

Geography Alive: Stage 2 (Topic 2: The Earth's Environment)

Lesson 8: Tundra		
<p>Content focus:</p> <p>In this lesson, students investigate the characteristics of the tundra and the animals that live there. In doing so, students investigate the adaptations of animals and plants to the harsh tundra climate. They also examine how the melting of permafrost contributes to global climate change.</p>		<p>Resources:</p> <ul style="list-style-type: none"> • YouTube video: <i>What are Tundras?</i> National Geographic [https://www.youtube.com/watch?v=RT6x5GVFFG8] • Resource Sheet 1: Tundra Fact Sheet • PowerPoint 1: Tundra • Worksheet 1: World map of vegetation zones
<p>Key inquiry questions:</p> <ul style="list-style-type: none"> • What makes the tundra unique? • What plants animals live in the tundra? • How have these plants and animals adapted to the climate of the tundra? • What impact is the melting of permafrost having on global climate? 	<p>Outcomes:</p> <p><i>A student:</i></p> <ul style="list-style-type: none"> • describes the characteristics that make the tundra unique • describes the climate of the tundra • identifies plants and animals that live in the tundra. • explains, in simple terms, how selected plants and animals have adapted to the tundra climate • Explains, in simple terms, how the melting of the permafrost of the tundra contributes to climate change. 	<p>Lesson sequence:</p> <ul style="list-style-type: none"> • Step 1: Students watch and listen to the YouTube video: <i>What are Tundras?</i> At the end of the video, ask the students: <ul style="list-style-type: none"> - How would you describe the climate of a tundra? - What type of vegetation did you see growing in the tundra? - What types of animals did you see living in the tundra? - How does the melting of permafrost contribute to global climate change? • Step 2: Ask students to study Resource Sheet 1 (<i>Tundra Fact Sheet</i>) and show them the images on PowerPoint 1. Ensure that the students understand: <ul style="list-style-type: none"> - where tundras are located - the climate of a tundra - the vegetation and animals that live and grow in a tundra. • Step 3: As a class, discuss and answer the following questions: <ul style="list-style-type: none"> - What is meant by the 'freeze-thaw' cycle? - How have animals adapted to the conditions found in the tundra? How do these adaptations help the animals survive? - How does the climate of a tundra affect the types of vegetation that can grow there? • Step 5: Using Worksheet 1, ask students to colour in the area of the world where tundra is found. Students are encouraged to use the one world map worksheet for lessons 1–7. If they do, pose the following questions: <ul style="list-style-type: none"> - Which vegetation type covers the greatest area of land? Why might this be? - Which vegetation type covers the smallest area of land? Why might this be? - In what ways might the distribution of vegetation across the world change in the future? <p>Extending students: Encourage more capable students to complete their maps without the assistance of PowerPoint 1.</p> <p>Supporting Students: Allow less confident students to complete their maps in a small group with the support of the teacher or teacher aide.</p>