

ODYSSEY UNKNOWN ISLANDS (T1)

S23
T1
D9
L1 P3



Focus on:

- Talent development (D9)

Task1: Do some arts and crafts! Make a mosaic picture or an "ancient" Greek vase!

Every solution is good!

Any kind of tool and material can be used!

You can use the ideas and list of materials from the Idea Bazaar, come up with your own ideas or just let the children be creative.

Idea Bazaar – some ideas:

- They can use pieces of coloured paper, or broken coloured tiles, pebbles or coloured beads, caps for making mosaic picture
- They can use air-drying ceramic or plasticine and black paint for making a Greek vase.
- They can roll a random vase using the template.

For details of the different solutions, see the Idea sheets!

Developmental fields:

In focus:

- Fine motor skills
- Creativity
- History
- Mathematics

In addition:

- Life skills
- Subject – Civics
- Talent development
- Social skills



Task3: Make a pixel art picture! Use the technique to scale it up and down!

Every solution is good!

Any kind of tool and material can be used!

You can use the ideas and list of materials from the Idea Bazaar, come up with your own ideas or just let the children be creative.

Idea Bazaar – some ideas:

- They can use ArTeC blocks and baseplate
- They can work in the Piskelapp application
- Using the template, students can color the picture according to binary color codes

For details of the different solutions, see the Idea sheets!

Take photos of buildings while they are being built and when they are finished.

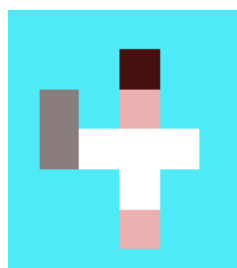
Developmental fields:

In focus:

- Fine motor skills
- Spatial orientation
- Creativity
- Mathematics, IT

In addition:

- Life skills
- Social skills
- Subject – Arts and crafts
- Talent development



How to manage output:

Organise the completed photos either in an online repository or printed on a notice board. If the children have made notes, or have any additional ideas left over, attach them as well.

ODYSSEY UNKNOWN ISLANDS (T1)

S23
T1
D9
L1 P4

Focus on:

- Talent development (D9)



Task2: Play blind man's buff! Play a Seeing-eye guide game!

Every solution is good!

Any kind of tool and material can be used!

You can use the ideas and list of materials from the Idea Bazaar, come up with your own ideas or just let the children be creative.



Idea Bazaar – some ideas:

- Blindfold one child in the class. His job is to catch the others. Use sounds and touch to get his attention.
- Blindfold one child from the class with a scarf. Build an obstacle course in the room using tables, chairs, and other objects! Guide them through the obstacle course! You can guide them with words, other sounds, or touch—agree on this beforehand!
- Make sure that no accidents happen!

For details of the different solutions, see the Idea sheets!

Developmental fields:

In focus:

- Social skills
- Life skills
- Spatial orientation

In addition:

- Creativity
- Subject – Civics
- Talent development

Task4: Help the sailors escape!

Every solution is good!

Any kind of tool and material can be used!

You can use the ideas and list of materials from the Idea Bazaar, come up with your own ideas or just let the children be creative.



Idea Bazaar – some ideas:

- Group the sheep on the teplate
- Select the numbers that, when divided by 3, leave a remainder of 1.

For details of the different solutions, see the Idea sheets!

Take photos of buildings while they are being built and when they are finished.

Developmental fields:

In focus:

- Mathematics, IT
- Life skills
- Fine motor skills
- Spatial orientation

In addition:

- Social skills
- Talent development

ODYSSEY UNKNOWN ISLANDS (T1)

S23
T1
D9
L2 P3

In focus:

- Talent development (D9)

Goals of the lesson:

- text comprehension
- problem solving
- decision making
- organising group work



Odysseus, a brave and cunning king, returns from the Trojan War after ten years of fighting. He is eager to return to his island of Ithaca with his men. As they sail, they arrive at an island inhabited by Cyclopes. The sailors, tired and hungry, land to explore the island. They hunt wild animals and look for water but find no signs of civilization, just forests and goats. Suddenly, Odysseus spots smoke from a neighboring island, hears the sounds of animals and human voices. Curious, he decides to approach them to see if these inhabitants are friendly or hostile, giving instructions to his men before leaving.

Character	Features	Interactions
Odysseus	Strong, brave, curious	Returns home from the war, approaches the inhabitants
Sailors	Tired, hungry	Wanders around, look for food and water

Suggestions

- Identify the characters in the text, with particular emphasis on the main plot points, character traits, emotions and movements.
- Collect pictures and information about the ancient Greek history, art and mythology
- Collect informations about different types of ship in the different ages

How to use the character card:

Each student fills in their own Character card:

- writes the name of the character
- their features, movements, reactions, etc.
- collects the elements of the environment, other accessories, things to be built
- thinks over the phases, tools and materials of the robot's building

Students can use more pieces of each part of the Character card if needed!

Odysseus, sailors, ship

Move, walk, hear sounds

Plant
Rocks
Caves
Sea

The main actions of the story
Media files needed
Divide the text segment into pieces
Make a list about things needed


Your name _____
Build _____


Your name _____
Be attentive, your robot should be able to: _____


Your name _____
There also should be: _____


Your name _____
Think over: _____

ODYSSEY UNKNOWN ISLANDS (T1)

S23
T1
D9
L3-4
P4



Suggested materials

- ArTeC blocks (at least the 112 pcs set) and ArTeC robot set (at least 1 Studuino motherboard, 2 DC motors, 3 servo motors, 5 Touch sensors 2 IR Photoreflector, drive rails, gears)
- Character cards and Robotic task card template
- Pencil

In focus:

- Talent development (D9)

Goals of the lesson:

- problem solving
- decision making
- body image

Suggestions

Walking, climbing

- Discuss with children how people and animals move
- Do some movements together so that children can observe the phases of their movements
- Show children anatomical mannequins in motion
- Build figures with moving body parts from ArTeC blocks

Rowing
Rocking
Disembarking

How to fill in the Robotic card?

- Choose the robot's activity and the complexity of the program to match the child's abilities, based on the activity card, the developmental aspect and the programming level.
- If necessary (e.g. for clarification or differentiation), additional robot cards can be filled in.
- Design the robot with several ways of building/programming!
- Complete the robot cards in the target language!
- Not all columns of the table need to be filled in, only those relevant to the robot's specific operation.
- Based on each row of the table, describe the robot's operation in the target language using grammatically correct sentences.

Robotic task card

The name of my robot: _____

The parts I need for my robot:

--	--	--	--	--	--

Choose the parts you need. Check off what you use.

Given action: _____
Given sentence: _____
Find robots: _____
Find materials: _____
Find technical: _____

This is how I build and program my robot:

What do I want to do?	What do I need?	What do I want to do?	What do I need?	What do I want to do?	What do I need?

This is how my robot will work: _____
Write it in complete sentences using the table above!

Related topics in the Technical corner

- Programming DC motor (2.a, 2.b)
- Programming servo motor
 - Moving mouth to a given angle (3.a, 3.b)
 - Repeated mouth movements a given number of times (3.b)
- Using Touch sensors (4.a)
 - Remote control made of 4 Touch sensors (4.d)
- Testing and programming IR Photoreflector (7.a, 7.c, 7.e)
 - Using IR photoreflector for detecting an object (7.d, 7.e)

DC motor driven boat

PROG1

A boat rocking on rails

PROG2

5 push-button boat robot with sail hoist

PROG3

A boat that stops automatically at the shore and from which the sailors are disembarked on a gear-drive rail structure.

PROG4

ODYSSEY UNKNOWN ISLANDS (T1)

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T1
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L3-4
P5

Ideas for robots on different programming levels

DC motor driven boat

PROG1

A boat rocking on rails

PROG2

5 push-button boat
robot with sail hoist

PROG3

A boat that stops
automatically at the
shore and from which
the sailors are
disembarked on a
gear-drive rail
structure.

PROG4



The journey of the boat

P1 Rowing boat

- Build the boat
- DC motor connected to the battery charger drives the "oars"

P2 Sailing boat

- Build the boat with 1 DC motor moving on a rack!
- Use a servo motor to rock the boat.
- Use one push button that moves the boat forward when pressed and one that moves it backward.

P3 Hoisting the sail

- The boat is built on a trolley and can be controlled by 5 push buttons: 4 buttons set the 4 directions, the 5th button when pressed hoists the sail to the mast using a servo motor and a gear, a rack and pinion.
- Pressing this button again will lower the sail.

P4 Disembarkation of the sailors

- We build the boat similar to that in P3.
- We build a gear and rack and pinion structure powered by a servo motor, on which we place boat figures.
- An infrared sensor is attached to the front of the boat. The boat will automatically stop when the infra sensor detects the shore of the island.
- Then, with the help of the rack and pinion device, the sailors land.

