



## Learning Unit for 4th Grade

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# How Can we Protect Marine Life?

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**Unit Developer**

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## General information

**Field of knowledge:** Language, science, English, geography and art.

**Age group:** Grade 4

**Estimated time for learning:** 10 hours of study

**Subject studied:** How can we protect marine life?

- **Sub-theme:** Awareness of protection of beaches

**Key concepts:**

- Knowledge: protecting the seashore, Herzliya - a coastal city, danger of extinction and protection of marine animals
- Skills: identifying the need to protect the beaches and the environment, reading and understanding, comparing, drawing conclusions, translating an idea into a product, creating an impact on the community
- Practices: developing environmental responsibility.

**Learning environment:** classroom, school



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## Reasons for choice of subject

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### Rationale for the teacher and the learning sequence

In 2015, 17 goals were set as a global agenda for sustainable development by the year 2030. In this unit, we will focus on Goal 14: protecting, in particular, the seashore and marine animals.

Moreover, as Herzliya is a coastal city, it is important to raise awareness among its residents of the coastal strip and sea animals. For example, in November 2022, the sea lobster "Ariel" was returned to the sea after treatment, having been found on the beach in distress a year earlier. Since our city is located on the coast of the Mediterranean Sea, it is important to develop awareness and especially responsibility for our environment.

### General goals:

Students will develop an awareness of protecting the seashore with an emphasis on protecting marine animals from extinction.

### Operative - practical goals

- The students will learn and research about the beaches and marine animals through videos, online information sources, literary text.
- The students will encourage the preservation of the beaches and sea animals among the community.
- The students will plan actions and prepare slogans in Hebrew and English about the protection of sea animals, draw comic book heroes who protect the environment and create a "garbage monster".

### Actions

We will encourage maintaining the beach and protecting marine animals through products:

- Slogans in English and Hebrew for safeguarding and protecting the seashores and marine animals
- A comic drawing of a hero protecting the environment
- Building a large "garbage monster" from the waste and dry garbage in our environment that may drift into the sea and pollute it



## How is the E (Education) principle expressed in the teaching unit?

The value that will be promoted in the unit is the preservation and protection of the seashore and sea animals in particular. Studying and researching the subject will arouse curiosity about the subject and encourage actions related to responsibility for the environment. Since Herzliya is a coastal city - research, study and impact actions are relevant to the students' lives and the local community.

## How is the A (Academy) principle expressed in the teaching unit?

Protecting the seashore and protecting marine animals, in particular, is a relevant and burning issue that calls for multidimensional research from a topical, geographical, scientific and social perspective (circumstances, habits, stakeholders).

The teaching and learning process includes research and integrative actions in five fields of thought:

- ✓ Science: the study of sea animals and identification of those in danger of extinction
- ✓ Language: reading texts, writing a slogan, finding information, researching, sorting, comparing, drawing conclusions
- ✓ Geography: Herzliya is a city on the coast of the Mediterranean Sea
- ✓ English: writing a slogan
- ✓ Art: comic drawing of a hero who protects the environment, building a "garbage monster".



## How is the C (Community) principle expressed in the teaching unit?

The subject of the unit and its goals are derived from the school's worldview of individual development and responsibility for the environment. The community principle is reflected in the development of awareness and responsibility for preserving the environment and protecting sea animals among the local community (Herzliya is a coastal city) and around the world. To this end, after the learning and research process - the learners will work to promote awareness of the issue and thus, encourage environmental responsibility among the community.

## How is the H (High-Tech) principle expressed in the teaching unit?

At the end of the learning and research process about the seashore and sea animal families, the students will arouse the attention of the community in the school and outside and raise awareness of the seashore and the danger of sea animals 'extinction with several products that they created have collaboratively:

- Digital slogans to raise awareness in the community about the problem of the beaches and the danger of extinction of marine animals. The creation of the slogan in English is actually an international product that may promote the impact beyond the immediate community in Herzliya and Israel.
- An artistic "garbage monster" made of dry garbage (which may reach the beaches and pollute them) collected by the students from around the school
- Drawing of a comic book hero protecting his environment

## Learning Resources

Learning and reference materials:

Learning materials and reference materials: accompanying presentations

- Science presentation
- Language presentation

Examples of learning outcomes:

### 1. Examples of the comic drawings



### 2. Video of slogans to protect sea animals - [Link to the video](#)



## Lesson program/ study sessions

- Lesson 1: Listening to and watching the story "Everyone with his family" / Yehuda Atlas and Yael Mashali - illustrated by Rinat Hoffer
- Lessons 2+3: What do we know about sea animals?
- Lesson 4: Israel Aquarium in Jerusalem
- Lessons 5+6: The Underwater Observatory in Eilat - comparison
- Lesson 7: Herzliya, a city located on coast and its impact on the marine environment.
- Lessons 8+9: Sea animal families - creating slogans / comics.
- Lesson 10+11: "Garbage Monster" - collecting dry garbage and creating a "garbage monster".



## Program for Lesson 1

Listening to and watching the story "Everyone with his family" by Yehuda Atlas and Yael Mashali - illustrated by Rinat Hoffer					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
5 minutes	Academy: a preliminary stage of knowing basic concepts of species families through written literacy skills and discussion, emotional discourse	Types of families	<a href="#">Accompanying SLIDE</a>	The students will express their opinion on the sentence "Everyone and his family".	<b>Introduction</b>
20 minutes			It is recommended to tie the topic to a life skills lesson on accepting the other - even if we are different from each other, we will always find something similar.	The students will listen to and watch the story "Everyone and His Family" / Yehuda Atlas and Yael Mashali. The students will answer questions in the notebook (slide 3 in the accompanying presentation). The students will get to know the types of families and connect them to the main theme: sea animals.	<b>Practice and assessment</b>
15 minutes					
5 minutes				We will summarize the lesson and what we learned in it.	<b>Summary and reflection</b>

## Program for Lessons 2 and 3

What do we know about sea animals?					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
20 minutes	Academy: knowing basic concepts of species families through written and oral literacy skills, emotional discourse	Types of sea animals	A link to the previous meeting through guiding questions in a dialogue with the students. (Slide 5 in the accompanying presentation).	The students will discuss in class about the sea animals using guiding questions from the previous lesson following the story "Everyone and His Family": - Have you met sea animals? - Have you ever dived? - Have you watched fish using a snorkel? - What does life look like underwater? - How are they similar/different from life on land?	Introduction
60 minutes		Sea			
		Dry land			
	Skills: using digital content, drawing conclusions, critical thinking		<u>סרטון וחיידון של תום ומובי</u>	The students will watch the video of Tom and Moby "under the sea". The students will answer the quiz and the challenges accompanying the video.	Practice and assessment
10 minutes				We will summarize the lesson and what we learned in it.	Summary and reflection



## Program for Lesson 4

Israel Aquarium in Jerusalem - watch the video					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
10 minutes	Academy: Knowing the species of sea animal families through written literacy skills  Skills: use of consumption of digital content, drawing conclusions, written literacy skills and discussion.	Sea animal species, Israel Aquarium in Jerusalem	Link to the students' previous knowledge about marine animal species	The students will write in the notebook the names of the species of sea animals they know.	Introduction
25 minutes			<a href="#">Video on the Aquarium</a>  <a href="#">Accompanying presentation SLIDE 6</a>	The students will watch a video about the Israel Aquarium in Jerusalem  The students will identify the sea animals and write their names in the notebook.	Practice and assessment
10 minutes				The students will present and discuss in class the species of sea animals they have identified.	Summary and reflection

## Program for Lessons 5 + 6

The Underwater Observatory in Eilat – a comparison					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
30 minutes	Academy: Knowledge of marine animal species families through written literacy skills, use of digital media content	The underwater observatory in Eilat	<a href="#">Video on the Underwater Observatory in Eilat</a>	<p>The students will watch a video about the underwater observatory in Eilat.</p> <p>The students will identify the sea animals and write their names in their notebook.</p>	Introduction
40 minutes	Academy: exploration, sorting, generalization, comparison		<p><a href="#">SLIDE 7 – Accompanying presentation</a></p> <p><a href="#">Accompanying SLIDE – Research of sea animals</a></p>	<p>Students will identify which sea animals live in each aquarium.</p> <p>The students will compare the similarities and differences between the sea animals in the Israel Aquarium and the sea animals in the underwater observatory in Eilat according to the differences of sea animal research in a table (presentation attached).</p> <p>Students will research and conclude which marine animals are adapted to each type of aquarium.</p>	
20 minutes	Skills: literacy, discussion		<p>The teacher will draw a table comparing the sea animals in the Israel Aquarium and the underwater observatory on the blackboard.</p>	<p>Students will present and discuss in class a comparison of the animal species in each aquarium.</p>	Summary and reflection



## Program for Lesson 7

Herzliya, a city located on coast and its impact on the marine environment					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
5 minutes	Academy: research, locating information from information sources, drawing conclusions	Coastal city, coastal plain	Show the students a map of the city of Herzliya and teach about its characteristics as a coastal city	The students will get to know the city of Herzliya as a city located on the coast of the Mediterranean Sea	Introduction
40 minutes	Values and education: responsibility for the environment, reflective observation of the habits and personal actions that the student has with the environment.	Man's influence on his environment, danger of extinction	<p>The teacher will ensure there are computers or laptops in the classroom.</p> <p>The teacher will allow learning in pairs or groups.</p>	<p>The students will collect data about sea animals and the danger of their extinction on the beaches of the city of Herzliya.</p> <p>The students will find articles and studies online about how the residents of the city of Herzliya affect the beach environment and whether they pose a risk to the sea animals.</p>	Practice and assessment



## Program for Lessons 8 + 9

Summary of sea animal families + creation of slogans / comic heroes					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
10 minutes	Educational values: environmental responsibility, proactivity.	Practice concepts learned in the previous lessons.	The teacher will encourage cooperation and group work.	The students will suggest actions as to what residents of Herzliya can do on behalf of the animals that live in the sea and for the environment.	<b>Introduction</b>
80 minutes	Community: action aimed at the near and far community to draw the residents' attention to the problem of the danger of extinction of marine animals.  Entrepreneurship: creative action to draw the residents' attention to the issue.			The students can create slogans in Hebrew and English about the beaches and sea animals. Students will draw a comic book hero that protects the environment. The students will publish and present the slogans and comics they have created at school and in the community.	



## Program for Lessons 10 + 11

Lesson 10+11: "Garbage Monster" - collecting dry garbage and creating a "garbage monster".					
Time	each model principle	Terms	Activities		Teaching Course
			Recommendations to the teacher	Instructions to students	
90 minutes	<p>Community: a creative action to raise the community's awareness of the problem of beach pollution, the danger of extinction of sea animals.</p> <p>Education and values: environmental responsibility through recycling and education of the community.</p>	Endangerment, circulation, pollution, waste, dry trash		Students will learn that dry garbage in the residential environment eventually ends up on the beaches.	Introduction
According to school schedule			<p>Before the teacher takes the students out to pick up the trash around the school, they should check the safety of the environment.</p> <p>The teacher will encourage cooperation and group work.</p>	Students will collect dry trash around the school grounds and together, create a "garbage monster" from trash they have collected.	Practice and assessment
					Using the "garbage monster", the students will explain to the school students about environmental protection, the danger of extinction of sea animals.