

THE COMIC BOOK MOUSE

VATTELAPESCA, THE VILLAGE IDIOT (T2)

S10
T2
D7
L1 P3

In focus:

- Robotics, engineering (D7)



Task1: What does the landscape look like?

Students create elements of the landscape. Discuss the differences between real and comic landscapes.

Every solution is good!

Any kind of tool and material can be used!

You can use the ideas and the list of materials from the Idea Bazaar, use your own ideas or just let the children to solve the problem using their creativity.

Idea Bazaar – some ideas:

- Building environment out of ArTeC Blocks
- Building environment out of recycled materials
- Drawing
- Creating computer graphics

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



Developmental fields:

In focus:

- Spatial orientation
- Fine motor skills
- Creativity

In addition:

- Attention concentration
- Subject concentration – Natural Sciences
- Talent development

Task2: What does a mouse look like?

Students create a mouse with movable mouth and limbs

Every solution is good!

Any kind of tool and material can be used!

You can use the ideas and the list of materials from the Idea Bazaar, use your own ideas or just let the children to solve the problem using their creativity.

Idea Bazaar – some ideas:

- Building a mouse out of ArTeC Blocks
- Cutting and binding a cardboard mouse
- Drawing series
- Animation editor

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

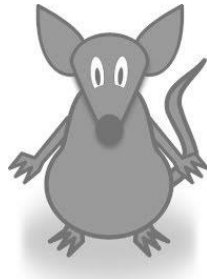
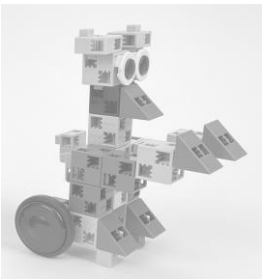
Developmental fields:

In focus:

- Fine motor skills
- Spatial orientation
- Creativity

In addition:

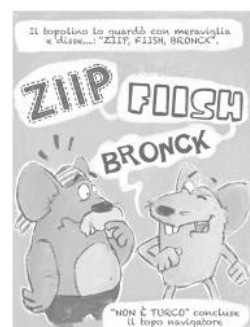
- Attention concentration
- Subject concentration – Drawing, IT
- Talent development



How to manage output:

Hang the pictures on the wall, on a big poster, and ask the children to arrange them according to a rule they decide.

Store the objects in a wardrobe, to protect them from falls. Attach a label with the name of the group!



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Task3: How can you communicate with someone who does not understand you?

Students talk about communication and languages.

Have you ever been laughed at? Have you ever been bullied?

Students talk about their experience of being bullied or laughed at, of the circumstances, reactions, solutions, and feelings.

They dramatize and act out the given situation.

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

How to manage output:

Take a video/audio record of the dramatized situation!

Idea Bazaar – some ideas:

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

Cut out the situation cards!

Choose the focus that you want the children to deal with! Give them the appropriate situation card!

Help them to build the situation if needed!

Developmental fields:

In focus:

- Social skills
 - Inclusion strategies
 - Communication strategies
 - Empathy
- Text comprehension

In addition:

- Life skills

Task2: Build a maze:

Build a maze, play an orienteering game in the maze!

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 cardboard boxes, wooden boards. Nail, spatula, yarn, rubber, glue, etc. (I2)
- They can build a maze in the classroom, e.g. using furniture, boxes, or in the yard, using branches, sand, stones

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:

- Spatial orientation
- Fine motor skills
- Creativity
- Social skills

In addition:

- Life 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.

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S10
T2
D7
L2 P3



Once they went hunting in a mill, full of sacks of white and yellow flour. The mice sank their teeth into that manna and chewed piecemeal, going: crik, crik, crik, as all mice do when they chew. But the cartoon mouse would go, "Crek, screk, schererek."
 "At least, please, learn to eat like polite people," muttered the navigator mouse.
 "If we were on a ship you'd have been thrown overboard by now. Do you realize or not that you make a disgusting noise?"
 "Crengh," said the cartoon mouse, and went back to stuffing himself into a sack of corn. The navigator, then, made a sign to the others, and they quickly ran away, abandoning the stranger to his fate, sure that he would never find his way back home

In focus:

- Robotics, engineering (D7)

Goals of the lesson:

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

Main features and interactions of the characters

Character	Features	Interactions
Mouse	eats, interacts, chews	Talk to each other
The navigator	Walks,, eats, interacts	
Other mice	Walks, eats, interacts, run away, chews	Talk to Vattelapesca

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!


Suggestions

- Discuss with your students what mice eat
- Discuss with your students why mice are pests
- Have students collect examples of table manners in different cultures
- Have students collect information about experiments on mouse behaviour (eg. labyrinth)




Your name _____

Build _____




Your name _____

Be attentive, your robot should be able to: _____



Your name _____

There also should be: _____



Your name _____

Think over: _____

Mouse
Navigator
Mice

Eat
interact

Mill
Sacks of flour
Outdoor places

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

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L3-4
P4



Suggested materials

- ArTeC Blocks (at least the 112 pcs set) and ArTeC robotics set (1 Studuino motherboard, 2 Touch Sensors, 1 LED, 1 servo motor, 2 DC motors)
- Mindmap or Chart draft, Storyline
- Character cards and Robotic task card template
- Pencil
- Video of hedgehog movements

How to fill in the Robotic card?

Choose the robot's „activity” and its programming complexity according to the Character task card, the developmental aim and the programming level that fits the child's skills. More Robotic cards can be filled in if needed (for clarification or for differentiation).

In focus:

- Robotics, engineering (D7)

Goals of the lesson:

- text comprehension
- problem solving
- decision making
- expressing movement

Suggestions

Walking

- Discuss how movements are made
- Make some movements together to imitate a mouse
- Show movable anatomical models to the children
- Build a simple figure with movable legs, arms or mouth from ArTeC Blocks
- **Eating**
- Imitate the movements of moving the mouth so that it seems real.

Body
Mouth
Walk

Robotic task card

Your name _____

Build a robot that can move it's _____

Use actuators and sensors for building:
 Senses are green
 Actions are blue
 Choose the needed parts!
 Check the boxes!

Buzzer Makes sound	Servomotor Turns things around	DC motor Turns things around	Sound sensor Hears sounds	Light sensor Hears light
Accelerometer Measures the acceleration	Infrared sensor Detects objects	Touch sensor Detects touch	Electronic buzzer Makes sound	LED Gives light

Build and program so that the robot _____

Use the Technical Corner for robotics help materials!

Related topics in the Technical corner

- Programming DC motor (2.a, 2.b)
- Testing and programming Touch sensor
 - Starting and stopping DC motors by pressing the same or different buttons or Touch Sensors (4.b, 4.c)
- Programming servo motor
 - Moving elements mounted on a servo motor to a given angle (3.a)
- Using IR Photoreflector
 - Testing IR photoreflector (7.a)
 - Detecting obstacles (7.b)
- Using LED (5.a)
 - Flashing (5.b)

The Comic Mouse and the Navigator Mouse are axially operated. The little mice are driven by a DC motor, directly connected to the batteries.

PROG1

Actors mounted in a puppet theatre can be moved by Touch sensors, one at a time.

PROG2

The actors move simultaneously but in opposite directions. The LED mounted on the cheese blinks.

PROG3

Chewing is represented by a horizontally moving jaw. The Comic Mouse moves on a servo motor

PROG4

THE COMIC BOOK MOUSE VATTELAPESCA, THE VILLAGE IDIOT (T2)

S10
T2
D7
L3-4
P5

Ideas for robots on different programming levels

The Comic Mouse and the Navigator Mouse are axially operated. The little mice are driven by a DC motor, directly connected to the batteries.

PROG1

Actors mounted in a puppet theatre can be moved by Touch sensors, one at a time.

PROG2

The actors move simultaneously but in opposite directions. The LED mounted on the cheese blinks.

PROG3

Chewing is represented by a horizontally moving jaw. The Comic Mouse moves on a servo motor

PROG4



Puppet show

P1 Mice in the warehouse

- Characters built with axes to stun the scene.
- The small mice can be moved as a structure directly driven by 1 DC motor.

P2 Puppet theatre

- Build a puppet theatre. 2 DC motors are mounted on the paravan, one horizontally and the other vertically.
- The Comic Mouse and the Navigator Mouse are mounted on the 2 DC motors and can be moved independently by 1 to 1 Touch sensor.
- A centrally located white LED mounted on the cheese lights up when any Touch sensor is pressed.
- The figures move and the LED lights up as long as the Touch sensor is pressed.

P3 Puppet theatre with exciting mechanics

- The Comic Mouse and Navigator Mouse are built on an articulated mechanism.
- The mechanism is driven by 1 DC motor, so they move at the same time, but in opposite directions.
- The white LED mounted on the cheese blinks.
- The scene starts when the Touch sensor is pressed and moves as long as the push button is held down.

P4 Puppet theatre with DC and servo motor

- Build a puppet theatre. 1 DC motor, 1 servo motor and 1 IR photoreflexor are mounted on the screen
- The Comic Mouse tilts with a servo motor.
- The jaw of the Navigator Mouse moves horizontally with DC motor and drive rails and gear.
- The scene is set in motion by an object placed in front of an IR Photoreflexor. The LED starts blinking simultaneously with the movement of the Comic Mouse and as long as the servo motor is moving, the white LED will blink.

