

# THE STORY OF THE PIG THE TRAVELER AND THE LARK (T2)

S8  
T2  
D8  
L1 P3



## In focus:

- Other subjects – natural sciences (D8)

**Task1: Make a piggy bank, a travelling bag or a bird feeder from recycled materials. Watch the video and create together!**

**Bake a good luck piggy cake together!**

### 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:

- Children collect used T-shirts, bottles, other recyclable materials
- Watch the videos below together and then make crafts together, or have the children make their own using the videos and following the steps shown in the videos.
- Use the Idea sheets (I1, I3)
- The videos:  
piggy bank: <https://youtu.be/AkK4eY5QSc4>  
travelling bag: <https://youtu.be/Y7dzB4-82zw>  
bird feeder: <https://youtu.be/S5KGs4a18rM>

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

### Developmental fields:

#### In focus:

- Graphomotor skills
- Creativity
- Spatial orientation

#### In addition:

- Nature conservation
- Attention development
- Life experience

### Task2:

Help the lark escape from the maze, without being caught by the basilisk, the otter or the snake! Navigate the maze.



### Idea Bazaar – some ideas:

- Use the worksheet (I6)
- Prepare several copies of the exercise sheet and different coloured pencils so that children can try more than once.
- Once you have found the way out, you can help your partner and guide them through the maze.

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

### Developmental fields:

#### In focus:

- Social skills

- Attention
- Creativity
- Spatial orientation

### Managing the output:

Make an exhibition of the finished piggy banks. Label your creations with the name of the group. Also make bird feed and put them in the feeder.

Give a demonstration of the finished bags!

A great team building activity is to bake a good luck pig together, get the parents involved in the project!

# THE STORY OF THE PIG THE TRAVELER AND THE LARK (T2)

S8  
T2  
D8  
L1 P4



## In focus:

- Other subjects – natural sciences (D8)

### Task3:

**Play a matching cards game! Talk about the inhabitants of the forest and the tracks they left behind.**

**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 :

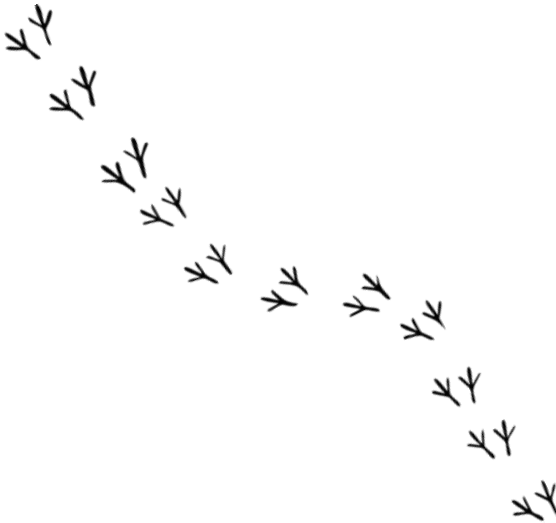
- Footprints matching cards (I4)
- Birds matching card (I5)
- Have the children make their own matching cards game, drawing the footprints of other animals! Try these out with the other groups!

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

### Developmental fields:

#### In focus:

- Social skills
- Attention
- Creativity
- Spatial orientation



### Managing the output:

The cards they have made together can also be tested between the groups.

Label the cards with the group name!

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S8  
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D8  
L2 P3



**In focus:**

- Other subjects – natural sciences (D8)

**Goals of the lesson:**

- Reading comprehension
- problem solving
- Decision-making
- organising group work

And at that moment a lame lark was seen limping along as best he could. And warbling, warbling, warbling, he stopped before Saint Sunday. Then she asked him too, "Lark, do you by any chance know where the Monastery of Incense is?" "Of course I know, mistress. My heart's desire took me there, and there I broke my leg."

"If you do, then go there at once and take this woman with you, as you know the way, and give her the best advice you can.."

Sometimes the lark went on foot; sometimes the princess flew through the air; sometimes she went on foot; sometimes he flew. And when the poor princess could no longer go either way, the lark at once took her on his back and flew along with her. Going on like this for another whole year, with great difficulty and hardship, they flew over innumerable countries and seas, over terrifying forests and deserts, where dragons crept along, poisonous asps, basilisks with the evil eye, otters, each with twenty-four heads, and thousands of other dreadful monsters who lay with open mouths, just ready to gobble them up; it would be quite impossible for any human tongue to describe the greed, the cunning, and the wickedness of these animals.

In the end, after so much trouble and so much danger, they succeeded in arriving at the entrance to a cave. Here the princess mounted once more onto the lark's wings which were now scarcely able to flutter, and he alighted into another world which was more beautiful than Paradise.

**Main features and interactions of the characters**

Character	Features	Interactions
Lark	Singing	Flapping its wings
Princess	Tired	Walking, travelling on the lark
Dragons, snakes, basilisk, otters, etc.	Scary, voracious, evil, cunning	Stare, gape their mouths

**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!**


**Character task cards**

✂

 Your name \_\_\_\_\_


Build \_\_\_\_\_

✂

 Your name \_\_\_\_\_


Be attentive, your robot should be able to \_\_\_\_\_

✂

 Your name \_\_\_\_\_

There also should be: \_\_\_\_\_

✂

 Your name \_\_\_\_\_

Think over: \_\_\_\_\_

✂

Lark

Line tracking  
Wings moving

Tree  
Hill, Forest  
Stream  
Path

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

**Suggestions**

- Discuss what the lark feeds on.
- What colour feathers does it have?
- Discuss what you can do to help birds in the winter.
- Collect stories with similar journeys.
- Collect scary creatures from other fairy tales.

# THE STORY OF THE PIG THE TRAVELER AND THE LARK (T2)

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L3-4  
P4



### Materials needed

- ArTeC blocks (at least the 112 pcs set) and ArTeC robot set (1 Studuino motherboard, 2 Touch sensors, 1 Buzzer, 1 servo motor, 3 DC motors, 2 IR Photoreflectors, 1 Touch sensor)
- Mindmap or Chart draft, Storyline
- Character cards and Robotic task card template
- Pencil

### In focus:

- Spatial orientation (D3)

### Goals of the lesson:

- Reading comprehension
- problem solving
- Decision-making
- expression of movement

### Proposals

#### Flying - Lark

- Discuss with the children how the lark moves
- Build simple moving figures from blocks and connecting elements
- Discuss what colour blocks will be needed
- Test sensor readings, motor operation

### 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).











Feet - running, speed of movement; Wings - flight - Lark

**Robotic task card**

Your name \_\_\_\_\_

Build a robot that can move its \_\_\_\_\_

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

 Studuino	 Servomotor	 DC motor	 Sound sensor	 Light sensor
 Accelerometer	 Reflective infrared sensor	 Touch sensor	 Electronic buzzer	 LED

Build a program so that the robot \_\_\_\_\_

Use the Technical Corner for robotics helping \_\_\_\_\_

### Related topics in the Technical corner

- Programming DC motor (2.a, 2.b)
- Programming Touch sensor (or buttons)
  - Starting and stopping DC motors by pressing the same or different buttons or Touch Sensors(4.b, 4.c)
  - Programming remote control (4.d)
- Programming servo motor
  - Moving elements mounted on a servo motor to a given angle (3.a)
- Using LED (5.a)
  - Flashing (5.b)
- Using Buzzer (6.a)
- Using IR Photoreflector (7.a)
  - Detecting obstacles(7.b)
  - Line tracing (7.f)

Both the lame lark and the fairytale creatures are exciting, unprogrammed characters.

PROG1

The lame lark is a robot remote controlled by 4 Touch sensors among the other characters.

PROG2

The lame lark is a line-tracing robot.

PROG3

When the tracing robot comes across a creature, it stops and makes a sound. If the obstacle is removed, the robot will move on.

PROG4

# THE STORY OF THE PIG THE TRAVELER AND THE LARK (T2)

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P5

## Ideas for robots on different programming levels

Both the lame lark and the fairytale creatures are exciting, unprogrammed characters.

PROG1

The lame lark is a robot remote controlled by 4 Touch sensors among the other characters.

PROG2

The lame lark is a line-tracing robot.

PROG3

When the tracing robot comes across a creature, it stops and makes a sound. If the obstacle is removed, the robot will move on.

PROG4



## The traveller

### P1 Puppeteering with a robot without programming

- The lame lark moves with a DC motor, controlled directly by the battery box, with the poor traveller on his back.
- The 24-headed otter also moves somewhat in the scene.
- The other creatures can be moved by building them with an axis.

### P2 4-button robot control

- The Lame Lark is a robot built on a 2 DC motor base, controlled by 4 Touch sensors.
- The 24-headed otter moves directly by switching the battery box on and off.
- The other creatures are built according to P1.

### P3 Line-tracing robot

- The lame lark tracks the line using an IR Photoreflector.
- Its wings can be moved up and down by 2 servo motors.
- It moves its wings up and down while tracking.
- Pressing the Touch sensor will stop the robot.
- All other characters are as in P1 and P2.

### P4 Tracking robot that stops before obstacles

- Structurally identical to the lame lark robot in P3, with the addition of 1 Buzzer and 1 IR Photoreflector.
- While the robot traces the black line using one of the IR Photoreflectors, it uses servo motors to move its wings continuously.
- If a creature comes in front of it, the robot stops using the forward-facing IR photo reflector and the Buzzer is activated.
- If you remove the obstacle in front of the lame lark, it will move on and move its wings.

