

KS2 Geography. Biomes.

Woodlands and Grasslands.

EVA: Get set for an exciting journey.

I am your guide, 'Earth's Virtual Assistant.' But you can call me E.V.A.

Your mission is to explore the world's biomes. Biomes are areas of the planet with similar climates, landscapes, animals and plants.

[A MAP OF THE EARTH REVEALS SIX BIOMES]

There are six major biomes found on Earth. Rainforests. Deserts. Savannahs. Tundras. Woodlands. And Grasslands.

Let's investigate...the *woodlands* biome.

Temperate woodlands are one type of woodland biome. They are habitats where the main plants are trees.

[A GLOBE SHOWS THE POSITION OF THE EQUATOR]

A biome's climate is mainly controlled by its *latitude* on Earth - how far north or south it is. The temperate woodland biome is found in higher latitudes between the Tropics and the poles, in the *temperate climate* zone. This means that temperatures are less extreme and rainfall is more evenly spread across the year.

[THE GLOBE ZOOMS INTO THE UK]

It's time to start this mission so let's journey to the United Kingdom.

Temperate woodlands have four distinct seasons: spring, summer, autumn and winter.

Leaves change colour in autumn and fall from the trees, growing back in the spring. This adaptation allows plants to survive cold winters.

These woodlands experience lots of rain throughout the year. Most of the trees are broadleaf trees such as oak, birch and chestnut.

[ON-SCREEN GRAPHICS - DECIDUOUS]

These are examples of deciduous trees, which are trees that drop their leaves every year.

[ON-SCREEN GRAPHICS - CONIFEROUS]

Temperate woodlands can also be home to some coniferous trees, which have evergreen, waxy needles that remain on the trees all year long, helping to reduce water loss.

Similar to a rainforest, there are different layers to the woodland biome, with trees of different heights. There are plenty of flowering plants within the forest in the spring, before the trees come into full leaf.

Temperate woodlands are rich in biodiversity. Amphibians, like frogs, lay their eggs in small ponds in the spring. Animals like red squirrels store nuts to eat during the winter, when there could be less food available.

Deforestation is one threat to temperate woodlands, when trees are cleared for different reasons including farming and to make space for growing populations.

[DEBRIEF - WOODLANDS]

1: Temperate woodlands are habitats where the main plants found are trees. 2: This biome goes through distinct seasons. 3: Woodlands are home to lots of different species.

[MAP OF THE EARTH REVEALS THE NEXT BIOME]

The mission continues now and it's time to explore another biome. This is the *grassland* biome.

Temperate grasslands are one type of grassland biome. They are vast and open areas of land, which are generally located between deserts and woodlands.

Due to their latitudes on Earth, the climate in temperate grasslands is less extreme than other biomes.

[MAP ZOOMS IN TO EASTERN EUROPE]

Let's journey to Eastern Europe. A quarter of the planet's surface is covered by temperate grasslands. This one is the largest. It's called the Eurasian Steppe. It stretches from Hungary in Europe to China in Asia.

Temperate grasslands have cold winters and warm summers with some rain. And, as their name suggests, grasses are the main plants found here.

The *saiga antelope* is famous for its bulging nose, which is an adaptation to help it survive in the grasslands. Its swollen nostrils cool their blood during hot, dry summers, and act as a heater in the winter to warm the cold air before it enters the saiga's lungs.

Grasslands also exist across large parts of America. Grasslands have good soil for farming. Most of the grasslands in the United States have been turned into fields for growing crops like wheat, oats and corn.

Wildfires that occur naturally, ignited by heat from the sun or a lightning strike, can be very destructive. But they can also play an important role in the biodiversity of the grasslands.

[ON-SCREEN GRAPHICS - BIODIVERSITY]

Scientists believe that occasional wildfires help to rid the land of old grasses and allow for new grasses to grow, helping to sustain life.

Threats to the grassland biome include unsustainable farming - such as overgrazing - and climate change, which could eventually turn some grasslands into deserts.

[DEBRIEF - GRASSLANDS]

1: Temperate grasslands have cold winters and warm summers. 2: Occasional, naturally occurring wildfires can help make way for new vegetation. 3: Some farming methods can be harmful, ridding the soil of much needed nutrients.

Congratulations! We've come to the end of our fabulous journey exploring two of the world's major biomes. Mission complete!