



# Medium Term Unit Planning

**Topic Name: - Survivor**

**Learning outcome:**

Pupils will learn about Antarctica in terms of geographical knowledge as well as how animals and vegetation have adapted to survive in these extreme conditions. In D/T, pupils will research, design a recipe and make an energy bar for an Antarctic expedition.

**Hook**

VR workshop

**Topic Showcase (e.g. display, museum, performance, presentation)** Assembly to share Eco impact

**Oracy:**

Presenting findings in Science. Share impact of Global warming on Antarctica/planet. Positive actions we can take.

**Key Vocabulary:**

climate/ weather, climate zones, vegetation sea level, grid reference, terrain, features, grid reference, contour lines, continent, landscape, arid, precipitation, contours, migrate, Arctic, Antarctic, sustainability, natural resources, latitude, vegetation belts, Ordnance Survey, longitude, climate zones, distance Greenwich/Prime Meridian, Time zone, pollution, grid reference, Northern hemisphere, symbols, Southern hemisphere, Tropic of Capricorn, Tropic of Cancer, equatorial, land use, Equator, latitude, location, pollution, longitude.

**Key Texts (whole class reading/end of the day book/Talk for Writing Texts etc.):**

The Survivor topic is complemented by a Literacy focus on Shackleton's expedition.  
Shackleton

**Citizenship/Community Opportunities:**

***(Focus – change in attitude/increase knowledge and awareness/make a difference)***

An awareness of global warming and the changes it is making in Antarctica, and in turn the planet. Link to Eco, share awareness with school community and positive actions we can take.



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## Experiences/Visits/Visitors

Antarctic explorer visit  
VR workshop

## Main Subjects covered:

**Geography, Science, DT with some integrated History and Computing.**

## Subject 1 Threshold concepts

**Geography – Investigate place**

## Subject 2 Threshold Concepts

**Science - Understand evolution and inheritance/ Investigate living things**

## Subject 3 Threshold Concepts

**History – build an overview of world History**

## Subject 4 Threshold Concepts

**D.T – master practical skills + design, make, evaluate and improve**

## Notes:

History – Investigate and interpret the past/understand chronology

}through Literacy

Geography – communicate geographically – create map of a location



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Lesson title and learning Intention	Threshold concepts (success criteria)	Milestones (success criteria)	Lesson structure/differentiation
Geography			
1.	Investigate place	Name and locate some of the countries and cities of the world and their identifying human and physical characteristics.	World Maps World locations knowledge - Nations of the world song/ capital city challenge. E.g. tell me a country apart from USA in North America
2.	Investigate patterns	Identify and describe the geographical significance of latitude, longitude, Equator, Northern Hemisphere, Southern hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic circle and time zones.	Location fact quiz recap identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night) Basketballs! Constantly link to Antarctica - global and flap!
3.	History – build an overview of world history	Compare some of the times studied with those of the other areas of interest around the world.	What else was happening in the world when Shackleton and his team set off for Antarctica?
4.	Investigate patterns	Identify and describe the geographical significance of latitude, longitude, Equator, Northern Hemisphere, Southern hemisphere, the Tropics of Cancer	Polar regions – similarities and differences Where are they? What are they like? Comparing physical and human characteristics. Differences between 1914 and today. Global warming.



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		and Capricorn, Arctic and Antarctic circle and time zones.	
5.	<b>Investigate place</b>	Identify and describe how the physical features affect the human activity within a location. Use a range of geographical resources to give detailed descriptions and opinions of the characteristic features of a location. Analyse and give views of the effectiveness of different geographical representations.	<p>Where is Antarctica?</p> <ul style="list-style-type: none"> <li>• World map with Antarctica and other locations on journey identified. Oceans</li> <li>• Map of Antarctica – South Pole, Mountains, seas</li> <li>• Physical and human characteristics</li> </ul>
6.	<b>Investigate place</b>	Identify and describe how the physical features affect the human activity within a location. Use a range of geographical resources to give detailed descriptions and opinions of the characteristic features of a location.	<p>Focus on Antarctica</p> <ul style="list-style-type: none"> <li>- Map of Antarctica: South Pole, mountains, seas</li> <li>- Physical and human characteristics</li> <li>- Identify and describe how the physical features affect human activity</li> </ul> <p>Reasons for geographical similarities and differences</p>
5.	<b>Investigate place</b> <b>Computing - collect</b>	Identify and describe how the physical features affect the human activity within a location. Use a range of geographical resources to give detailed descriptions and opinions of the characteristic features of a location.	<p>Antarctic research log – David Attenborough documentary and fact files  <a href="https://www.youtube.com/watch?v=X3uT89xoKuc">https://www.youtube.com/watch?v=X3uT89xoKuc</a>            Create DPS factfile</p>



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		<p>Select appropriate applications to devise, construct and manipulative data and present it in an effective and professional manner.</p> <p>Describe how locations are changing and explain some of the reasons for change.</p>	
6. Physical geography	<b>Communicate geographically</b>	Describe and understand key aspects of physical geography, including climate zones, biomes and vegetation belts, rivers, mountains, volcanoes, earthquakes and the water cycles.	
Science			
1. What is adaptation and evolution?	<b>Understand evolution and inheritance</b>	<p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p>	<p>What is adaptation and evolution – ppt – g finches – bird beak buffet.</p> <p>Science books – explanation – what is adaptation. Camel song</p> <p>Focus on Antarctica</p>



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<p>2. Animals</p>	<p><b>Understand evolution and inheritance</b></p> <p><b>Work scientifically</b></p> <p><b>Computing - collect</b></p>	<p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Select appropriate applications to devise, construct and manipulative data and present it in an effective and professional manner.</p> <p>Present findings in written form, displays and other presentations.</p>	<p>Animals – research Antarctic animals using laptops - websites as hyperlinks. Table to record research on how animals have adapted. Two truths and a lie Leopard Seal/Orca/Krill/Emperor Penguin/Albatross</p>
<p>3. Plants and vegetation</p>	<p><b>Understand evolution and inheritance</b></p> <p><b>Computing - collect</b></p>	<p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Select appropriate applications to devise, construct and manipulative data and present it in an effective and professional manner.</p>	<p>Focus on plants/vegetation Antarctic Hair grass/Antarctic pearlwort/ Antarctic Moss Create own plant to survive Antarctic conditions based on research</p>
<p>4.</p>			



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5. Classifying	<b>Investigate living things</b>	Describe how living things are classified into broad groups according to common observable characteristics.  Give reasons for classifying plants and animals based on specific characteristics.	
6. Survival game	<b>Understand evolution and inheritance</b>	Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Survival game
7. Sex Education – linked to PSHE	<b>Investigate living things</b>	Describe the life process of reproduction in some plants and animals	SEX ED/PSHE lessons
8. Life cycles	<b>Investigate living things</b>	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	Videos Research Create life cycle diagrams

<b>Lesson title and learning Intention</b>	<b>Threshold concepts (success criteria)</b>	<b>Milestones (success criteria)</b>	<b>Lesson structure/differentiation</b>
D.T. - Food			



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What food gives us	<b>Design, make, evaluate and improve</b> <b>Science – Understand humans-healthy eating</b>	Recognise the importance of diet on the way the human body functions	Know that nutrients, as well as water and fibre, are essential for health. Identify the main nutrient provided by food group and some individual every day foods. Analyse a selection of products and express their opinions about ingredients using sensory vocabulary. Focus on Antarctic food and expedition food/needs.
Selecting ingredients and recipes	<b>Design, make, evaluate and improve</b> <b>Computing - collect</b>	Create and refine recipes, including ingredients, methods, cooking times and temperatures.  Select appropriate applications to devise, construct and manipulative data and present it in an effective and professional manner.	Research different <i>energy bars</i> and how they are made. Explain where ingredients in some <i>energy bars</i> come from. Carry out a survey to seek opinion about ingredient options
Designing recipe	<b>Design, make, evaluate and improve</b>	Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).	Write a set of design criteria for an <i>expedition</i> product. Design and product based on the design criteria. Write a recipe to make a product.
Food prep skills	<b>Master techniques - food</b>	Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.  Demonstrate a range of baking and cooking techniques.  Understand the importance of correct storage and handling of	Make their product according to the plan. Perform food skills safely and as instructed (e.g. <i>peel, grate, cut using the bridge hold and fork secure/claw grip</i> ).





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		ingredients (using knowledge of micro-organisms).	
Evaluating	<b>Design, make, evaluate and improve</b>	<p>Create and refine recipes, including ingredients, methods, cooking times and temperatures.</p> <p>Make products through stages of prototypes, making continual refinements.</p>	<p>Evaluate their <i>expedition</i> product against the design criteria and feedback from others.</p> <p>What changes would they make? How would these changes improve their recipe design?</p>
High quality finish	<b>Design, make, evaluate and improve</b>	Ensure products have a high-quality finish, using art skills where appropriate	Design a suitable package for the product which includes key label information (e.g. <i>ingredients, weight, cost</i> ).
DT part 2  <b>Current plans are being developed</b>	<b>Master techniques</b>	<p>Write code to control and monitor models or products</p> <p>Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.</p>	<p>Design and programme a multifunctional navigational tool for a client tailored to a specific set of requirements</p> <p>Develop a 3D CAD model to pitch and explain the product to a guest panel</p>