

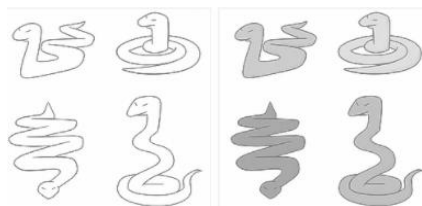
THE JUNGLE BOOK THE DANCE OF KAA (T2)

S4
T2
D10
L1 P3

In focus:
• Creativity (D10)



Task1: Draw snakes! Imagine how they would move! Portray them!
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.



<https://mindy.hu/hu/kreativ-otlet/4462/mozgathato-kukacozo-papir-kukac-kreativ-otlet-gyerekekek-papirbol>

Idea Bazaar – some ideas:

- Drawing
- Putty
- Salt and flour dough
- Clay
- Rubik's cube
- Wood
- Paper
- Textile, yarn

Developmental fields:

In focus:

- Social skills
- Fine motor skills
- Creativity

In addition:

- Subject – biology
- Talent development

Task2: Listen to the music! Design your own snake dance! Who can do the best snake dance?

Every solution is good!

Let the children watch the video below and then design their own snake dance together!

<https://www.youtube.com/watch?v=kMMm3I86KN4>

Idea Bazaar – some ideas:

- Observe the movement of snakes, try to imitate it
- Try to develop a common choreography (I4)

Make a video of the dance as it's being developed, and after completion. Analyse how well you managed to imitate the snakes' movements.

Developmental fields:

In focus:

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

In addition:

- Subject – biology
- 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 DANCE OF KAA (T2)

S4
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L2 P3

The Dance of Kaa

Generations of monkeys had been scared into good behavior by the stories their elders told them of Kaa, the night-thief, who could slip along the branches as quietly as moss grows, and steal away the strongest monkey that ever lived; of old Kaa, who could make himself look so like a dead branch or a rotten stump that the wisest were deceived till the branch caught them.

Kaa was everything that the monkeys feared in the jungle, for none of them knew the limits of his power, none of them could look him in the face, and none had ever come alive out of his hug.

The moon was sinking behind the hills and the lines of trembling monkeys huddled together on the walls and battlements looked like ragged, shaky fringes of things. Baloo went down to the tank for a drink, and Bagheera began to put his fur in order, as Kaa glided out into the center of the terrace and brought his jaws together with a ringing snap that drew all the monkeys' eyes upon him.

"The moon sets," he said. "Is there yet light to see?"

From the walls came a moan like the wind in the tree-tops: "We see, O Kaa!"

"Good! Begins now the Dance—the Dance of the Hunger of Kaa. Sit still and watch."

He turned twice or thrice in a big circle, weaving his head from right to left. Then he began making loops and figures of eight with his body, and soft, oozy triangles that melted into squares and five-sided figures, and coiled mounds, never resting, never hurrying, and never stopping his low, humming song. It grew darker and darker, till at last the dragging, shifting coils disappeared, but they could hear the rustle of the scales.

Baloo and Bagheera stood still as stone, growling in their throats, their neck-hair bristling, and Mowgli watched and wondered.

"Monkeys," said the voice of Kaa at last, "can you stir foot or hand without my order? Speak!"

"Without your order we cannot stir foot or hand, O Kaa!"

"Good! Come all one pace nearer to me."

The lines of the monkeys swayed forward helplessly.

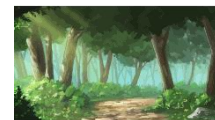
"Nearer!" hissed Kaa, and they all moved again.

In focus:

- Creativity (D10)

Goals of the lesson:

- szövegértés
- problémamegoldás
- döntéshozatal
- csoportmunka szervezése



Suggestions

- Identify the characters in the text, with particular emphasis on the main plot points, character traits, emotions and movements.
- Discuss together the causal relationships (the process of hypnosis, Mowgli's escape).
- Collect information about monkeys and snakes.
- Discuss the relationship between Kaa and the monkeys and how he achieved this.

Character	Features	Interactions
Kaa	Silent You cannot look between his eyes, Moves slowly, softly	Climbs the tree, glides, It grabs the monkeys, squeezes them to death, He twists and turns, he does figure eights, circles, sings
Monkeys	They afraid of Kaa	They are hypnotised They cannot move, speak They limp

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.
- 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 _____


 Your name _____
 Be attentive, your robot should be able to: _____


 Your name _____
 There also should be: _____


 Your name _____
 Think over: _____

Kaa

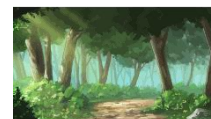
monkeys

Baloo
Bagheera
Mowgli

The main moments of the plot
Files needed
Divide the text into parts
List the necessary materials, etc.

THE JUNGLE BOOK THE DANCE OF KAA (T2)

S4
T2
D10
L3-4
P4



Suggested materials

- ArTeC blocks (at least the 112 pcs set) and ArTeC robot set (at least 1 or 2 Studuino motherboards, 2 DC motors, 3 servo motors, 4 LED, 4 Touch Ssenosors, 3 IR Photoreflectors)
- Character cards and Robotic task card template
- Pencil

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

Coiling, dancing

- Discuss with the children how snakes coil, what it means to perform movements simultaneously
- Discuss how emotions are expressed in movement (e.g. terrified monkey, hypnotised monkey)
- Build figures with moving body parts from ArTeC blocks

Hypnotised monkey Coiling snake

The name of my robot: _____

The parts I need for my robot:

Module	Development	DC motor	Servo motor	Light
Accelerometer	Software	Touch sensor	Electronic buzzer	LED

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

Blue: action
Green: setting
Pink: robot
Support materials in the Technical Corner!

This is how I build and program my robot:

What do I need?	What is it doing?	What? (robot)	What? (robot)	What? (robot)	What? (robot)	What? (robot)

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, 2.b, 2.f)
- Programming servo motor
 - Moving arms/legs/tail to a given angle(3.a)
 - Repeated arms/legs/tail movements a given number of times (3.b)
- Using Touch sensor (4.a, 4.b)
 - 4 Touch sensor-remote controller (4.d)
- Testing and programming IR Photoreflector (7.a, 7.c, 7.e)
 - Using IR photoreflector for detecting an object (7.d, 7.e)
- Using LED (5.a)
 - Blinking eyes (5.b)

Programmed and unprogrammed "dancing" Ka .
The monkey troop is not yet programmed.

PROG1

Kaa is mounted on a robot base and moves.
Kaa dangles from a tree.
The monkey troop is not yet programmed.

PROG2

Can be controlled by remote control
Kaa approaches the robotic monkey team.
Hypnotisation is indicated by the monkeys' movements and the flashing of the LED.

PROG3

The monkeys and Kaa also perceive the other robot via an infrared sensor and their operations are thus coordinated.

PROG4

THE JUNGLE BOOK THE DANCE OF KAA (T2)

S4
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L3-4
P5

Ideas for robots on different programming levels

Programmed and unprogrammed "dancing" Kaa.
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PROG1

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PROG4



Dancing Kaa, hypnotized monkeys

P1 Monkey troop and dancing Kaa

a.) The monkey troop is a group of built-up figures mounted on axles, with a design suitable for puppetry.

- Kaa is mounted on 1 DC motor and its body sections are turned by axles.
- The DC motor plugs directly into the attached battery holder, so Kaa moves from on to off without programming.

b.) The monkeys are the same structure as in a.).

- Kaa is a moving figure with 2 red LEDs mounted on a robotic base.
- Kaa's program starts automatically, his forward progress echoes the serpentine motion characteristic of snakes with rapid changes of direction,
- **The LEDs are lit all the time.**

P2 Kaa on the ground and in the tree

The monkey troop all the way, as in P1.

a.) Kaa's program is triggered by pressing 1 Touch sensor.

- Movement as in P1/b), but the LEDs flash.
- b.) Kaa hangs from a large tree and has a servo motor built into one of its body sections, which is connected to the tree.
- 1 Touch sensor starts Kaa's program and he swings on the tree branch
- The LEDs at the eyes flash while the robot moves, indicating hypnosis.



P3 Dancing snake, hypnotised monkeys

Monkey troop:

- The monkey troop is equipped with 1-1 servo motors for 1-1 actor, 1 IR Photoreflector and 1 green LED.
- The two monkeys, which can be moved by servo motors, when 1 IR photoreflector detects Kaa, turn and the green LED flashes to indicate hypnotisation.

Kaa :

- Kaa is mounted on a robot base with 2 DC motors,
- 2 red LEDs on the head with 2 eyes
- Controlled by a console with 4 touch sensors, it moves in 4 directions
- This way the robot can be directed in front of the monkey team, which triggers the monkeys to move.
- Each direction has a different LED light/flash/off programmed.

P4 Dancing snake, hypnotised monkeys

Monkey troop:

- The monkey team is equipped with 2 IR photoreflectors, 1 green LED and 1 servo motor for each of the 3 monkeys.
- The three monkeys, which can be moved by servo motors, turn simultaneously in the direction in which they face the IR sensor.

Kaa :

- Kaa is still built on 2 robotic bases with DC motors, with 2 red LEDs at its eyes.
- His program starts automatically, the 2 red LEDs light up while he moves forward. At the front, pointing downwards, there is 1 IR photoreflector, which detects the black stripe, the robot stops, the LEDs turn off.
- Randomly turns left or right until one of the IR photoreflectors is placed on the monkey team.
- When Kaa stops, the monkeys turn in the direction of the sensor and the green LED starts blinking.

