

ODYSSEY THE SHEEP (T3)

S23
T3
D3
L1 P3



Focus on:

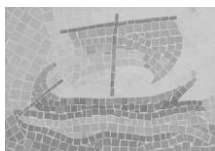
- Spatial orientation (D3)

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 THE SHEEP (T3)

S23
T3
D3
L1 P4



Focus on:

- Spatial orientation (D3)

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 THE SHEEP (T3)

S23
T3
D3
L2 P3



In focus:

- Spatial orientation (D3)

Goals of the lesson:

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

After a futile search and hesitating in his movements, the Cyclops eventually finds his way in the cave. He finally reaches the exit and removes the rock blocking the entrance to enjoy the fresh night air, easing his pain while blocking the entrance with his body. The Cyclops is consumed by his desire for revenge. Odysseus and his companions, on the other hand, search for a way to escape, and they find one, for the king of many tricks never runs out of ideas. They all hide under the sheep and wait for dawn. In the early morning, the animals stir because they want to go out. Polyphemus realizes that a new day is breaking and pushes his flock out of the cave, not noticing the Greeks hiding well beneath the animals.

Character	Features	Interactions
Odysseus	Strong, brave, tricky,	Finds out solution for escaping
Cyclops	Giant, blind, desired for revenge	Blocks the entrans, Lets the sheep out
Sailors	Frightened, strong	Hide under the sheep
Sheep		Want to go out

Suggestions

- Identify the characters in the text, with particular emphasis on the main plot points, character traits, emotions and movements.
- Collect informations about sheep farming in different ages
- Collect stories from world literature in which a tricky character an enemy with trickery and cleverness.

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!

Odusseus, sailors, Cyclops, sheep

Move, walk, hide

Rocks, Cave
Furnitures
Sheep

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 THE SHEEP (T3)

S₂₃
T₃
D₃
L₃₋₄
P₄



Suggested materials

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

Suggestions

Walking, staggering

- Discuss with children how people 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

Stepping
Staggering
Screaming

[illegible]

In focus:

- Spatial orientation (D3)

Goals of the lesson:

- problem solving
- decision making
- body image

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.

Related topics in the Technical corner

- Programming DC motor (2.a, 2.b)
- Programming servo motor
 - Moving arm to a given angle(3.a, 3.b)
 - Repeated arm movements a given number of times (3.b)
- Using Touch sensors (4.a)
 - Remote control made of 4 Touch sensors (4.d)
- Lighting the LED (5.a)
- Using Buzzer (6.a,b)
- Testing and programming IR Photoreflector (7.a, 7.c, 7.e)
 - Using IR photoreflector for detecting an object (7.d, 7.e)
 - Line tracing (7.f)

The characters are built as movable figures

PROG1

Reflex game: the sheep must be started when the cyclops raises its arm

PROG2

The arm of Cyclops blocks the way of the sheep like a barrier

PROG3

Line tracing sheep and the Cyclops

PROG4

ODYSSEY THE SHEEP (T3)

S23
T3
D3
L3-4
P5

Ideas for robots on different programming levels

The characters are built as movable figures

PROG1

Reflex game: the sheep must be started when the cyclops raises its arm

PROG2

The arm of Cyclops blocks the way of the sheep like a barrier

PROG3

Line tracing sheep and the Cyclops

PROG4



Trick with the sheep

P1 Odyssey's sheep

- We build the lamb based on the pattern.
- We also build the boatmen, the other lambs and the cyclops.

P2 Outsmarting the Cyclops

- The Cyclops and the lamb that carries Odysseus are separate robots
- The lamb is built on a cart and 1 Touch sensor is attached to it.
- When the Touch sensor is pressed, the lamb moves forward and stops after 3 seconds.
- The cyclops sits on the ground, 2 Touch sensors are attached to it.
- One of its arms is raised by a servo motor when one Touch sensor is pressed and lowered by the other.
- The sheep is sent forward when the cyclops raises its arm.

P3 Barrier

- The Cyclops and the sheep are separate
- The sheep is mounted on a small cart and, once switched on, automatically moves forward until it detects the Cyclops' arm with an infrared sensor, at which point it stops
- The cyclops is in a sitting position and starts to work when it hears a sound
- The cyclops also has an infrared sensor, which detects the arrival of the sheep, waits for a random amount of time, and then lifts its arm like a barrier using a servo motor

P4 Line tracing

- The two robots are built similarly to P3
- The sheep has two infrared sensors, which follow a line to reach the cyclops, where it stops and then reverses using the other infrared sensor
- The cyclops has two infrared sensors, which detect the arrival of the sheep, wait for a random amount of time, and then lift its arm like a barrier
- The sheep is equipped with two infrared sensors, which guide it to the klüklopsz using line tracking. There, it stops and, with the help of the other infrared sensor, reverses and moves forward again
- The klüklopsz has an infrared sensor, and when it detects the sheep for the third time, it lifts its arm like a barrier

