

YEAR A - Pico

THEME: Other Countries

TERM: Autumn 1

EXPEDITION: Survivors



EXPEDITION OVERVIEW:



This expedition will use both factual and fictional survival stories to focus on what it would take to survive in a range of situations and environments. Our local deciduous woodland, the boreal forest of Canada, the Borneo lowland rainforests and the Amazon Rainforest will be the backdrop to our adventures which will be brought to life through real life experiences provided through a class trip to a survival camp and visits to school by experts in the field.

CULTURAL CAPITAL:

Visitors with survival expertise

Use of the reserve and the local area for:

Foraging, Shelter building, Fire making

BOOKS:



VOYAGE



KEY CONCEPTS: These are areas of understanding within our curriculum which are repeated during their Voyage through the school.

boundaries (continents, region, nations)

cartography (atlases, directions, distance, Equator, latitude, longitude, North/South Pole, maps, scale, symbols) change (adaptation, sustainability, development) climate (climate change, climate zones, weather)

economy (trade, sustainability)

environment (fertile, diversity, vegetation, climate, habitat, ecosystem, sustainability)

movement (navigation, transport)

physical geography (biomes, bodies of water, terrain, vegetation)

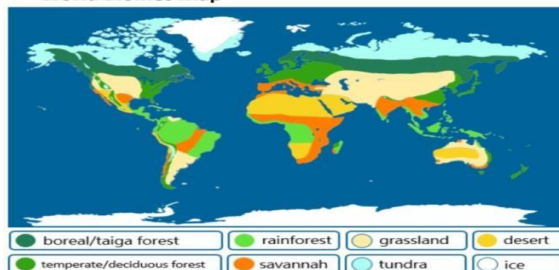
resources (energy, food supply, infrastructure)

settlements (population, rural areas, urban areas, development)

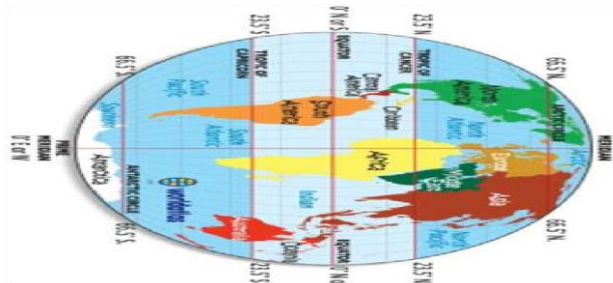
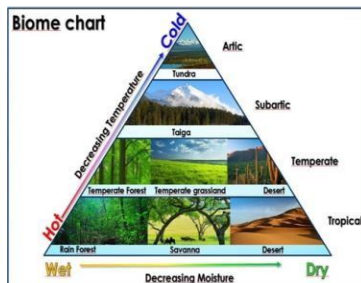
KNOWLEDGE AND ASSESSMENT

Map and chart skills:

World Biomes Map



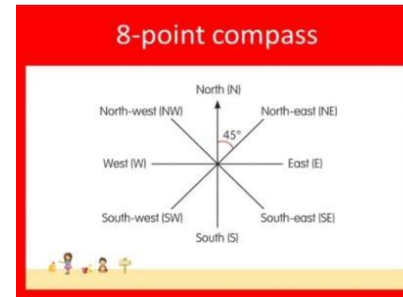
Biome chart



Survival and outdoor skills:



Symbol	Meaning
	Campsite
	Motorway
	Railway
	Railway station
	River
	School
	Place of worship
	Post office (rural)
	Woods



Identification skills:



NEW VOCABULARY:

adaptations – the process of change by which an organism or species becomes better suited to its environment.

arid – having very little rain. Arid land is so dry that very little plants can grow there.

Arctic - Area of frozen sea and land around the North Pole.

Antarctica - Area of frozen sea and land around the South Pole.

fertile – land or soil that is fertile is able to support the growth of a large number of plants.

fauna - another word to refer to animals

flora - another word to refer to plants

habitat – the natural home or environment of an animal, plant or other organism.

<p>biodiversity - variety of living things e.g. species, habitats biome - large ecosystem which relies on climate characteristics - A feature or quality belonging to a person, place or thing.</p> <p>climate – the climate of a place is the general weather conditions that are typical of it (average weather conditions over longer periods)</p> <p>coniferous – A coniferous forest or wood is made up of conifers.</p> <p>conifers – A tree that bares cones and needle-like leaves which they do not lose in winter.</p> <p>coniferous forest - forests made mostly of conifer trees such as cedar, fir and pine trees deciduous – a tree or bush that loses its leaves in the autumn every year.</p> <p>deciduous forest - forests made mostly of broad-leafed trees that shed their leaves during a season (usually winter)</p> <p>ecosystem – group of living organisms interacting with their physical environment</p> <p>Equator – an imaginary line on the middle of the Earth at an equal distance from the North and South Poles and dividing the Northern and Southern Hemispheres.</p>	<p>hemisphere - Half of a sphere or ball. People use the word to describe one half of the earth e.g. southern hemisphere, northern hemisphere. Latitude - lines which go around the earth east to west Longitude - lines which go around the earth north to south</p> <p>organism – an individual animal, plant or single-celled life form such as bacteria or fungus.</p> <p>Precipitation - any form of moisture which falls to the earth</p> <p>Survival - Continuing to live or exist, typically in spite of an accident, ordeal or difficult circumstances. temperate – a climate or place that is rarely extremely hot or extremely cold.</p> <p>tropics - The only part of the earth where the sun shines directly downwards. Because the sunlight is so concentrated, the tropics are usually warmer than other parts of the earth.</p> <p>Tropic of Cancer - An imaginary line which marks the northern edge of the tropics.</p> <p>Tropic of Capricorn - An imaginary line which marks the southern edge of the tropics. vegetation – plants, trees and flowers can be referred to as vegetation.</p>
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LEARNING - What they should already know:

How to use world maps, atlases and globes to identify the United Kingdom and its countries, as well as being able to name and locate the world's seven continents and five oceans.

Identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.

Describe weather associated with the seasons and how weather can change quickly - one day it can be dry and sunny and the next day it may rain.

What they will be learning:

How do I locate parts of the world?

The equator is an imaginary line dividing Earth into a northern and southern hemisphere and is a line of latitude. The Tropic of Capricorn and Tropic of Cancer are lines of latitude. The Greenwich Meridian is a line of longitude. Locating places using lines of longitude and latitude. The world is made up of seven continents and several major oceans.

What are the factors that affect climate?

There are several factors which affect the climate including: latitude, altitude, distance from the sea, prevailing wind direction, and the urban heat island effect.

What are Ecosystems?

The plants and animals of each biome have traits that help them to survive in their particular biome. Plants and animals that live within smaller areas of a biome also depend on each other for survival. These smaller areas are called ecosystems.

Each individual plant and animal could not exist by itself on planet Earth. All living organisms need other living organisms to survive. How these organisms interact with the Sun, soil, water, air and each other in an area is called an ecosystem.

Each biome has many ecosystems.

What are biomes?

Biomes are areas of our planet with similar climates, landscapes, animals and plants. Climate describes average weather conditions over longer periods and over large areas. A large ecosystem is called a biome. What lives in each biome depends on:

- how warm or cold it is
- how dry or wet it is
- how fertile the soil is

A biome contains particular plant and animal groups, which are adapted to that particular environment.

Where are the major biomes of the world located?

The major biomes are in certain areas of the world. Their distribution is not haphazard, and is influenced by factors such as latitude and altitude etc.

What are the features of the major biomes of the world?

Biomes have distinct characteristics, such as their climate and vegetation.

Tropical rainforest- near the Equator (equatorial), hot and wet all year, rich in plants and animals, poor soils.

Temperate forest- cool summers and mild winters, rain throughout the year and rich deciduous woodland.

Taiga- north of the equator, on mountains, long cold winters, short mild summer, limited rainfall, coniferous trees.

Grassland- warmer summers and very cold winters, low rainfall and mainly grassland vegetation.

Savannah (tropical grassland)- within the tropics, hot with a wet and dry season, mainly grass and scrub and a few specially adapted trees. (Kenya, Zambia and Tanzania. Northern Australia, Venezuela and Brazil)

Desert- very hot and dry and limited plants and water. Arid- receive less than 250mm of rain per year. Deserts can be hot or cold. (Antarctica can be called a desert because of its low levels of precipitation). The Sahara Desert is the largest desert in the world.

Ice - the areas that surround the North and South Poles, below freezing, light snowfall builds up each year

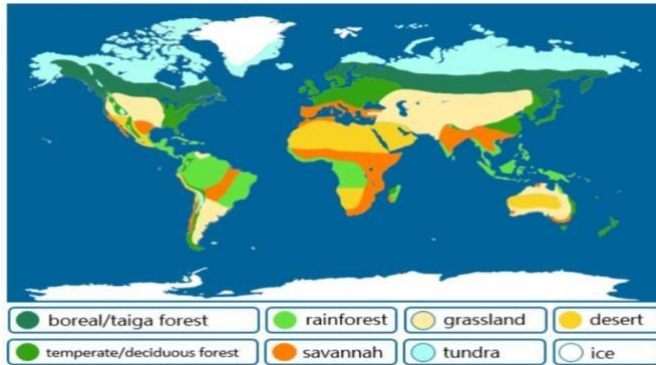
Tundra – The areas just next to the Ice biome that contain very low growing grasses and plants and are below freezing for most of the year, the ground is almost permanently frozen, snowfall and snow melt

Marine- the largest biome in the world (salt water). Covers 70% of the Earth. The average temperature is 4 degrees. Animals and plants have adaptations that help them to remove salt or take on water.

Freshwater- low levels of salt, includes ponds, streams, lakes and rivers. Animals and plants have many adaptations to help them retain salt.

How do I locate Biomes on a map?

World Biomes Map



What is the structure of the Amazon rainforest compared to Boreal forest?

The rainforest has a distinct structure with four layers. Each layer of the rainforest has distinct characteristics.

How have plants and animals adapted to survive in the Amazon and Boreal forests?

Plants and animals have adapted to live in rainforests differently to boreal forest. Examples include buttress roots, drip tips, epiphytes etc. Animals that have adapted include the howler monkey, sloth etc.

What are the impacts of deforestation?

In these lessons we will continue to use the Amazon and Boreal forests as examples. Deforestation in the Amazon has many impacts, such as environmental and economic impacts. Some of these impacts are negative, some are positive.

How can the forests be conserved?

It is important to protect forests. Reasons include biodiversity, climate regulation and important products such as, medicines. The Amazon can be developed sustainably through selective logging and ecotourism for example.

SCIENCE

In science we will focus on our knowledge of living things and their habitats, specifically an animal's basic needs and nutrition. We will also revisit our knowledge of plant and animal types and how they can be grouped.

We will then move on to looking at materials and their properties, with particular focus on combustible materials and the fire triangle. We will observe changes associated with burning. We will also be separating solids from liquids.

We will also make comparisons between North and South American vegetation belts and use maps, atlases and satellite images to support our learning.