

## Year 5-Desert Survival



<b>Term:</b>	Summer 2
<b>Subject focus:</b>	Geography and Design Technology
<b>Non-Fiction:</b>	Non-Chronological Report
<b>Fiction:</b>	Narrative (Descriptive setting)

Concepts	
Geography	Design Technology
Change/People and Places	Innovate/Technique/Evaluate
<p>Children will already have some understanding of deserts around the world, having studied different continent e.g. Arctic and Antarctica, North America and Africa.</p> <p>This topic gives children the opportunity to explore some of the world’s deserts in more depth, including learning about how people and animals adapt to live in these harsh climates.</p> <p>Continuing on from prior knowledge of North America, children will have the opportunity to explore how humans have made use of the desert in Nevada and then compare this with other deserts.</p> <p>They will also learn about the continent of Australasia and identify deserts in this region. They will have the opportunity to compare this continent to the other continents they have learnt about in previous topics, focusing on the climate, land use, land size and populations. The children research the Great Victoria Desert and make comparisons with a contrasting desert, the arctic.</p> <p>In previous D&amp;T units, the children have created a shelter for insects as well as using a range of tools to cut and join materials together. This topic gives them the opportunity to develop these skills by designing a shelter that would provide safety in the desert. They will need to use their knowledge of the climate, materials and how to make a secure structure in order to design and make a prototype. This will support future learning in Year 6, where the design and make a shelter to withstand an impact.</p>	

## Geography

### National Curriculum

#### Geography

- I can understand and use a widening range of geographical terms such as climate zones, biomes and vegetation belts, river, mountains, volcanos and earthquakes, and the water cycle
- I can recognise the different shapes of countries
- I can identify the physical characteristics and key topographical features of the countries within North America
- I can show I know about the wider context of places e.g. county, region and country
- I can describe where a variety of places are in relation to physical and human features
- I can understand about weather patterns around the world and relate these to climate zones
- I can understand how humans affect the environment
- I can explain about changes to the world environment
- I can understand why people seek to manage and sustain their environment
- I can compare the physical features of regions in the UK and a region in North America, identifying similarities and differences

#### Design Technology

- I can use my research into existing products and my market research to inform the design of my innovative product
- I can create prototypes to show my ideas
- I can make careful and precise measurements so that joins, holes and openings are in exactly the right place
- I can produce step by step plans to guide my making, demonstrate that I can apply my knowledge of different materials, tools and techniques
- I can make detailed evaluations about existing products and my own considering the views of others to improve my work
- I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger or more stable

#### Computing

- I can use the internet to allow me to share data with another person
- I can select appropriate software to use for a given task
- I can confidently use a range of software tools
- I understand how to choose online content for my age group
- I can use more advanced features when searching online
- I can use a range of search tools to find exactly what I am looking for

## Year 5

### Geography

#### Desert Survival

### Foundation subject Knowledge and skills

#### Where in the world?

- Locate deserts on a map (Arizona Desert, Sahara Desert, Nevada Desert, Arctic Desert, Great Victoria Desert)
- Know the countries and continents different deserts are found
- Know that the Arctic is also a desert and located at the northernmost part of our planet
- Know that the Arctic consists of the Arctic Ocean and parts of Canada, Russia, the USA, Greenland, Norway, Finland, Sweden and Iceland
- Know that because of the Earth's tilt, for at least one day a year there is an entire day of darkness and also a full day of sunshine in the Arctic region
- Understand some of the ways that the arctic desert is changing due to climate change and the impact this is having on the wildlife there
- Understand ways to help prevent further damage to the arctic desert
- Understand what drought is and the effects on wildlife and humans

#### Deserts around the world

	<ul style="list-style-type: none"> <li>• Know that the Arabian Desert used to be a sea. The accumulation of dead sea creature and organic matter buried beneath layers of rock and sand has formed valuable oil reserve trapped by impermeable rock deep beneath the desert</li> <li>• Know that the Thar Desert is in India. The soil is sandy, nutrient poor and relatively infertile</li> <li>• Know that temperatures in the Arctic can reach as low as -70</li> <li>• Know that the Great Victoria Desert is the largest desert in Australia and consists of many small sandhills, grassland plains, areas with closely packed surface of pebbles and salt lakes</li> <li>• Know that Australia is in the continent of Australasia and identify the countries in this continent</li> <li>• Identify how the land is used in different places of the continent</li> <li>• Make comparisons between the size of this continent and the other continents around the world</li> <li>• Identify deserts in this continent</li> <li>• Know that the Arizona Desert is in North America</li> </ul>
<p><b>What are the physical features?</b></p>	<p><b>Adaptation</b></p> <ul style="list-style-type: none"> <li>• Know that plants and animals have adapted to survive in the desert</li> <li>• Know that plants have either shallow, wide roots to catch as much water as possible when it rains or long roots to tap into deep underground water</li> <li>• Know that small leaves reduce the amount of water lost through transpiration</li> <li>• Know that succulent e.g. cacti have large, fleshy stems for storing water</li> <li>• Know that many plants have thick, waxy skin to stop transpiration</li> <li>• Know that some plants have spines and toxins to stop animals from stealing their water</li> <li>• Know that some plants e.g. the desert rose have bulbous trunks for storing water</li> <li>• Know that some animals have large fat stores e.g. a camel's hump allows it to go days without food or water</li> <li>• Know that many desert animals are nocturnal, coming out at night when it is cooler</li> <li>• Know that some animals e.g. the desert tortoise in the south western United States, spends much of their time underground</li> <li>• Know that some animals have large ears or long limbs to allow more heat loss</li> <li>• Know that the jerboa, a small rodent, doesn't have to drink water. It is able to extract enough water from its food to survive</li> <li>• Know that most desert birds are nomadic. They travel long distance in search of food and water</li> <li>• Know that lizards and snakes cannot tolerate high body temperatures</li> <li>• Know that most desert animals minimize water loss from sweat and urine</li> <li>• Know that some animals are camouflaged to protect against predators</li> <li>• Know that during the day temperatures get very hot and cold at night</li> <li>• Know that there is interdependence between climate, water, soils, plants, animals and people in deserts</li> <li>• Know that the Arctic is home to lots of wildlife including polar bears, Arctic foxes, walrus, seals and whales</li> <li>• Know that the narwhal is only found in the Arctic and have a tusk that can grow over 3m in length</li> <li>• Know ways in which animals are adapted to live in the arctic e.g. polar bears have a thick coat of insulated fur which covers a layer of fat. They even have fur on the bottom of their paws, which protects against cold surfaces and provides a good grip on the ice</li> </ul>
<p><b>What are the human features?</b></p>	<ul style="list-style-type: none"> <li>• Know that nomadic communities live in the desert, such as the Bedouin people in the Sahara Desert.</li> <li>• Know about how they live in the desert (e.g. live in goat's hair tents and travel with their herds of cattle, sheep, goats and camels to find resources such as food and water. They settle in one place for a short time until the land becomes exhausted and then they relocated.)</li> </ul>

	<ul style="list-style-type: none"> <li>• Know that nomadic tribes mainly live on the edges of the desert and they are hunter-gathers and trade animals, meat and hides with other tribes and settled communities nearby</li> <li>• Know the impact of the Bedouin people on the desert e.g. this is minimal but they do make some damaging changes to the delicate ecosystems, such as pitching tents and building sand houses to create temporary settlements</li> <li>• Know that most of the damage caused by the Bedouin people can be seen around water sources, where trees are often cut down for fuel or to remove shade and enable grass to grow for grazing animals</li> <li>• Know that Las Vegas is built in the Mojave Desert and has a population of approximately 630000 people</li> <li>• Know that millions of people visit Las Vegas each year and this contributes to the economy but also has an impact on the limited resources of a desert ecosystem</li> <li>• Know that despite the freezing temperatures of the Arctic, approximately four million people live there. Amongst these are the indigenous people of the Arctic called the Inuits.</li> <li>• Know some of the ways that the Inuits have found to survive in the harsh environment e.g. building igloos from hard-packed snow, hunting animals and using their furs, using sleds to travel</li> <li>• Know that the Sahara Desert is an idea environment to collect solar wind energy and plans are being made to create wind and solar farms there</li> <li>• Know that the natural biodiversity of Arizona combined with the landscape and infrastructure and facilities attract tourism to the desert.</li> <li>• Know that the Grand Canyon receives six million visitor per year. Tourists can take tours of the desert in large vehicles, hike and take river trips.</li> <li>• Know that the tourism to the desert can have negative impacts, including pollution, damage to habitats and ecosystems, water pollution to the rivers, introduction of invasive foreign plant species, risk to endangered species through hunting and habitat loss, erosion of the landscape by repeated trampling and the visitor numbers, contamination of the ground and waterways from raw sewage</li> <li>• Know that deserts around the world are used for a number of different reasons by humans e.g. military testing and mining takes place in Mojave Desert; filmmaking in the Sahara Desert; farming in Thar Desert; drilling for oil in the Arabian Desert</li> <li>• Know that these usages have impacts on the environment and be able to talk about what some of these impacts are e.g. pollution, changes to habitats and ecosystems</li> </ul>
<b>Comparison</b>	<ul style="list-style-type: none"> <li>• Make comparisons between the Great Victoria Desert and the Arctic Circle</li> <li>• Know the similarities and differences in these land masses</li> <li>• Be able to identify how animals and plants have adapted in these deserts</li> </ul>
<b>Design Technology</b>	
<b>Year 5</b>	
<b>Design Technology-Construction</b>	
<b>Year 5</b>	<ul style="list-style-type: none"> <li>• Research the ways in which people protect themselves in the desert at night</li> <li>• Learn about nomads and the resources they use in the desert</li> <li>• Evaluate suitable materials which could be used in the night to create a shelter</li> <li>• Consider the structure of the shelter, ensuring it will stay standing</li> <li>• Make a prototype for a shelter to be used in the desert, using appropriate tools, materials and techniques</li> <li>• Evaluate end product against the design criteria</li> </ul>

## Writing Outcomes

### Non-Fiction

Non-Chronological report about a desert, including the physical and human features (Comparing Great Victoria Desert with the Arctic)

### Fiction

Text: Survivors by David Long & Kerry Hyndman  
Narrative focusing on description, using a range of figurative language and direct and indirect speech