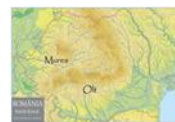


MURES AND OLT THE CONCILIATION (T3)

S13
T3
D8
L1 P1



Focus on:

- Other subjects – Geography (D8)

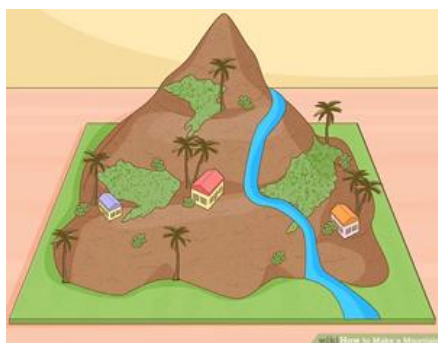
Task1: How to make a paper mache mountain?

Students create a mountain as an element of the landscape.

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:

- Building environment out of recycled materials
- Drawing
- Creating

For details of the creation, see the Idea sheets!

Developmental fields:

In focus:

- Fine motor skills
- Spatial orientation
- Creativity

In addition:

- Attention concentration
- Subject concentration – Art
- Talent development



Task5: Study the map of Romania. How do the two rivers, Mures and Olt flow?

Students search the internet to find interesting information about the different regions of Romania!

Create a presentation, a poster or a model using the map of Romania!

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:

- Building out of ArTeC Blocks
- Printing out the map of Romania (large scale or smaller)
- Creating presentations, posters
- For details of the different solutions, see the Idea sheets!

Developmental fields:

In focus:

- Mathematical competences
- Spatial orientation
- Presentation skills
- Creativity

In addition:

- Attention, concentration
- Subject concentration – Natural Science, Geography
- Talent development

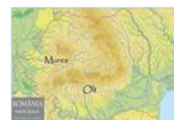


How to manage output:

Record videos of the children's creations and presentations.

MURES AND OLT THE CONCILIATION (T3)

S13
T3
D8
L1 P2



Focus on:

- Other subjects – Geography (D8)

Task3: How does the characters and the scenes of the story look like?

Students create elements of the environment, the mountain, castle. They create plants, animals, figures as well.

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:

- Building environment and characters out of ArTeC Blocks, using Artec mechanisms
- Drawing
- Creating computer graphics

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

Developmental fields:

In focus:

- Spatial orientation
- Presentation skills
- Creativity
- Talent development

In addition:

Subject concentration
– Natural Sciences,
Arts

How to manage output:

Record videos with different characters and elements of the environment.

Task4: How to use arguments in a conflict? How to convince people of your ideas?

The main situation of the story can be used to talk about conflict solving and argumentation techniques. How to do it, what language to use to convince people in a conflict situation?

They dramatize and act out the given situation.

You can use the **Act it out! cards** from the Idea Bazaar

Idea Bazaar – some ideas:

- Finish sentences about siblings.
- Dramatize a conflict situation with your sibling. Think of the solution, argumentation!
- Imagine a conflict before travelling. What could be the reason and the solution?
- Dramatize the two end of the conflict.

For details see the Idea sheets!

Developmental fields:

In focus:

- Social competences
- Critical thinking
- Civics
- Text comprehension

In addition:

- Attention concentration
- Life skills
- Talent development


MURES AND OLT

S13
T3
L1


 Some ideas – Behaviors in different situations

Finish the sentences:
 What I like about my sibling(s) is that they...
 What I cannot stand about my sibling(s) is that...

Act it out!
 The brothers in the story were always quarrelling.
 Have you found yourself in a similar situation before?
 What was the reason and the resolution of the conflict?
 Find out and play out the situation!

Act it out!
 In the story the brothers could not come to common sense regarding the travelling.
 What could be the reason?
 Do you think they managed to agree? How? If not, why?
 Imagine and dramatize the two ends of the conflict.

How to manage output:

Record a video acting out the situations.

MURES AND OLT THE CONCILIATION (T3)

S13
T3
D8
L2 P3

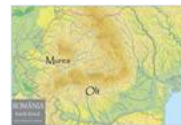


Focus on:

- Other subjects – Geography (D8)

Goals of the lesson:

- text comprehension
- trial argumentation
- problem solving
- decision making
- organizing group work



Summary:

Tarcău, the fairy, wanted to send her two sons to find their father, so she turned them into rivers. The boys had different characters, so they could not agree on whose name to travel by. So they decided to travel separately against their mother's advice. They met again at the end of their journey, the Danube embraced them and took them to the Black Sea.

Main features and interactions of the characters

Character	Features	Interactions
Tarcău	Walks, moves	Walks in front of the golden palace
Mures	Walk, moves	Follow the line
Olt	Walk, moves	Follow the line

Suggestions

Discussion topics:

- Why did the brothers follow different ways?
- How did they travel? What does this say about their character?
- Have them act out the dialogue, and think of possible arguments.

Civic, social studies:

- Talk about the scene, participants, interactions during the dialogue (who are the participants, what is the environment like, who can speak, how can they quarrel, etc.)
- Collect information about the geographical situation of the rivers.

Suggested materials

- ArTeC Blocks (at least the 112 pcs set)
- Act it out! cards
- Pencil, paper, cardboard, glue

How to use the character card:

Each student fills in their own Character card:

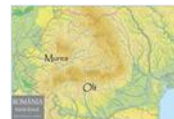
- writes the name of the character
- their features, movements, reactions, etc.
- collects the elements of the environment, other accessories, things to be built
- thinks over the phases, tools and materials of the robot's building

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

 Your name _____ Build _____	Mures Olt father Mountains landscape
 Your name _____ Be attentive, your robot should be able to: _____	Walk Sit Carry things
 Your name _____ There also should be: _____	Landscape on a map Shores, trees
 Your name _____ Think over: _____	The main actions of the story Media files needed Divide the text segment into pieces Make a list about things needed

MURES AND OLT THE CONCILIATION (T3)

S13
T3
D8
L3-4
P4



Suggested materials

- ArTeC Blocks (at least the 112 pcs set) and ArTeC robotics set (1 or 2 Studuino motherboards, 2 DC motors, wheels, 2 servo motors, 2 Touch sensors, 4 IR Photoreflectors, 3 LEDs)
- Mindmap or Chart draft, Storyline
- Character cards and Robotic task card template
- Pencil

Focus on:

- Other subjects – Geography (D8)

Goals of the lesson:

- fine motor skills,
- problem solving,
- decision making,
- life skills

Suggestions

- Collect information about the landscapes with the two rivers (paintings, photos)
- Collect information about clothing of fairies, kings

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 character 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.

Mures /Olt
Moves
Moves his arm

Has LED
Follows the line

The name of my robot: _____

The parts I need for my robot:

Buttons	DC motor	Servo motor	Light sensor
Accelerometer	IR Photoreflector	Touch sensor	LED

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

Draw action
Green: simple
Find robotics
suggested materials
in the Technical
Corner!

This is how I build and program my robot:

What do I see?	What is in my design?	What? (action)	What? (sensor)	In what? (how long? How many times?)	What does it do?

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)
 - Winding the motor until the sensor detects change (2.b, 2.c)
- Programming servo motor
 - Moving the arm up and down (3.b)
- Testing and programming Touch sensor (4.a, 4.b, 4.c)
- Using LED
 - Lighting and blinking the LED (5.a, 5.b)
- Testing and programming IR Photoreflector (7.a, 7.c, 7.e)
 - Using an IR Photoreflector for detecting an object (7.d, 7.e)
 - Line tracing robot (7.f)
- Using variables (11.a)
 - Counting (11.c)

Mures and Olt DC
motorised structure

PROG1

Mures and Olt on a
fixed route

PROG2

Mures line tracing
robot, Olt has
movable arms

PROG3

Mures line tracing
robot, Olt counts
obstacles in its path

PROG4

MURES AND OLT THE CONCILIATION (T3)

S13
T3
D8
L3-4
P5

Ideas for robots on different programming levels

Mures and Olt DC
motorised structure

PROG1

Mures and Olt on a
fixed route

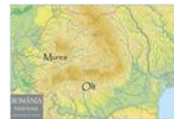
PROG2

Mures line tracing
robot, Olt has
movable arms

PROG3

Mures line tracing
robot, Olt counts
obstacles in its path

PROG4



Mures and Olt to the sea

P1 Building Mures and Olt

- The two fairies are built as DC motorised robots connected to a battery holder.
- Mures is a slow moving robot, Olt is a fast moving robot with gears.

P2 Building Mures and Olt

- The two fairies are built as robots mounted on a trolley.
- Olt is built with a device that allows him to push objects away from him.
- The robots follow a pre-drawn path: Mures a winding one, Olt a straighter one.

P3 Build the journey of Mures and Olt

- Mures is a line tracer robot, using IR-photoreflector.
- It uses another IR photo-reflector to see if it reaches the sea, where it stops.
- Build Olt so that her arms can be moved using a servo motor.
- When an object comes in its path, it detects it with an IR photoreflector and scoops it aside with its arms.
- It uses another IR photo-reflector to see if it reaches the sea, where it stops.

P4 Build the journey of Mures and Olt

- Build the fairies in a similar way to P3.
- Mures uses two IR-photoreflectors to observe objects in her path. She avoids them if necessary.
- Olt counts how many objects she has dredged and when she stops at the sea, she flashes the number.

