



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

Didactic Unit (DU)/Lesson plan

Aquatic, semiaquatic animals and Reptiles

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OVERALL DESCRIPTION

Sections	Description
1. Topic/DU Title	Life in water and on land – Aquatic, Semi-aquatic animals and Reptiles.
2. Brief description of the DU	This DU tackles the topic of aquatic, semiaquatic animals and reptiles. It is meant to differentiate between different species that display different features.
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	Aquatic, Semi-aquatic animals and Reptiles
6. Aim/s	To differentiate between different species that are aquatic, semi-aquatic and reptiles. To identify specific adaptations of aquatic and semi-aquatic animals and reptiles as a response to their environment. To understand how developmental environments must be protected in order to safeguard aquatic, semi-aquatic animals and reptiles.
7. Subjects	Science, Biology and Environmental Sciences.
8. Expected results	By the end of the topic, students will be able to differentiate between aquatic and semi-aquatic animals and different reptile species adaptations. Students will also develop a sound knowledge of developmental environments and to be able to recognise how these environments must be protected in order to safeguard such species.

WORKPLAN

Phase/Title /Lessons	Brief description	Subjects	Aims	Knowledge and Competences	Educational strategy	Tools and resources	Setting*	Evaluation and assessment	Duration
Lesson 1: Adaptation of aquatic and semiaquatic animals.	Introduction: Class discussion – Which animals live in water? T writes answers on the whiteboard and states that these are considered aquatic animals. Then T shows video 1: Aquatic and semiaquatic animals Class discussion: what is the difference between aquatic and semiaquatic animals? – emphasis on Metamorphosis. Semiaquatic animals video 2	Science, Biology, Ecology, English.	To allow students to recognise that there are animals that are aquatic and live in water, and animals that start their life in water but later adapt to survive outside water. To enable students to differentiate between aquatic and semiaquatic animals.	English listening, reading and speaking skills	Frontal lesson / directive-interactive- T presents the material and instructs students to carry out the activities.	Video 1 from LINNEO Project Aquatic and semiaquatic animals Video 2 YouTube video from Children's Maritime Institute Bean: Semi-Aquatic Creatures Episode 3 Worksheet on semiaquatic animals created by the teacher (see for example Semiaquatic	Physical classroom setting – teacher at the front of the class presenting Whiteboard Projector	Worksheet correction in class	40 minutes

	Semi-aquatic worksheet + class correction					webquest on the Los Angeles Maritime Institute website, Educator resources.			
Lesson 2: Developmental environments	Introduction: class discussion – where do aquatic and semiaquatic animals live? T lists places on whiteboard and adds examples (wetlands, rivers, ponds, lakes, estuaries). Video on protecting and restoring freshwater ecosystems. Class discussion: Why are freshwater environments so important for animals? T elicits the idea that these environments harbour aquatic	Science, Biology, Ecology, English.	To make students aware that freshwater environments are under threat globally. To allow students to come up with solutions on how we can protect these environments	English listening, reading, speaking and public speaking skills. By formulating their own action plan, they will be using and developing their problem solving and critical thinking skills.	Frontal lesson / directive-interactive - T presents the material and instructs students to carry out the activities. Collaborative – Ss work in groups of 4 in order to create their presentation.	Stationary for making a chart (cardboard paper, pictures, markers, glue, scissors, etc). YouTube video from United Nations Water Protecting and restoring freshwater ecosystems	Physical classroom setting – T at the front of the class instructing Ss. Ss desks joined together in groups of 4 to enable collaboration for group activity. Projector Whiteboard	Evaluation on each group's presentation & chart.	40 minutes

	and semiaquatic species and allow them to reproduce and even allow metamorphosis of species (e.g., frog). Group activity: in groups of 4, T instructs Ss to come up with an action plan in order to protect freshwater ecosystems in their locality/country. They must draw up a plan that people in their society must implement. They must make a physical chart to highlight their ideas. Presentations: Ss present their ideas in front of their classmates.								
	Introduction: T asks - Do reptiles live in water or on land? Answer: both is	Science, Biology, Ecology, English.	To learn about the adaptations of reptiles to live	English listening, reading, speaking and	Frontal lesson / directive-interactive - T presents the	Video from LINNEO project	Physical classroom setting – T at the front	Evaluation of each group's findings and	

Lesson 3: Adaptations on land – Life of reptiles	possible. Some reptiles live on land (terrestrial) in water (aquatic) or both (semiaquatic) Video on reptile adaptations to live on land Class discussion: what are some of the adaptations that allow reptiles to live on land? T writes answers on the whiteboard and adds missing examples Group activity: the class is divided into 4 groups. T gives a picture of a specific reptile to each group (choice between grass snake, lizard, crocodile & turtle). Ss must use their tablet to research all about that specific reptile and		and develop on land (grass snake, lizard, crocodile, turtle) through collaborative group work.	public speaking skills. Problem solving and critical thinking skills are utilized since they will be looking up information on species adaptations using their tablets. Ss build on prior knowledge of aquatic and semiaquatic animals and freshwater ecosystems.	material and instructs students to carry out the activities. Collaborative – Ss work in groups in order to research the topic and find answers. They discuss their findings with their group members.	Adaptations of reptiles Pictures of reptile species (grass snake, lizard, crocodile & turtle) Tablets for students to conduct research on reptile adaptations Kahoot quiz from National Geographic Reptiles (public Kahoot)	of the class presenting . Desks are joined according to the number of students present – the class must be split into 4 groups. Projector + speakers Whiteboard	explanation on how a specific reptile species has adapted to terrestrial life. Kahoot quiz on reptiles.	40 minutes
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	how it is able to survive on land. Each group is allowed 5 minutes to share their findings with the rest of the class. T monitors and evaluates Ss and gives feedback on their findings. Conclusion: Kahoot quiz on reptiles								
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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.