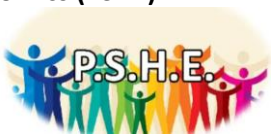
HEARTS Curriculum – Termly Summary

Upper Key Stage 2 (5/6) Spring Term A

Geography 	The geography topic for this term is Europe with a focus study on the Netherlands. In lower key stage 2, pupils have learnt to locate the world's countries and used maps to focus on Europe and North and South America. Through this topic, pupils will concentrate on key human and physical features of the Netherlands and its cities as well as environmental regions. Pupils will be able to locate positions of photos on maps and use photographic evidence in an investigation. This builds on previous work in key stage 1 where they located Kenya and Antarctica as well as in lower key stage 2 where children located Brazil and compared a region in Brazil to a region in England. Using the Netherlands as a focus point will also allow children to build on their year 3 and 4 knowledge of coastal regions and sea /water defences.
Science 	Children will learn to recognise the ways in which living things have changed over time and that fossils can be used to provide evidence of this change. Children will apply this knowledge to examine how animals and plants have adapted to suit their environment and make comparisons between these adaptations. Later in the term, building upon prior knowledge from lower key stage 2 where they explored the ways in which living things can be grouped, children will classify a wider range of living things based on specific characteristics. Developing their understanding of animals and living things from lower key stage 2, children will recognise the differences between vertebrates and invertebrates and examine the features that these creatures have. To support their understanding, children will examine the life and work of Charles Darwin.
Religious Education (RE) 	**Year 5** This unit will be studied through the disciplinary lens of philosophy to answer the main enquiry question. The children will learn to explore different beliefs about what causes and affects happiness as well as examine a philosophical ideology of happiness and how knowledge and ignorance can impact life. Previously they have looked at how people express a commitment to a worldview or religion which will give them an understanding of the dedication and commitment people participate in. Furthermore, they have looked at what philosophy is and how people make moral decisions which will have laid the foundations for them to begin looking further into the views of some key philosophers such as Kant and Plato. To aid understanding of this unit, children will have previously learnt in KS1 about significant events, festivals and communities and what the meaning behind these are to different beliefs. They will have also understood readings from religious texts and spoken about the impact of these words. Prior learning, in Year 3 with regards to religious outlooks on life, will offer further opportunity for children to discuss through a philosophical lens, moral dilemmas and how the outcomes can change from person to person. **C**hildren have previously looked at whether seeing is believing and if believing in God is reasonable where they began to ask deeper questions and think like philosophers themselves and understand arguments made by great philosophers as well as responding to these arguments with their own thoughts. This links particularly well to when they will look at Plato's allegory of the cave. **Year 6** By applying and drawing upon their developing philosophical thinking, children will learn to explore and evaluate a range of answers to questions about the world around them, including questions relating to meaning and existence. Furthermore, they will analyse and evaluate different ways in which philosophers understand humanness incorporating what it means to live a 'good' life. They will use well-chosen pieces of evidence to support and counter a particular argument. Previously, children have looked at how people express a commitment to a worldview or religion and how people make moral decisions. To aid understanding of this unit, children will have previously learnt in KS1 about significant events, festivals and communities and applied their knowledge of this to their developing religious literacy. They will have also understood readings from religious texts and spoken about the impact of these words. Prior learning, in Year 3 with regards to religious outlooks on life, will offer further opportunity for children to discuss through a philosophical lens, moral dilemmas and how the outcomes can change from person to person. Children have also discussed and debated about whether seeing is believing and if believing in God is reasonable and began to ask deeper

	questions and think like philosophers themselves. They have begun to develop and understand arguments made by great philosophers as well as responding to these arguments with their own thoughts. This links particularly to when they will look at Plato's allegory of the cave.
Computing 	**<u>Year 5 - Data and Information – Flat-file databases</u>** This unit looks at how a flat-file database can be used to organise data in records. Children will use tools within a database to order and answer questions about data. They will create graphs and charts from their data to help solve problems. They will also use a real-life database to answer a question and present their work to others. This unit of work will build upon learning in year 3, where pupils learnt how to create and use branching databases; and in year 4 where children used digital devices (data loggers) to collect data using sensors to be analysed by a computer. **<u>Year 5 - Programming – Selection in Physical Computing</u>** In this unit, children will use physical computing to explore the concept of selection in programming using the Crumble programming environment. They will be introduced to a microcontroller (Crumble controller) and learn how to connect and program it to control components (including output devices — LEDs and motors). Children will be introduced to conditions as a means of controlling the flow of actions in a program. They will make use of their knowledge of repetition and conditions when introduced to the concept of selection (through the 'if...then...' structure) and write algorithms and programs that utilise this concept. To conclude the unit, children will design and make a working model of a fairground carousel that will demonstrate their understanding of how the microcontroller and its components are connected, and how selection can be used to control the operation of the model. Throughout this unit, they will apply the stages of programming design that have been taught previously. This unit of work builds upon the concepts taught in years 3 and 4 where children learnt how to create algorithms that respond to events in sequence and that use both infinite and count controlled loops to demonstrate how algorithms use repetition to reduce the steps within a programme. **<u>Year 6 - Data and Information – Spreadsheets</u>** This unit introduces the children to spreadsheets. They will be supported in organising data into columns and rows to create their own data set. Children will be taught the importance of formatting data to support calculations, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. Children will be taught how to apply formulas that include a range of cells and apply formulas to multiple cells by duplicating them. They will use spreadsheets to plan an event and answer questions. Finally, they will create charts, and evaluate their results in comparison to questions asked. This unit builds upon learning from year 3, where children planned and created branching databases in order to answer questions; and in year 5 where flat-file databases were used to group, sort and refine large amounts of data in order to answer questions. **<u>Year 6 - Programming – Variables in games</u>** This unit explores the concept of variables in programming through games in Scratch. First, children find out what variables are and relate them to real-world examples of values that can be set and changed. Then they use variables to create a simulation of a scoreboard. In Lessons 2, 3, and 5, which follow the Use-Modify-Create model, children experiment with variables in an existing project, then modify them, before they create their own project. In Lesson 4, children focus on design. Finally, in Lesson 6, they apply their knowledge of variables and design to improve their games in Scratch. This unit of work builds upon the concepts taught in years 3 and 4 where children learnt how to create algorithms that respond to events in sequence and that use both infinite and count controlled loops to demonstrate how algorithms use repetition to reduce the steps within a programme.
Art and Design 	Pupils will explore art produced by a famous painter, learning to appreciate and reflect on various artwork. Children will explore and practise specific techniques using sketchbooks to create their own high-quality art using the techniques but also having freedom and choice when applying their knowledge and using their own style. The children will build upon their knowledge of colour and colour mixing from key stage 1 and lower key stage 2 and begin to consider imagery and using colour to convey feelings and mood.

Design Technology (DT) 	Children will explore the difference between windmills, wind turbines and fans. They will then design their own windmill structure that can be used as a desk fan. They will build on their previous knowledge from key stage 1 and years 3 and 4 about frame structures. As part of the design process, the children will learn new techniques, including constructing frame components themselves and how to link these together, using recycled materials. The children will also build on skills learnt in years 3/4 when they built a simple electrical torch circuit. This circuit will connect to a motor that will drive the sail of the windmill/ fan. Later, in key stage 3 they will be able to extend their knowledge further when they look at the work of engineers and new technologies and use more advanced systems, including computer aided design and controlled machinery to create their designs.
Physical Education (PE) 	**<u>Spring 1</u>** This unit will focus on the teaching of techniques and practices for learning gymnastics. Children will develop a complex sequence and explain how a sequence is formed, using appropriate terminology to describe technique and composition. The unit will build on prior learning from lower key stage 2 where children have learnt how to move in varied ways and directions confidently and safely around the room including travelling across the floor, mats and onto and off of benches and tables whilst making different body shapes. They also have previous experience of using different travelling movements. During this gymnastics unit, when applying skills, children will be able to create a complex sequence and explain how a sequence is formed, using appropriate terminology to describe technique and composition whilst varying direction, levels and speed, to improve the look of a sequence. They will build upon prior knowledge and match and mirror a partner when performing own sequences on the floor, mats and apparatus. Throughout these activities the children must think about performing jumps and shapes fluently and with control, including when working with apparatus; including jumping from 1 foot and landing on the opposite foot. **<u>Spring 2</u>** This unit will focus on the teaching of techniques and practices for learning netball. Children will develop the use of attacking and defending skills appropriately within a game. The unit will build on prior learning from lower key stage 2 where children have learnt how to pass, receive and move with a ball, keeping control and possession. They also have previous experience of moving fluently, changing direction and speed whilst avoiding collisions. During this invasion games unit, when applying skills, children will be able to demonstrate accurate passing and receiving including when on the move. They will build upon prior knowledge and get into a good position to receive the ball and can explain why this is important. Throughout these activities the children must think about choosing a range of strategies to keep a rally going with a partner, whilst working in a small group to devise their own net or wall game including rules to follow.
Personal, social, health and economics (PSHE) 	Children will be exploring a range of topics from two of the three main strands in PSHE: Physical Health and Wellbeing and Relationships. Previously in lower key stage 2, children will have learnt about different relationships, and that what is important is, that these relationships are stable, caring and happy and that they help you feel secure as you grow up. Moving into upper key stage 2, children will understand that relationships change as a result of growing up, as well as, what marriage is and what it means. Children will also learn about how to recognise and report feelings of being unsafe and the difference between appropriate and inappropriate touch. This will build on previous learning in lower key stage 2, where the children will have learnt that they have control over their body and that it is important to respect others. Children will explore mental wellbeing and understand that it is part of daily life. Children will also learn about the impact of how what happens online can affect their mental health and explore whether or not the same principles apply to online relationships as to face to face. This will further their understanding of what they learnt in years 3 and 4 where they explored whether or not people behave differently online.

Music 	**<u>Year 5</u>** Children will continue to listen, appraise and perform music. Children will appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians. Children will build their appraisal skills, giving opinions about specific genres of music, whilst becoming more confident applying technical vocabulary. Building on learning from lower key stage 2, the children will now be more secure in reading and playing some conventional music symbols using note values of minim, crochet and quaver. Through playing the glockenspiel, children will learn about the structure and organisation of music and how to make accurate entries and endings. Children will know and be able to talk about how pulse, rhythm, pitch, tempo, dynamics, texture and structure work together to make a song sound interesting and be able to keep the internal pulse. Children will learn how to play instruments with the correct technique within the context of the song. They will continue to develop performance skills (singing and playing instruments), including dynamic awareness, accuracy, fluency and expression. They will be able to record and compare their performance to a previous one and talk musically about it. This will ensure the children are fully prepared for their journey into key stage 3, where they will be exposed to and evaluate music in more depth, from across a range of time periods and genres, and consider how they influence music today. **<u>Year 6</u>** Children will continue to listen, appraise and perform music. Children will also learn to compose their own music whilst continuing to develop their improvisation skills and fluency leading to a final performance. Children will appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians. They will build their appraisal skills, giving opinions about specific genres of music, whilst becoming more confident applying technical vocabulary. Building on learning from lower key stage 2, the children will now be more secure in reading and playing some conventional music symbols using note values of minim, crochet and quaver. In this unit, children will learn to compare two songs in the same style, talking about what stands out musically in each of them and discuss their similarities and differences. Children will be able to identify the structure of the songs (intro, verse, chorus etc.) and name some of the instruments used in the songs. They will be able to create simple melodies using up to five different notes and simple rhythms that work musically. Children will know and be able to talk about how pulse, rhythm, pitch, tempo, dynamics, texture and structure work together to create a song or music**.** They will continue to develop performance skills (singing and playing instruments), including dynamic awareness, accuracy, fluency and expression. Children will be able to record and compare their performance to a previous one and talk musically about it. This will ensure the children are fully prepared for their journey into key stage 3, where they will be exposed to and evaluate music in more depth, from across a range of time periods and genres, and consider how they influence music today.