Theme: Heavy Metal Year 4 **Term:** Spring 2 (6 weeks)

Heatherlands Primary School

Curriculum drivers: The curriculum is underpinned by the school's Curriculum Drivers: Community, Communication and Consolidation. The spiritual, moral, social and cultural development of our pupils and their understanding of the core values of our society are also woven through the curriculum and developed through 'The Heatherlands Way' values of independence, resilience, motivation, aspiration and respect. The curriculum also consolidates the fundamental British values of democracy, the rule of law, individual liberty, and mutual respect and tolerance of those with different faiths and beliefs.

We have identified the key concepts or overarching ideas within each subject. To enable the children to access them, we call these the 'Big Ideas'.

Key knowledge and skills

Art

Big ideas: inspiration, experimentation & expression

- Study wire sculptures by Alexander Calder and use computer generated animation as starting points for own work **(inspiration, experimentation, expression)**
- Use pipe cleaners, to create prototype models before sculpting with wire for final product **(experimentation, expression)**
- Use the work of Alexander Calder (Sculptor) to replicate ideas or inspire own work **(inspiration, experimentation, expression)**
- Create wire sculptures inspired by Alexander Calder **(inspiration, experimentation, expression)**
- Study the work of Alexander Calder (Sculptor) identifying the 7 elements of art and the principles of balance, contrast, emphasis, movement, rhythm and unity using the work as an inspiration for their own art **(inspiration)**
- Use artists work as an inspiration for their own. **(inspiration, experimentation, expression)**
- Decide what materials best suit the task by exploring known techniques. **(experimentation)**
- Collect ideas in sketch books and annotate using key, relevant art vocabulary. **(experimentation, expression)**
- Know that 3-dimensional art includes the length, width, and depth of an object such as a structure, building, or sculpture. **(expression)**

Key knowledge and skills

Geography

Big ideas: Location, diversity, impact

Locational Knowledge:

- Demonstrate knowledge of the world by matching countries to continents using maps and atlases.

Place Knowledge:

- Find out where Cherbourg is and why it is twinned with Poole. **(location, diversity, impact)**
- Discuss the benefits of twinning and what this means to each location. **(location, diversity, impact)**
- Compare and contrast how the human and physical features in Poole and Cherbourg have changed over time. **(location, diversity, impact)**

Human and Physical Geography:

- Identify and recognise significant physical and human features in the UK using aerial photographs. **(location, diversity)**

LOCAL AREA STUDY– do the people who live in Poole work in Poole?

- Use 4 figure grid references to give and follow directions using the language of Eastings and Northings. (Maths) **(Location)**
- Understand that maps have different scales. (Maths)
- Use and understand the 8 compass points in orienteering tasks. **(Location)**
- Use grid references to read maps
- Extract information from maps including locating key features and land use. **(location,**

• Draw shadows and understand tones are created by the way in which light falls on a 3D object. **(experimentation, expression)** • Know that where light is strongest, highlights are created, where light is weakest, shadows form. **(experimentation, expression)** • Use scale and proportion in drawings ensuring that the object drawn or illustrated has been reduced or enlarged from its original size, but is still proportional to the real object **(experimentation, expression)**	**diversity, impact)** **Science (see separate planning)** ***Big ideas: Investigation, explanation, observation*** **Enquiry: How does the temperature of the water affect the time it takes for ice to melt?** • Understand that gases are formed when liquids evaporate and that when a gas is cooled it condenses to form a liquid. **(observation, explanation, investigation)** • Understand that gases move and flow more easily than liquids and in all directions. **(observation, explanation)** • Understand that gases differ from solids and liquids in that they do not maintain their shape and volume but spread out to fill the space they are in. **(observation, explanation)** • Observe and understand the 3 different states of water. **(observation, explanation, investigation)** • Understand that water evaporates into the air: the sun heats up water on land, and in rivers, lakes and seas and turns it into water vapour. The water vapour rises into the air. **(observation, explanation)** • Understand that water vapour condenses into clouds: water vapour in the air cools down and changes back into tiny drops of liquid water, forming clouds. **(observation, explanation)** • Recognise that water falls as precipitation: the clouds get heavy and water falls back to the earth in the form of rain or snow. **(observation, explanation)** • Understand that water returns to the sea: rainwater runs over the land and collects in lakes or rivers, which take it back to the sea. **(observation, explanation)** • Know that cooling means to reduce the temperature whereas freezing means to reduce the temperature until a substance turns from a liquid to a solid. **(observation, explanation, investigation)** • Know that heating means to increase the temperature whereas boiling means to increase the temperature of a liquid until bubbles start to form. **(observation, explanation, investigation)** • Know that vapour is a gas that is normally a liquid at room temperature. **(observation, explanation)** • Know that we measure temperature in degrees Celsius (°C). That 0ºC is the temperature at which water freezes and 100ºC is the temperature at which water boils. That things can be much hotter than 100°C or much colder than 0ºC (when we start using negative numbers). **(observation, explanation, investigation)** **SC1:** • Ask relevant questions and use different types of scientific enquiries to answer them

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Set up simple practical enquiries, comparative and fair tests
Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
Gather, record, classify and present data in a variety of ways to help in answering questions
Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

<u>Computing (see separate planning)</u>
Big ideas: coding, design & online safety
Animation

To understand what animation is.
To understand the term onion skinning and be able to use this technique for 2D computer animations. (design)
To know how to enhance simple animations using animation software. (design)
To plan an animation. (design)
To create a narrative through animation. (design)
To evaluate animations.

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<tr><td><u>Key vocabulary:</u>

Alexander Calder sculptor, sculpture, wire, mould, malleable, prototype, prototype, decoration, hold, securely, wire sculptures, exploring techniques, art vocabulary</td><td>Twinning, countries, continents, human, physical, ariel photographs, compass points, synthesise, 4 figure grid references, scale, Eastings, Northings

State, matter, solid, liquid, gas, evaporate, condense, flow, volume, classify, criteria, water cycle, H2O, evaporated, precipitation, vapour, states of matter, heating, boiling, cooling, freezing, gas, vapour, temperature, rate, predict, plan, variables, measure, record, conclude

Animation, onion skinning, background, copy frame, frame, frame per second, sharing controls, sound effect, stop motion, storyboard</td></tr>
<tr><td colspan="2">Previous linked learning to consolidate: ‘Down by the riverside’ – Y3 local area study, human and physical features

What comes next? ‘Food and Fairtrade’ – Y4 human and physical features</td></tr>
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