

## Grasmere Academy - Project Medium Term Planning

Term : Summer		Project Question: What if we were born somewhere else?		Year group: 6	
<b>Summary of the project:</b> North and South America - the project include finding out about biomes, climates and biodiversity. Exploring the Sierra Nevada de Santa Marta, rainforests and mountains. Link to volcanoes and tectonic plates, climate change and deforestation.					
Literacy Genres - persuasive text and information text					
Maths Units - Statistics and shape					
What do we want children to <b>know</b> by the end of this project?					
<b>Geography</b>  To locate the world's countries, using maps to focus on North and South America, concentrating on their environmental regions, key physical and human characteristics, countries and major cities. *To understand geographical similarities and differences through the study of human and physical geography of a region in North and South America  Climate zones Biomes and vegetation Types of Settlement			<b>Art</b>  <u>Texture</u>  *applies knowledge of different techniques *uses the correct brush for the area being painted *work collaboratively on a large scale *to make and use appropriate embellishments to add texture *to be able to express 2D relief using mixed media such as card, mod rock, collage, textured paper, fabric and sewing		<b>DT</b>
Famous Person - David Attenborough			<b>Artist - Georgia O'Keeffe</b> <a href="https://www.tate.org.uk/kids/explore/who-is/who-georgia-okeeffe">https://www.tate.org.uk/kids/explore/who-is/who-georgia-okeeffe</a>		
<b>Music</b> GarageBand  Play melodies on tuned percussion following staff notation and using notes within the Middle C range. - Understand how triads are formed and play them on tuned percussion or melodic instruments. - Perform a range of repertoire pieces combining acoustic instruments to form mixed ensembles. -Perform confidently to an audience. - Develop the skill of playing by ear.	<b>Computing</b>  Describe what variables are Demonstrate the use of variables in an everyday situation Code using variables Describe what types and initialization are Demonstrate the use of types and initialization in an everyday situation Code using types and initialization Describe what parameters are Demonstrate the use of parameters in an everyday situation Code using parameters. Describe what arrays are Demonstrate the use of arrays in an everyday situation Code using arrays	<b>Science</b>  <u>Living things and their habitats</u>  Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.  Give reasons for classifying plants and animals based on specific characteristics.	<b>RE/French</b>  Making compound sentences Preparing a presentation Months and seasons Weather and seasons Read and learn a story and recreate story in English	<b>PE</b>  Use running, jumping, throwing, catching and hitting in isolation and in combination play competitive games and apply basic principles suitable for attacking and defending develop flexibility, strength, technique, control and balance	

Which **words and phrases** do we want children to **recall and define** by the end of this project

Science	Art	Music	D&T	Computing	RE
Classification, characteristics, plants, animals, micro-organisms, vertebrates, invertebrates, organise	Hue, tint, tone, shade, atmosphere, mood, light, dark, acrylic, delicate, contrast, perspective, representation	Verse, chorus, bridge,intro, outro unison, harmony Ternary form Syncopation Diatonic scale  Crescendo - getting louder Decrescendo- getting quieter Accelerando- getting faster Rallentando - getting slower Legato- smooth Staccato - detached, bouncy  Fortissimo - very loud Pianissimo - very quiet Mezzo forte - moderately loud Mezzo piano- moderately quiet	Functional. design, criteria, generate, develop, model, communicate, technology, equipment, cutting, shaping, joining, finishing, components, structures, stronger, stiffer, stable, mechanism, iterative, context, discussion, cross section, annotate, exploded diagrams, prototypes, pattern pieces, reinforce, monitor.	Algorithm, array, bug, coding, command, debugging, developer, event, loop, parameters, sequence, type	

Which **visits,visitors and special experiences** will we organise to secure children's knowledge ?

Library  
 StemFest Net Zero event at St James Park

Which **books** will help the children secure and think more deeply about the knowledge in this project?

Girl with Ink and Stars - Class read  
 50 Adventures in the 50 States  
 The 50 states  
 The Crows Tale  
 National Parks of the USA  
 Holes

How will we exhibit our learning? How will we present our learning from each subject?

Mini outcome 1 -

Mini outcome 2 - To create artwork, keynotes and audio content for the website video.

Final outcome - To create a video to add on to the school website about 'The Americas'

In order to ensure **all children can achieve** - what pre teaching/learning will need to occur? What prior knowledge will they need?

<p><b>Geography</b></p> <p>Recap knowledge in year 5. Recap vocabulary around latitude, longitude, equator, northern hemisphere etc.. Children will have thought about the wider world in year 5 - in particular Australia. Recap seven continents. Recap world countries. This is to be continued into looking at North and South America and linked to the year 6 history topic. Children need to understand that we are a small part of a very large world.</p>					<p><b>Art</b> <u>Colour</u></p> <p>explore the use of texture in colour            *to use colour for purpose            *to understand how colour changes with perspective            *to be able to create mood and atmosphere through paint choices            *to show tone, shade and mood through intricacy of detail            *to explore the contrast of bright colours and the subtlety of tonal shades            *to understand primary and secondary colours</p>					<p><b>DT</b> <u>KS1 Cooking objectives</u></p> <p>Understand which foods are reared, caught, or grown and that this happens in the UK and across the globe            Understand that recipes can be changed by adding or taking away ingredients            Understand that the seasons can affect food produce            Identify that food and drink are needed to provide energy for a healthy and active lifestyle.            Identify that people should eat at least 5 portions of fruit and vegetables a day.            Prepare simple dishes hygienically and safely, where needed with a heat source.            Use cooking techniques such as: chopping, peeling, grating slicing, mixing, spreading, kneading and baking.</p>				
<p><b>Music</b></p> <p>N/A</p>		<p><b>Computing</b></p> <p>Commands            Sequencing            Debugging            Functions            Loops            Booleans            Logical operators            Conditional code            Algorithms</p>			<p><b>Science</b></p> <p><u>Living Things and their Habitats</u></p> <p><u>PRIOR LEARNING Y5</u>            Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats)            Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)</p>			<p><b>RE/French</b></p> <p>Recap commands, numbers, food etc</p>		<p><b>PE</b></p> <p>N/A</p>				

## Launch Afternoon

Tuesday 26th April

Hook - World Map Puzzle jigsaw - to work as a class to identify the different continents, cities and oceans of the world. Create the World Map jigsaw and display it in class.

Quiz about different things that are from different continents and countries around the world - children have to think about which countries the items are from / made from.

## Art Week

Georgia O'Keeffe

<https://www.tate.org.uk/kids/explore/who-is/who-georgia-okeeffe>

Children create artwork based on the artist.

## Breakdown of Project Sessions Week 2 - 12

### Geography -

**Lesson 1 Where in the world does biodiversity exist?** Introduce topic to children and explain what a biome is. Go through PowerPoint to understand the varying biomes found in North and South America and how biodiverse it is. Children to create front page of Topic book learning what biodiversity is.

**Lesson 2 Would we have biomes without climate zones?** Explain what climate is (drawing a map of North and South America and labelling where different biomes are found across the continents) and how there are three major climate zones in the world. Climate zones and biomes are intrinsically linked - the climate dictates the biome. Using a map with an image of the three climate zones and look at how each zone links to the location on earth - Tropical zones are near the equator. They get the most direct sunlight for 12-hours a day all year round. They are where you find the hottest biomes. As you move away from the equator north or south, you enter the temperate climate zones. The temperate zones have colder winters with short days and hot summers with longer days. This is the climate zone of the United States. Furthest from the equator, you reach the polar zones.

Activity - children to create a map of the world showing how the climate zones spread across the world. Information underneath to explain how this helps to form the biomes in each zone.

**Lesson 3 What affects climate?** <https://www.exploringnature.org/db/view/1777>

Looking at physical land forms and how they contribute to the conditions of a biome alongside climate. Different landforms, such as mountain ranges and large bodies of water can affect the climate. For example, a mountain range can block rainfall from reaching an area (rain shadow), making it a dry, desert region. Being near the ocean can also affect the climate of an area. The ocean holds its temperature longer than land, so coastal regions tend to be milder - cooler in the summer and warmer in the winter than inland regions. Even altitude can affect climate. One tall mountain can have several climate zones and as a result several biomes. At its base, it can have mild, temperate forests, while the top is a cold, windswept tundra biome. Therefore, the locations of different types of biomes depend on the climate, landforms and altitude.

Activity - Children to paint a landscape picture of a varying climate - so from the coast inland to a mountain range. Using colours (and a key) to show change of temperatures across the landscape.

**Lesson 4 What makes the Americas unique amongst the world?**

North vs south - looking at the biomes on a map which are found in North and South America and comparing them and discussing the reasons why. (Recap lesson 1)

Focussing in on South America, showing the children clip of <https://www.bbc.co.uk/iplayer/episode/m000b9f8/seven-worlds-one-planet-series-1-3-southamerica>. 'With an unparalleled number of plant and animal species, South America's rich biodiversity is unique among the world's continents'.

<https://www.nationalgeographic.org/encyclopedia/south-america-physical-geography/> and <https://www.bbc.co.uk/bitesize/articles/zvwmjhy>

**Lesson 5 What is special about Sierra Nevada de Santa Marta?**

One in every 10 species of flora and fauna that is found on earth can be found in Colombia. So what is the reason behind this incredible biodiversity?

Look at a map of Colombia and recognise that near enough every biome is evident in this one country - In Colombia, it is possible to travel from desert to alpine tundra within a few days, passing through jungles, along rivers and overseas. Focus in on Sierra Nevada as an example of a place with more than one ecosystem. Referencing the varying ecosystems and experiences found in the one place and pulling on their knowledge of climate zones and physical landforms. What is an ecosystem? Research Colombia and look into the variety of ecosystems present there. Present findings artistically.

### **Lesson 6 What is a rainforest?**

Within Colombia is the Amazon rainforest - we will use this as the focus biome for the remainder of the topic. Define a rainforest and support learning with a PPT. Activity: a visit from <http://rainforestroadshow.co.uk/Main%20Pages/About%20us.html> Display their understanding of a rainforest and its structure in an interactive page demonstrating the different layers. What is a rainforest? Focussing on the Amazon, children to create a diagram outlining the different layers and the animals within them.

### **Lesson 7 Why is the Amazon Rainforest so important?**

Look at the impact the rainforest has on our planet using a ppt. to direct learning. Show the children news articles from a few years ago regarding the Amazon fires. What were the repercussions of that? Discuss this with the children explaining the vital role and impact of the rainforest, not only on our planet but for the people and species that live there. [https://wwf.panda.org/knowledge\\_hub/where\\_we\\_work/amazon/about\\_the\\_amazon/why\\_amazon\\_important/](https://wwf.panda.org/knowledge_hub/where_we_work/amazon/about_the_amazon/why_amazon_important/) Deforestation, destroying, global warming, climate change Describe and understand key aspects of climate zones and biome. Children will organise a defence case to protect the Amazon rainforest - they can present this as a speech, newspaper article or persuasive letter. They must include the vital benefits of the rainforest and the implications of its demise.

### **Lesson 8 Can you create a biome?**

<https://switchzoo.com/games/buildabiome.htm> What does a biome entail? How is it different to a habitat? Can you create a biome? How might we do this? Give the children a wide variety of materials and equipment and ask them to create a self-sustaining environment modelling the functions of a biome/ecosystem. Over the course a few weeks, they will be able to see whether they have met the criteria and can evaluate and adapt using their knowledge gained. Children create biome in a bottle.

### **Lesson 9 What is deforestation?**

What is deforestation? Children to watch video showing the impact of deforestation across the globe. What is causing it and how can we stop it? Children to research ways to preserve the rainforests and the animals within them? How can we stop deforestation? Children to research things that encourage deforestation and create a poster to demonstrate this.

### **Lesson 10 Which species are affected by deforestation?**

Recap on previous week's learning. Which animals are most affected by deforestation? Focus orangutans and look at the impact of deforestation on their lives. Watch short video and present information.

## Science -

### **Lesson 1 Classifying**

To give reasons for classifying plants and animals based on specific characteristics in the context of sorting and grouping animals for a zoo.

I can give reasons for classifying animals based on their similarities and differences.

### **Lesson 2 Linnaean System**

To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals by finding out about the Linnaean System of classification.

I can describe how living things are classified into groups.

### **Lesson 3**

To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals by identifying the characteristics of mammals, birds, insects, reptiles, amphibians, fish, arachnids, annelids, crustaceans, echinoderms and molluscs.

I can identify the characteristics of different types of animals.

To give reasons for classifying plants and animals based on specific characteristics by exploring unusual creatures and designing their own curious creature.

I can classify a creature based on its characteristics.

### **Lesson 4 Microorganisms**

To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals by exploring helpful and harmful microorganisms.

I can describe and investigate helpful and harmful microorganisms.

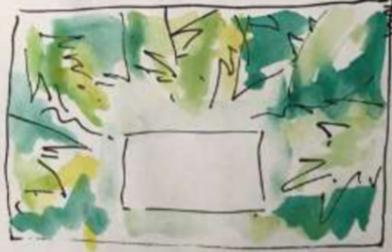
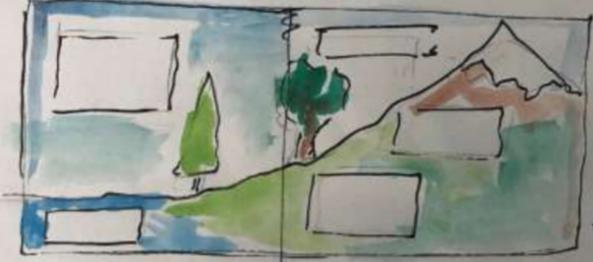
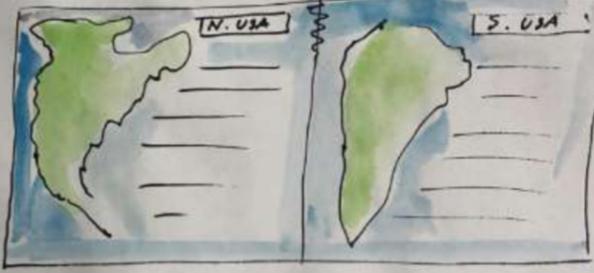
### **Lesson 5 More about Microorganisms**

To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals by identifying the characteristics of microorganisms.

I can identify the characteristics of different types of microorganisms.

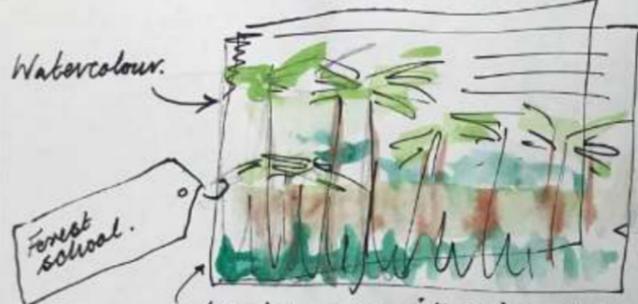
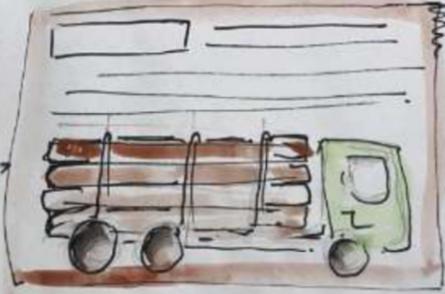
Outcome 2 and 3:

Colour Scheme:

<p>1.</p> <p>Watercolour or scratch and wax.</p>  <p>Where in the world does bio-diversity exist?</p>	<p>2.</p> <p>World map.</p>  <p>3 major climate zone information.</p> <p>What we have learned without climate zones?</p> <p>Factfile saying amount of miles away. Labels match.</p>
<p>3.</p> <p>Labels.</p>  <p>What affects climate?</p> <p>Watercolour landscape.</p>	<p>4.</p>  <p>What makes the Americas unique amongst the world continents?</p>
<p>5.</p> <p>Extra page.</p>  <p>What is special about Sierra Nevada de Santa Marta?</p>	<p>6.</p>  <p>What is a rainforest?</p> <p>Watercolour collage.</p>

Knowledge Base Examples and Notes

Colour Scheme:

<p>7.</p> <p>Watercolour.</p>  <p>Why is the Amazon Rainforest so important?</p> <p>Rainforest diagram.</p> <p>tracing paper with written information.</p>	<p>8.</p>  <p>What is deforestation?</p> <p>Collage logs.</p> <p>Watercolour.</p>
<p>9.</p>  <p>Which species are affected by deforestation?</p> <p>Water colour cheat sheet.</p>	<p>10.</p>

