RIDE

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THE COMIC BOOK MOUSE
THE MOUSE WHO EXITS THE COMIC BOOK (T1)

S10 T1 D4 L1 P3

In focus:
- Attention (D4)

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?

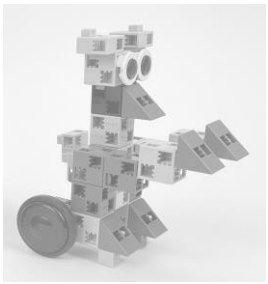
Students create a mouse with movable mouth and limbs
.
Every solution is good!
Any kind of tool and material can be used!
You can use the ideas and the list of materials from the Idea Bazaar, use your own ideas or just let the children to solve the problem using their creativity.

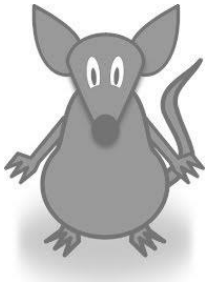
Idea Bazaar – some ideas:
- Building a mouse out of ArTeC Blocks
- Cutting and binding a cardboard mouse
- Drawing series
- Animation editor

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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THE COMIC BOOK MOUSE
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S10 T1 D4 L1 P4

In focus:
- Attention (D4)

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 bulled?

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

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

Task4: How would you communicate in a country where you don't know the language?

Students collect what they would need in a foreign country.

They create their own sign language for these needs.

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:
- Brainstorming about needs in a new environment
- Collecting types of sign languages
- Making the props

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

Developmental fields:

In focus:
- All skills
- Life skills
- Algorithmic thinking
- Attention
- Creativity

In addition:
- Subject concentration – Arts, IT
- Talent development

How to manage output:

Take a video/audio record of the dramatized situation!

THE COMIC BOOK MOUSE
THE MOUSE WHO EXITS THE COMIC BOOK (T1)

S10 T1 D4 L2 P3

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A comic book mouse, tired of living between the pages of a comic book and eager to change the taste of meat with that of cheese, took a big leap and found himself in the world of flesh-and-blood mice.
"Squash!" he immediately exclaimed, smelling a cat.
"What did you say?" whispered the other mice, startled by that strange word.
"Sploom, bang, gulp!" said the mouse, who spoke only comic book language.
"It must be Turkish," observed an old bastard mouse, who had been serving in the Mediterranean before he retired. And he tried to address him in Turkish.
The mouse looked at him in wonder and said, "Ziip, fiish, bronk."
"No, It is not Turkish," the navigator concluded.
"Then what is it?"
"Vattelapesca."
So they called him Vattelapesca and kept him a bit like the village idiot.
"Vattelapesca," they asked him, "do you like parmesan or gruyere better?"
"Spliiit, grong, zizizir," replied the cartoon mouse.
"Good night," laughed the others.
The little ones, then, would pull his tail on purpose to hear him protest in that funny way, "Zoong, splash, squarr!"

In focus:
- Attention (D4)

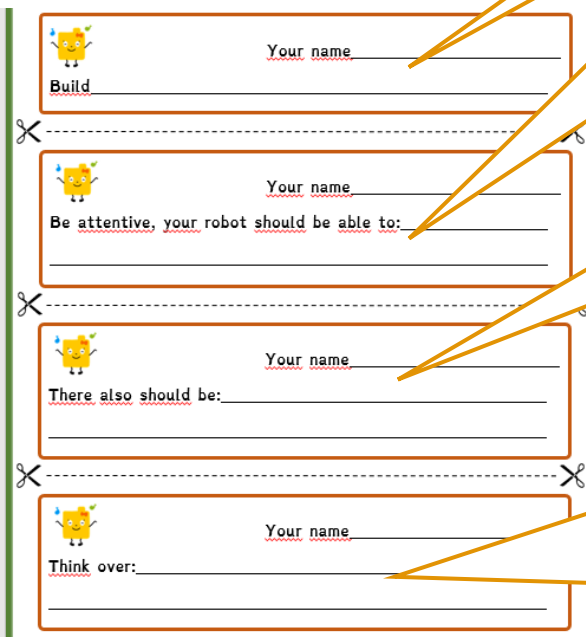
Goals of the lesson:
- text comprehension
- problem solving
- decision making
- organizing group work

Suggestions
- Discuss how movements are made. Make some movements together and the children should perceive the phases of their own movements
- Discuss why the mouses couldn't understand each other. What are the basics of communication?
- Build a simple figure of a mouse with movable legs, arms or mouth from ArTeC Blocks

Main features and interactions of the characters		
Character	Features	Interactions
Mouse	Walks, stops, interacts	Talk to each other
The navigator	Walks, stops, interacts	
Other mice	Walks, interacts	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!



Mouse
Navigator
Mice

Walk
Stop
interact

Book
Outdoor places

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

RIDE
Robotics for the Inclusive Development of Atypical and Typical Children
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THE COMIC BOOK MOUSE
THE MOUSE WHO EXITS THE COMIC BOOK (T1)

S10
T1
D4
L3–4
P4

In focus:
- Attention (D4)

Goals of the lesson:
- text comprehension
- problem solving
- decision making
- expressing movement

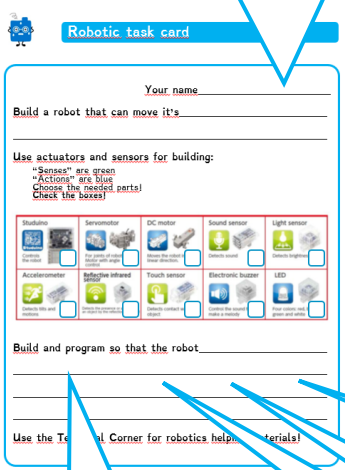
Suggested materials
- ArTeC Blocks (at least the 112 pcs set) and ArTeC robotics set (2 Studuino motherboards, 6 Touch Sensors, 2 Buzzer, 3 IR Photoreflectors, 1 Accelerometer, 2 servo motors, 2 DC motors)
- Mindmap or Chart draft, Storyline
- Character cards and Robotic task card template
- Pencil
- 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).

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

Speaking
- Imitate the movements of moving the mouth so that it seems real.
- Collect ideas about how speaking can be represented by robot parts.

Body
Mouth
Walk



Related topics in the Technical corner
- Programming DC motor (2.a, 2.b)
- Programming servo motor
  - Moving elements mounted on a servo motor to a given angle (3.a)
  - Programming waving movement (3.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)
- Using Buzzer (6.a)
- Using IR Photoreflector
  - Testing IR photoreflector (7.a)
  - Detecting obstacles (7.b)
  - Avoiding obstacles, (7.c,d)
  - Moving forward until the black line is found (7.e)

PROG1
A Comic Mouse is a moving device, or programmed robot. The other characters can be moved with axes.

PROG2
The Comic Mouse forwards to the Navigator Mouse. The Navigator Mouse is also approaching and sniffs the cheese. They try to make conversation.

PROG3
The Comic Mouse moves randomly, the Navigator Mouse controlled by remote control.

PROG4
The Comic Mouse moves in a maze. The Sailor Mouse is controlled by an accelerometer and a Touch sensor.

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THE COMIC BOOK MOUSE
THE MOUSE WHO EXITS THE COMIC BOOK (T1)

S10
T1
D4
L3–4
P5

Ideas for robots on different programming levels

PROG1	PROG2	PROG3	PROG4
A Comic Mouse is a moving device, or programmed robot. The other characters can be moved with axes.	The Comic Mouse forwards to the Navigator Mouse. The Navigator Mouse is also approaching and sniffs the cheese. They try to make conversation.	The Comic Mouse moves randomly, the Navigator Mouse controlled by remote control.	The Comic Mouse moves in a maze. The Sailor Mouse is controlled by an accelerometer and a Touch sensor.

The mouse who exits the comic book

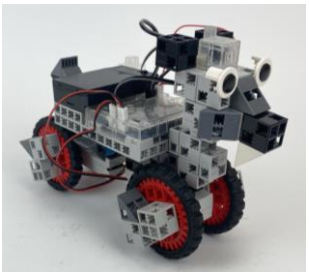
P1 Puppeteering

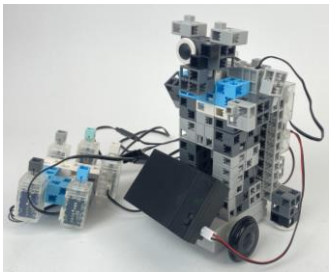
a.) Build the Comic Mouse
- The DC motor is driven directly from the batteries
- Comic Mouse rolls up to the Sailor Mouse and the little mice.

b.) Comic Mouse mounted on robot carriage
- Its program starts automatically on switch-on and rolls forward for 5 seconds to the Navigator Mouse and the group of little mice.

P2 Comic Mouse and Navigator Mouse talking
- Build the Comic Mouse as in P1 b).
- 2 Touch sensors and 1 Buzzer are attached
- When one Touch sensor is pressed, it starts and when the other Touch sensor is pressed, it stops and the Buzzer mounted on it sounds in a high-pitched tone.
- Build the Navigator Mouse Robot.
- 1 Touch sensor, 1 servo motor and 1 Buzzer are connected.
- Its program starts automatically when the robot is switched on.
- The robot moves forward, stops when the Touch sensor is pressed and the servo motor lifts its head, while the Buzzer emits a low-pitched sound.

P3 Comic Mouse and Sailor Mouse meet
- Build the Comic Mouse, as in P2, 1 IR photoreflector is connected.
- The Comic Mouse moves forward with random changes of direction.
- When the IR photoreflector detects the Navigator Mouse, it stops and the Buzzer sounds a high-pitched tone.
- Build the Navigator Mouse robot, as in P2, we connect a 5-button remote control console to it.
- The Navigator Mouse can be controlled with 4 Touch sensors, so we guide it in front of the Comic Mouse.
- By pressing the 5th button, the servo motor in the neck of the Navigator Mouse moves the robot's head up and down, and the Buzzer sounds a deep tone.





P4 Comic Mouse looking for the way
- Build the Comic Mouse, as in P2, we connect 3 IR Photoreflectors, 1 Buzzer and 1 Touch sensor, mount a servo motor in its neck.
- The Comic Mouse detects and avoids obstacles by means of 1-1 IR Photoreflectors placed on the sides of the mouse.
- When the 3rd IR Photoreflector, mounted in front, detects an obstacle, it stops.
- When the Touch sensor is pressed, a servo motor built into the neck moves the head left and right and turns the Buzzer on with a high-pitched sound.
- Build the Navigator Mouse robot, as in P2, an Accelerometer and 1 Touch sensor are attached.
- The Navigator Mouse can be controlled with an accelerometer, so you can guide it to the Comic Book Mouse and press its push button.
- When you press the push button on the Navigator Mouse, the servo motor mounted in its neck moves its head up and down and the Buzzer sounds a low tone.