



**pLatform for INnovation in Natural science online
education**

Didactic Unit (DU)/Lesson plan

Freshwater and Aquatic Plants

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OVERALL DESCRIPTION

Sections	Description
1. Topic/DU Title	<i>Lakes and Ponds</i>
2. Brief description of the DU	This DU deals with the topic of lakes and ponds, outlining the differences between natural lakes and artificial ponds, different types of freshwater and four types of aquatic plants. This will be taught through multiple means of representations such as pictures, videos, hands-on activities such as making a collage and written handout exercises.
3. Beneficiaries	Year 6 students aged 9-10 years old. Primary school teachers can utilise this resource for their science lessons
4. Total hours	x3 lessons of 40 minutes each, a total of 120 minutes
5. Situation problem / reality or authentic task	Lakes and Ponds
6. Aim/s	To teach the difference between natural lakes and artificial ponds To learn about different types of freshwater sources in nature To explore different types of aquatic plants
7. Subjects	Science, Biology, Earth systems & English
8. Expected results	Students learn how to distinguish between different freshwater sources present in nature and to be able to name some aquatic plants that thrive in such environments. They will demonstrate this by creating a collage of images of wet environments harbouring aquatic plants.

WORKPLAN

Phase/Title /Lessons	Brief description	Subjects	Aims	Knowledge and Competences	Educational strategy	Tools and resources	Setting*	Evaluation and assessment	Duration
Lesson 1: Lakes and artificial ponds.	<p>T shows Ss two pictures, one of a lake and one of a pond – T outlines basic differences</p> <p>T displays video on natural lakes and artificial ponds</p> <p>Online video</p> <p>Then students answer a quiz about lakes vs. ponds. Quiz answers are discussed in class.</p>	Environmental science , Biology, Earth sciences, English.	To learn to distinguish between lakes and artificial ponds.	<p>English listening, reading and speaking skills</p> <p>Prior understanding of earth water systems</p> <p>To be able to recognize the difference between saltwater and freshwater</p>	Frontal lesson / directive-interactive - T presents the material and instructs students to carry out the activities.	<p>Video from LINNEO project Natural lake and artificial pond</p> <p>Quiz ‘lakes vs. ponds’ created by the teacher</p>	Physical classroom – teacher at the front of the classroom Whiteboard	Evaluation of quiz carried out in class	40 minutes
	<p>Class discussion: T introduces lesson by asking students: where do you think the water we drink comes from? What types of water do we find on this planet? Why is water so important?</p>	Environmental science , Biology, Earth sciences, English, Maths.	<p>To learn about the importance of freshwater for Earth’s ecosystems</p> <p>To understand the importance</p>	<p>English listening, reading and speaking skills</p> <p>Prior understanding of earth water systems</p>	frontal lesson / directive-interactive	<p>Tablets for each student</p> <p>YouTube video from Next generation science</p>	Physical classroom – teacher at the front of the classroom	<p>Class correction of worksheet</p> <p>Kahoot quiz created by the teacher</p>	

<p>Lesson 2: Diversity of Freshwater</p>	<p>Worksheet exercise on freshwater and saltwater on our planet – class correction</p> <p>Kahoot quiz on freshwater</p>		<p>of water for life on our planet</p> <p>To understand how water supply is divided on our planet in approximate percentages</p>	<p>To be able to recognize the difference between saltwater and freshwater</p>		<p>The world of fresh water</p> <p>Kahoot quiz from National Geographic Freshwater (public Kahoot)</p> <p>Worksheet on Earth's water (free resource from www.worksheetplace.com)</p>			<p>40 minutes</p>
<p>Lesson 3: Aquatic Plants</p>	<p>Class discussion: T introduces lesson by asking questions about the importance of water for life on our planet. T asks: can you think of some plants that live in water? T writes some examples on the whiteboard.</p>	<p>Environmental science , Biology, Earth sciences, English,</p>	<p>To distinguish between terrestrial plants and aquatic plants</p> <p>To identify four types of aquatic plants</p>	<p>English listening, reading and speaking skills</p> <p>Prior understanding of earth water systems</p> <p>To be able to recognize the</p>	<p>frontal lesson / directive-interactive – T sits at the front of the class to direct and instruct Ss to implement various activities.</p>	<p>Video from LINNEO project Four types of aquatic plants</p> <p>Worksheet on terrestrial vs. aquatic</p>	<p>Physical classroom – teacher at the front of the classroom</p>	<p>Class correction of worksheets</p> <p>Assessment of collages made by the students.</p>	<p>40 minutes</p>

	<p>Worksheet: Ss distinguish between aquatic plants and terrestrial plants</p> <p>Worksheet on aquatic plants permit, this worksheet can be given as homework).</p> <p>Collage activity: T prints out picture of lakes, ponds and different types of aquatic plants, and also terrestrial plants. Ss must identify the aquatic plants and make a collage of freshwater ecosystems.</p>		<p>To categorise types of aquatic plants (emergent, free floating, floating & submerged)</p> <p>To make a collage of lakes and ponds and aquatic plants that thrive in this environment.</p>	<p>difference between saltwater and freshwater</p> <p>To recognize the differences between lakes and artificial ponds</p> <p>To recognize the importance of freshwater of living organisms</p>	<p>Collaborative lesson – Ss work in groups of 4 to make a collage on freshwater and aquatic plants.</p>	<p>plants created by the teacher (see for example Do the plants live in water or in land on https://www.liveworksheets.com/.</p> <p>Collage resources (pictures, chart, coloring pens)</p>	<p>Desks are joined in groups of 4 so that Ss can easily work together on the collage.</p>		
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*Setting: organisation of classroom space (physical and virtual) functional to the activity, provision of resources (technological and others), management of resources.