pLatform for INnovation in Natural science onlinE education

# Didactic Unit (DU)/Lesson plan

# Life under the Sea


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| **Contract No.:** | **2022-1-IT02-KA220-SCH-000088667** |
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# OVERALL DESCRIPTION

| Sections | Description |
|---|---|
| **1. Topic/DU Title** | **Life Under the Sea** |
| **2.Brief description of the DU** | Through this DU students will explore 3 different marine environments, 3 different classifications of marine organisms and different shapes and movements displayed by marine animals. |
| **3. Beneficiaries** | Primary School Children: Year 5-6, Ages 8-10 |
| **4. Total hours** | 2 hours |
| **5. Situation problem / reality or authentic task** | Awareness about the importance of protecting marine environments to protect marine animals. This awareness is created through the presentation that students will make. |
| **6. Aim/s** | The main aim of this DU is for students to explore the diversity of marine animals and environments, and how different classifications of marine species have physically adapted to their environments. |
| **7. Subjects** | Science, Marine Biology, Environmental Science, English. |
| **8. Expected results** | Final product – the students create a presentation on their favourite marine animal, detailing what environment it lives in, its classification, what it looks like and how it moves around. |

# WORKPLAN

| Phase/Title /Lessons | Brief description | Subjects | Objectives | Knowledge and Competences | Educational strategy | Tools and resources | Setting* | Evaluation and assessment | Duration |
|---|---|---|---|---|---|---|---|---|---|
| **Lesson 1: Marine Environments** | T introduces lesson by asking Ss to sketch out a picture showing what it looks like under the sea<br><br>Ss compare pictures & T points out features that relate to marine environments.<br><br>T plays video 'The different marine environments (Sandy, rock bottom, open sea)'<br><br>Ss work out a worksheet on marine environments – it contains 3 exercises related to the topic – answers to the questions posed can be found in the video. | Science<br>Biology<br>Environmental Science<br>English | To distinguish between 3 types of marine environments (sandy, rock bottom, open sea)<br><br>To be able to list at least 3 types of organisms that live in each marine environment. | English language, reading, listening, writing and speaking skills. | Will learn to classify animals into groups based on certain characteristics. Will be able to distinguish and name the characteristics of vertebrate and invertebrate, warm-blooded and cold-blooded groups and give some examples. | Video from LINNEO project The different marine environments<br><br>Worksheet on marine environments (annexed) | Physical classroom setting – teacher at the front of the class<br><br>Whiteboard | Monitoring during classroom activities<br><br>Correction of classwork – So must share the mark they obtained in the worksheet. | 40 minutes |

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| | T plays the video a second time for students to complete the exercises.<br><br>Class correction – T gives the correct answers and Ss correct their own work, issuing a mark. | | | | | | | | |
| **Lesson 2: Classification of Marine Organisms** | T introduces lesson by asking: (what are some apparent differences between a jellyfish and a shark?) eliciting the idea that there are major differences between sea organisms.<br><br>T explains that marine organisms can be grouped into 3 classes: Plankton, Benthos and Nekton.<br><br>T plays video on ecological classification<br><br>T instructs Ss to work out the worksheet | Science<br>Biology<br>Environmental Science<br>English | To be able to classify marine organisms into a particular group depending on their features. (plankton, benthos, nekton)<br><br>To be able to name at least 1 organism from each class. | English language, reading, listening, writing and speaking skills. | Directive – interactive lesson. | Video from LINNEO project The ecological classification<br><br>Worksheet on Marine Organism Classification (annexed) | Physical classroom setting – teacher at the front of the class<br><br>Whiteboard | Monitoring during classroom activities<br><br>Correction of classwork – Ss must share the mark they obtained in the worksheet. | 40 minutes |

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| | using knowledge gathered from the video.<br><br>Class correction. Ss show their classmates pictures they drew in the 4th exercise. | | | | | | | | |
| **Lesson 3: Marine life – Shape and Movements** | T introduces lesson by showing Ss a picture of a jellyfish – T asks "how does the jellyfish move in the ocean?"<br><br>Video on shape and movement of marine animals<br><br>Ss work out 3 exercises on the worksheet assessing their knowledge gained from the video.<br><br>Ss work in groups to create a presentation on their favorite marine animal, detailing what it looks like, its classification, the marine | Science<br>Biology<br>Environmental Science<br>English | To understand that not all marine animals move the same way.<br><br>To be able to explain how marine animals have different physical shapes which allow them to move in their environment in a specific way. | English language, reading, listening, writing and speaking skills. | Directive – interactive lesson, Collaborative | Video from LINNEO project Shape and movement of marine animals<br><br>Worksheet on shape and movement of marine animals (annexed)<br><br>Tablets or research material<br><br>Resources for making a presentation | Physical classroom setting – teacher at the front of the class, student desks are grouped in 4 to ease collaboration.<br><br>Whiteboard | Monitoring during classroom activities<br><br>Correction of classwork – Ss must share the mark they obtained in the worksheet.<br><br>Assessment of final presentation – T determines knowledge and competencies of marine animals gained from | 40 minutes |

| | | | | | | | | | |
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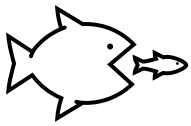
| | environment it lives in, and how it moves around. If time permits, they may make a painting or build a model of the creature to display its specific features. They may use their tablets to conduct more research/look for images.<br><br>Ss showcase their research by presenting it to the classroom. | | | | | (colored paper, pictures, scissors, etc.) | | the lessons by the quality of information presented on that particular marine animal. | |

*Setting: organisation of classroom space (physical and virtual) functional to the activity, provision of resources (technological and others), management of resources.

# Lesson 1: Marine Environments Worksheet

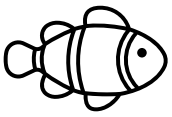


**Name:**_____ **Date:**_____

## Exercise 1: Matching

**Match the type of marine environment with its description by drawing a line between them.**

| | | |
|---|---|---|
| **Sandy Marine Environment** | • | • Characterized by large expanses of sand with little to no vegetation. |
| **Rock Bottom Marine Environment** | • | • Consists of rocky surfaces and crevices providing habitat for various marine organisms. |
| **Open Sea Marine Environment** | • | • Extends over vast areas of ocean with few obstacles or structures. |



## Exercise 2: True or False

**Circle whether the statement is true or false**.

1. Sandy marine environments are usually rich in plant life.

   *True / False*

2. Rock bottom marine environments provide hiding places for marine animals.

   *True / False*

3. Open sea marine environments are typically found close to the shore.

   *True / False*

**Exercise 3: List Marine Species**

**List three marine species that are commonly found in each type of marine environment mentioned below.**

Sandy Marine Environment:

_____

_____

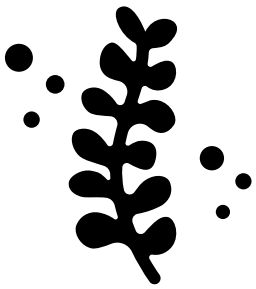
_____

Rock Bottom Marine Environment:

_____

_____

_____

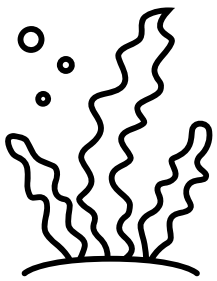


Open Sea Marine Environment:

_____

_____

_____



**Total mark: _____/15**

# Lesson 2: Classification of Marine Life

## Marine Organism Classification Worksheet

**Name:**_____ **Date:**_____

### Exercise 1: Plankton

1. What is plankton?

    A. Small marine organisms that can swim against ocean currents.

    B. Tiny marine organisms that drift with ocean currents.

    C. Large marine animals that live near the ocean surface.

2. Which of the following is an example of plankton?

    A. Jellyfish

    B. Phytoplankton

    C. Crab

3. True or False: Plankton includes both plant-like and animal-like organisms.

    True / False

### Exercise 2: Benthos

1. What is Benthos?

    A. Marine organisms that float on the ocean surface.

    B. Marine organisms that live on or in the ocean floor.

    C. Marine organisms that migrate long distances.

2. Which of the following is a characteristic of benthic organisms?

    A. They are primarily found in the open ocean.

    B. They rely on ocean currents for movement.

    C. They are adapted to life in sediments or attached to solid surfaces.

3. True or False: Benthic organisms include animals like crabs, sea stars, and clams.

True / False

**Exercise 3: Nekton**

1. What is nekton?

A. Small marine organisms that drift with ocean currents.

B. Marine organisms that live on or in the ocean floor.

C. Marine organisms that can actively swim against ocean currents.

2. Which of the following is an example of nekton?

A. Seaweed

B. Tuna

C. Sea anemone

3. True or False: Nektonic organisms include large marine animals like whales, dolphins, and sharks.

True / False

4. Draw a picture of a marine organism belonging to the Nekton class.

**Total mark: ____/ 10**

## Lesson 3: Marine life – Shape and movement

**Marine Organisms: Movement and Shape Worksheet**

**Name:**_____ **Date:**_____

**Exercise 1: Matching**

**Match the type of movement with its description by drawing a line between them.**

| | |
|---|---|
| Swimming | Moving by using fins, flippers, or tails to propel through water. |
| Crawling | Moving by stretching and contracting muscles, often on the ocean floor. |
| Drifting | Moving passively with ocean currents without actively swimming. |

**Exercise 2: True or False**

**Circle whether the statement is true or false.**

1.Fish use their fins to swim forward and backward.

*True / False*

2. Squid and octopuses move by crawling along the ocean floor.

*True / False*

3. Jellyfish and some plankton drift with ocean currents.

*True / False*

**Exercise 3: Matching Shapes**

**Match the marine organism with its corresponding shape that helps it move efficiently in the ocean environment.**

1. Sea turtle

A. Streamlined body shape

B. Flattened body shape

C. Round body shape

2. Moray eel

A. Elongated body

B. Flattened body shape

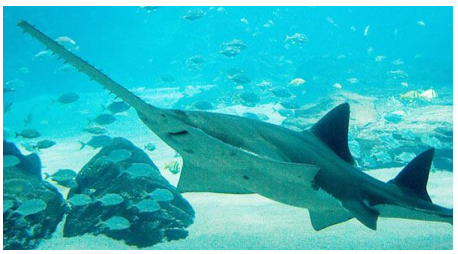
C. Round body shape

3.Sawfish

A. Flattened body shape

B. Round body shape

C. Elongated body shape



**Bonus Question:**

Can you think of another marine animal and describe how its shape helps it move in the ocean environment?

_____

_____

**Total mark: ____/ 10**