and controversies relate to the purpose and interpretation of the texts. For example, does reading Genesis as a poetic account conflict with scientific accounts?
• I know there are many scientists throughout history and now who are Christians.
• I know the discoveries of science make Christians wonder even more about the power and majesty of the Creator.</td></tr>
<tr><td>PSHE</td><td>Friendship</td><td></td><td></td></tr>
<tr><td>  </td><td>Families and Relationships: (Y3/4)
• I know that violence is never the right way to solve a friendship problem.
• I know that bullying can be physical or verbal and not a one off event.
• I know the different roles related to bullying including victim, bully and bystander.
• I know that everyone has the right to decide what happens to their body.
• I know some stereotypes are related to disability.
• I know that trust is being able to rely on someone and it is an important part of relationships.
• I know that bereavement describes the feeling someone might have after someone dies or another big change in their lives.
Health and Wellbeing: (Y5/6)
• I know that relaxation stretches can help us to relax and de-stress.
• I know that what we do before bed can affect our sleep quality.
• I know what can cause stress.
• I know that failure is an important part of success.</td><td>Health and Wellbeing: (Y5/6)
• I know the risks of sun exposure.
• I know that calories are the unit that we use to measure the amount of energy certain foods give us.

Safety and Changing Body: (Y3/4)
• I know that there are risks to sharing things online.
• I know the difference between private and public.
• I know that cyberbullying is bullying which takes place online.
• I know that other people can influence our choices.
• I know the physical changes to both male and female bodies as people grow from children to adults
• I know that it is important to maintain the safety of myself and others, before giving first aid.
• I know that bites or stings can sometimes cause an allergic reaction.
Changing Body (Y5/6)
• I know the risks associated with drinking alcohol
• I know the process of the menstrual cycle.
• I know the names of the external sexual parts of the body and the internal reproductive organs.
• I know that puberty happens at different ages for different people
• I know how a baby is conceived and develops

**The puberty and reproduction lessons should be taught to individual year groups.</td><td>Citizenship: (Y5/6)
• I know that parliament is made up of the House of Commons, the House of Lords and the Monarch.
• I know that parliament is where MPs debate issues, propose laws, amend existing laws and challenge the government's work.
• I know that education is an important human right.
• I know that the prime minister appoints 'ministers' who have responsibility for different areas, such as healthcare and education.
• I know what happens when someone breaks the law.
• I know that prejudice is making assumptions about someone based on certain information.
• I know that discrimination is treating someone differently because of certain factors

Economic Wellbeing: (Y3/4)
• I know that budgeting money is important.
• I know that there are a range of jobs available.
• I know that money can be lost in a variety of ways.
• I know the importance of tracking money.
• I know that there are different ways to pay for things.
• I know that some stereotypes can exist around jobs but these should not affect people's choices.

Transition: Y3/4 Y5/6
• I know that setting goals can help us to achieve what we want. (Y3)
• I know that change often brings about more opportunities and responsibilities. (Y4)
• I know the skills needed for roles in school (Y5)
• I know that a big change can bring opportunities but also worries</td></tr>
<tr><td>PE</td><td>Netball, Dance, Gamesense</td><td>Swimming, Gymnastics, Fitness</td><td>Forest Schools, Tennis, Athletics, Rounders</td></tr>
<tr><td>  </td><td>Netball
I know what it means to be an attacker and defender
I know what possession means
I know some different passes and when to use them
I know the rules for footwork
I know the different positions on a court and understand their boundaries.
I know how to play a game of netball
Dance – Folk dancing
(Linked to local history topic eg Richmond Clog Dancers)
I know the importance of dance through history
I know the importance of dance in culture and society
I know what folk dancing is and its place in communities</td><td>Swimming
I know some basic pool safety
I know why it is important to be safe around water, and can list some ways to protect myself
I know how to self-rescue in water- based situations
I know the names of a range of strokes
I know how to breathe appropriately whilst swimming and why it is important
Gymnastics
I know how to make my movements and balances 'excellent'
I know how to make my gymnastics sequences interesting, including themes</td><td>Tennis
I know how to win points in tennis
I know how the court is set out and where I can play
I know to let the ball bounce once before I hit it
I know what a serve is and how serving well can help me win

Athletics
I know to maintain my sprinting speed until I cross the finish line
I know how sprinting is different to long distance running
I know what the lanes are for and why I need to stay in my lane
I know how to adopt a good sprinting technique</td></tr>
</table>

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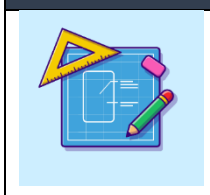
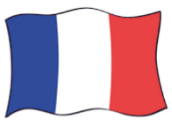
	I know and can name some simple country folk dances I know the footwork for some classic folk dances I know how to perform folk dances for an audience. **Game Sense** I know where and when to pass, in order to score points against the other team I know that different games have different boundaries, rules and positions I know that I need to work as a team when playing team games I know what it means to be an attacker and a defender I know why games have rules	I know that canon and unison can be used to add interest to my sequence I know that changing levels and direction can add interest to my sequence I know that a sequence is a combination of controlled movements and balances that have been linked together in a particular order **Fitness** I know the cardiovascular elements I know what the impact is of exercise on my body I know the importance of developing aerobic capacity I know the importance of warming up and cooling down for our bodies I know how being flexible impacts my health I know how to take my own pulse and what it means if it changes after exercise	I know how to adapt my running at the start, middle and end of a sprint I know what a relay is and how to changeover I know the history of Athletics games and how we compete **Rounders** I know the role of the batting and fielding teams in a game of rounders I know the role of the backstop and now it can help my team win I know what it means when the batter misses the ball I know when to use an overarm and under arm throw, depending on my aim
DT	Constructing a Castle	Spaghetti Bolognaise	Gears and Pulleys
	**I can draw and label a simple castle that includes the most common features.** **I can recognise that a castle is made up of multiple 3D shapes.** **I can score or cut along lines on the net of a 2D shape**. **I can utilise skills to build a complex structure from simple geometric shapes**. I can design a castle with key features which satisfy a given purpose. I can use glue to securely assemble geometric shapes. I can evaluate my work by answering simple questions.	I know the process of beef production. I know what is in a traditional Bolognese recipe and can suggest changes to it. I know that you can add nutritional value to a recipe by selecting ingredients. I know how to prepare ingredients and cook a version of bolognese sauce.	I know the names of mechanical systems that use gears in everyday objects (e.g. bicycle, clock, etc.). I know gears and pulleys allow us to transfer movement and force from one part of a mechanical system to another. I know gears allow us to increase the output of a mechanism. I know hot glue creates a strong bond quickly. I know that sustainability means thinking about the materials that were used to make a product and how the product was made.
French	Les Monstres Les Portraits	Animals and Habitiats	**Introducing myself** **My favourite animals**
	**<u>Les Monstres:</u>** End of unit expectations: **Have a developing understanding of the way sounds are represented in writing** **Recognise and respond to instructions including parts of the body** Be able to accurately copy and write some key words from the unit Be able to sing a song from memory Describe numbers of body parts **<u>Les Portraits:</u>** End of unit expectations: **Be able to describe themselves** **Understand descriptions spoken and written by other people** Be able to say how other people look Be able to write about themselves or another person using adjectives to describe distinguishing features	**Animals and Habitats** End of Unit expectations: Know how to create simple spoken and written sentences including an adverbial opener, a verb, nouns, adjectives and conjunctions. know the indefinite article une, is used with feminine nouns Know the verb – je vois (I can see) Know how to spell colours in French know about Paris and its landmarks, and speak about them in French	**Introducing myself** End of unit expectations: know how to ask someone how old they are know how to say how old you are know how to ask someone where they live know how to say where you live know about landmarks in Belfast, Cardiff and Edinburgh and how to name them **My favourite animals** Know how to say whether I live in a house or a flat Name objects found in the garden know about possessive adjectives Know the negative adverb ne…pas land that in a negative statement un, une ,des use the conjunctions ou or et in compound sentences