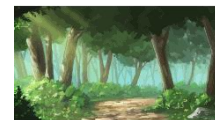


THE JUNGLE BOOK THE RUINED CITY (T1)

S4
T1
D10
L1 P3

Focus on:

- Creativity (D10)



Task1: Imagine and build the abandoned ruined city! What happens when everyone moves out of a city?

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 recycled materials, textiles, boxes, building blocks, plasticine (I1)
- In the classroom e.g. using furniture, boxes or in the schoolyard, sandpit (I1)

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

Developmental fields:

In focus:

- Creativity
- Social skills
- Fine motor skills

In addition:

- Life skills
- Subject – Civics
- Talent development



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:

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

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.



THE JUNGLE BOOK

THE RUINED CITY (T1)

S4
T1
D10
L2 P3



In focus:

- Creativity (D10)

Goals of the lesson:

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

They all knew where that place was, but few of the Jungle People ever went there, because what they called the Cold Lairs was an old deserted city, lost and buried in the jungle, and beasts seldom use a place that men have once used. Besides, the monkeys lived there, and no self-respecting animal would come within eye-shot of it except in times of drouth, when the half-ruined tanks and reservoirs held a little water.

The monkeys called the place their city, and pretended to despise the Jungle People because they lived in the forest. And yet they never knew what the buildings were made for nor how to use them. They would sit in circles on the hall of the king's council-chamber, and scratch for fleas and pretend to be men; or they would run in and out of the roofless houses and collect pieces of plaster and old bricks in a corner, and forget where they had hidden them.

The monkeys dragged him into the Cold Lairs late in the afternoon, and were very pleased with themselves for the time. They joined hands and danced about and sang their foolish songs. Mowgli had never seen a city before, and though this was almost a heap of ruins it seemed very wonderful and splendid. Some king had built it long ago on a little hill. You could still trace the stone causeways that led up to the ruined gates where the last splinters of wood hung to the worn, rusted hinges.

Trees had grown into and out of the walls, and wild creepers hung out of the windows of the towers on the walls in bushy clumps. A great roofless palace crowned the hill, and the marble of the courtyards and the fountains was split and stained with red and green, and the cobblestones in the courtyard had been thrust up and apart by grasses and young trees.

Mowgli was sore and angry as well as hungry, and he roamed through the empty city giving the Strangers' Hunting Call from time to time, but no one answered him, and Mowgli felt that he had reached a very bad place indeed.

Now a cloud came to cover the moon, and Mowgli was thinking about what would happen. That same cloud was being watched by the three good friends, Baloo, Bagheera and Kaa, in the ruined ditch below the city wall. "I will go to the west wall," Kaa whispered, "and come down swiftly with the slope of the ground in my favor."

Character	Features	Interactions
Monkeys	They are not selfish, they are content	Sit around, hold a meeting, run around, explore Forget everything Dance in circles, sing
Mowgli	Tired, hungry	Wanders around, shouts, thinks
Ruined city	Buried in the jungle, water puddles, corridors, tunnels, roads, gates, Ruined, magnificent	

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 ruined cities of ancient cultures.
- Discuss how ancient ways of life can be inferred from ruins.
- Make a collection of crawling plants and vegetation on the sites of lost settlements.

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!

Mowgli, chief monkey, other monkeys

Monkey hangs from the tree, walks on all fours, Mowgli stands on 2 legs, etc.

**Plant
Ruin
Treasure
Chasm**

**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: _____

THE JUNGLE BOOK THE RUINED CITY (T1)

S4
T1
D10
L3-4
P4

Suggested materials

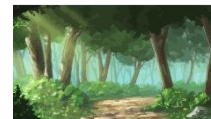
- ArTeC blocks (at least the 112 pcs set) and ArTeC robot set (at least 1 Studuino motherboard, 2 DC motors, 3 servo motors, 3 LED, 1 Sound Sensor, 3 IR Photoreflector)
- Character cards and Robotic task card template
- Pencil

In focus:

- Creativity (D10)

Goals of the lesson:

- problem solving
- decision making
- body image



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, 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

Drumming
Swinging
Monkey sliding over
Walking
Coiling

The name of my robot: _____

The parts I need for my robot:

Motor	Servo motor	DC motor	Sound sensor	Light sensor
☐	☐	☐	☐	☐

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

Brain action: Create! Solve! Find! Robotics support materials in the Technical Corner!

This is how I build and program my robot:

What do I see?	What is it doing?	What? (action)	What? (action)	To what? (how many times?)	What kind? (what?)

This is how my robot will work: Write it in complete sentences using the parts 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)
- Testing and programming IR Photoreflector (7.a, 7.c, 7.e)
 - Using IR photoreflector for detecting an object (7.d, 7.e)
 - Labyrinth-traversing robots (7.h)
- Testing and programming Sound Sensor (9.a)
 - Activating the robot by voice (9.b)
- Using LED (5.a)
 - Flashing (5.b)

Monkey troop and Mowgli "puppet theatre" with movable figures

PROG1

A troop of monkeys rocking and swaying on the trees on servo motors.
Chief monkey crawls on a drive rail as vine

PROG2

Mowgli finds his way through the maze of the ruined city
A guide monkey crawls from tree to tree on a drive rail "vine"

PROG3

Monkey that can walk
Chief monkey pecking on a vine

PROG4

THE JUNGLE BOOK THE RUINED CITY (T1)

S4
T1
D10
L3-4
P5

Ideas for robots on different programming levels

Monkey troop and Mowgli "puppet theatre" with movable figures

PROG1

A troop of monkeys rocking and swaying on the trees on servo motors.
Chief monkey crawls on a drive rail as vine

PROG2

Mowgli finds his way through the maze of the ruined city
A guide monkey crawls from tree to tree on a drive rail "vine"

PROG3

Monkey that can walk
Chief monkey pecking on a vine

PROG4



Monkeys and Mowgli

P1 Puppet Theatre

- Build the characters of the scene
- Their heads, tails and arms can be moved on axis
- All the characters can be moved, the whole scene

P2 Monkeys in the trees

- a.) Build the characters in the scene as in P1
- The 3 members of the monkey troop, mounted on a servo motor, rotate left and right
- A green LED is mounted in the trees which blink when the monkeys move
- The movement is triggered by a clap, which is detected by a Sound sensor
- b.) The leader monkey moves back and forth on a track with drive rail, with 1-1 DC motor and gears on its arms, in the ruined city

P3 Mowgli in the ruined city

- a.) Build the labyrinth of the ruin city, at the end of the labyrinth the monkey troop as in P2 a.)
- Build Mowgli on a robotic base, equipped with 3 IR Photorefectors, 2 red LEDs
- Mowgli has 2 IR Photorefectors (mounted front-side right and left) facing the sides of the maze, so the robot can keep its distance from the walls and move towards the exit to reach the monkey team.
- The third IR Photoreflector is mounted facing forward. When it detects the monkey troop, Mowgli stops.
- The 3 members of the monkey team, mounted on a servo motor, rotate left and right while the green LED flashes, automatically starting the program when switched on.
- b.) Build the tree-climbing leader monkey
- Its structure is the same as in P2 b), but it has 1 IR Photoreflector and 1 sound sensor.
- The robot starts when a clap is detected by the Sound sensor and stops when the IR photoreflector detects the end of the trajectory.



P4 Chief monkey

- a.) The Chief monkey is a robot that can dance thanks to 4 servo motors built into its legs.
- The coordination of the 4 servo motors, the continuous balancing of the robot and the accurate measurement of the values allow the robot to stay on its feet and not to topple over.
- The monkey starts move its feet, when clapping is detected by a Sound sensor.
- b.) Building a monkey clinging to a tree.
- The DC motor mounted on the robot is connected directly to the battery holder.
- The two arms of the monkey alternate with the DC motor and axes driven asynchronously (one hangs, the other moves forward).
- The robot thus moves forward suspended on the outstretched rope.

