

# LOGO 7 Symmetries

Early learning and kindergarten

To develop and improve preschool skills in a playful way

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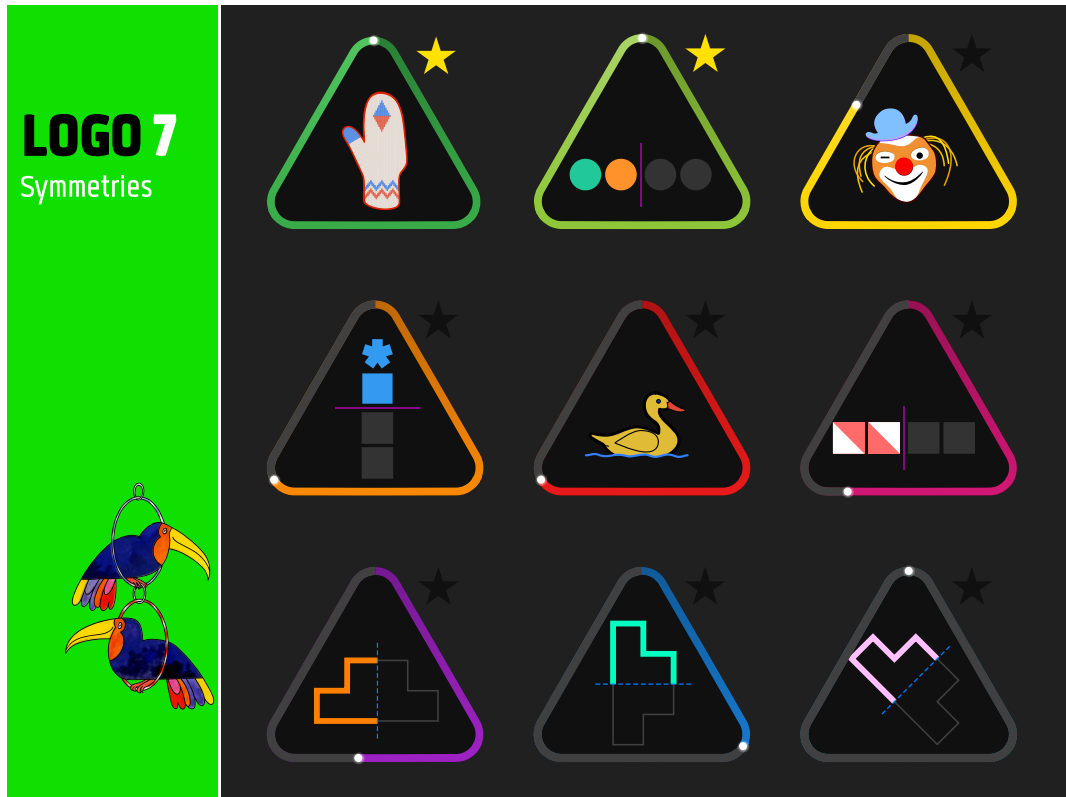
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## 1. Landing page



The landing page is both **exercise selection** and **Training Log**. Here, students select the desired exercise set and have an insight into their work status.

### 1.1. Exercise selection

Each learning module in the LOGO series focuses on an important topic of pre-school learning. The start page of the learning module is both an exercise selection and a Training Log. A learning module in the LOGO series always offers nine different exercises on the topic of the learning module. Click or tap on the triangular exercise symbol to select the difficulty level of an exercise. The exercises become more challenging from top left to bottom right.

The learning modules in the LOGO series are **language-free**.

### 1.2. Training Log

The exercise selection is also a Training Log and continuously documents the learning progress. The three sides of the triangular exercise symbol represent the three difficulty levels of an exercise. They are filled with color according to the degree of completion of an exercise. Anyone who completes all three difficulty levels of an exercise without errors is rewarded with a star.



Level 1 solved without errors



Level 2 solved without errors



Level 2 incompletely solved or error during processing

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All 3 levels solved without errors

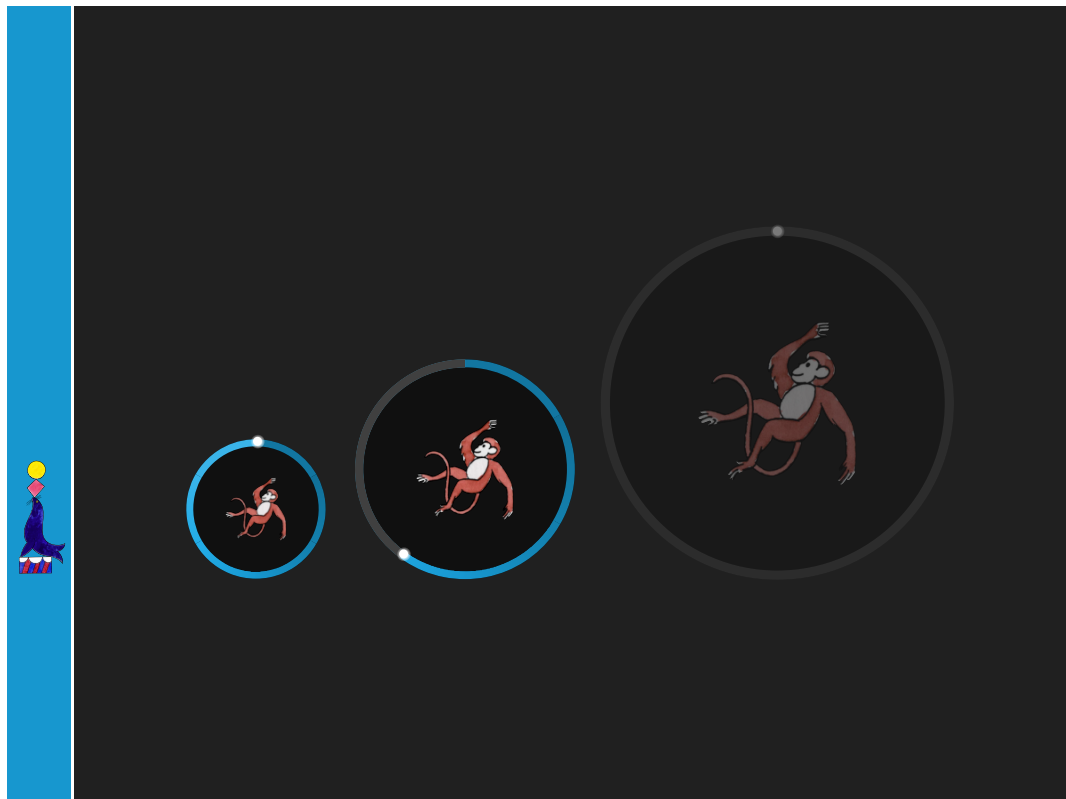
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## 2. Levels of difficulty of an exercise

The three difficulty levels of an exercise help children to familiarize themselves with a topic. In the introductory level, they get to know the mechanism and the requirements of the exercise in the simplest possible way. Success is guaranteed. This motivates them to tackle and master the increasing challenges of the next levels.



The next level is unlocked as soon as the previous level has been solved completely and without errors.

### Level 1 – Introductory exercise with tutorial character

Simple and with graphic support where useful  
Getting to know the task, the objects and the exercise mechanism  
Few tasks  
→ Preparation for levels 2 and 3

### Level 2

Increased requirements in terms of differentiation and orientation  
Often shuffling the selection, reorientation in every task  
More tasks, more elements to choose from

### Level 3

High demands in terms of differentiation and orientation  
Mixing the selection, reorientation in each task High number of tasks, many elements to choose from  
→ Increased demand on stamina and concentration

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## 3. Exercises

### 3.1. Info bar



#### Navigation arrow

The blue arrow takes you back to the level selection and from there to the exercise selection.

#### Icon Level

The three increasing dots represent the three difficulty levels. The filled dot indicates the currently selected level (here level 2).

#### Exercise processing status

The progress bar fills up according to the degree of completion of an exercise. Incorrectly completed exercises are marked with a **x**.

#### Help

Click or tap on the question mark to activate help. An animation shows what needs to be done in the current task. Help can be called up at any time.

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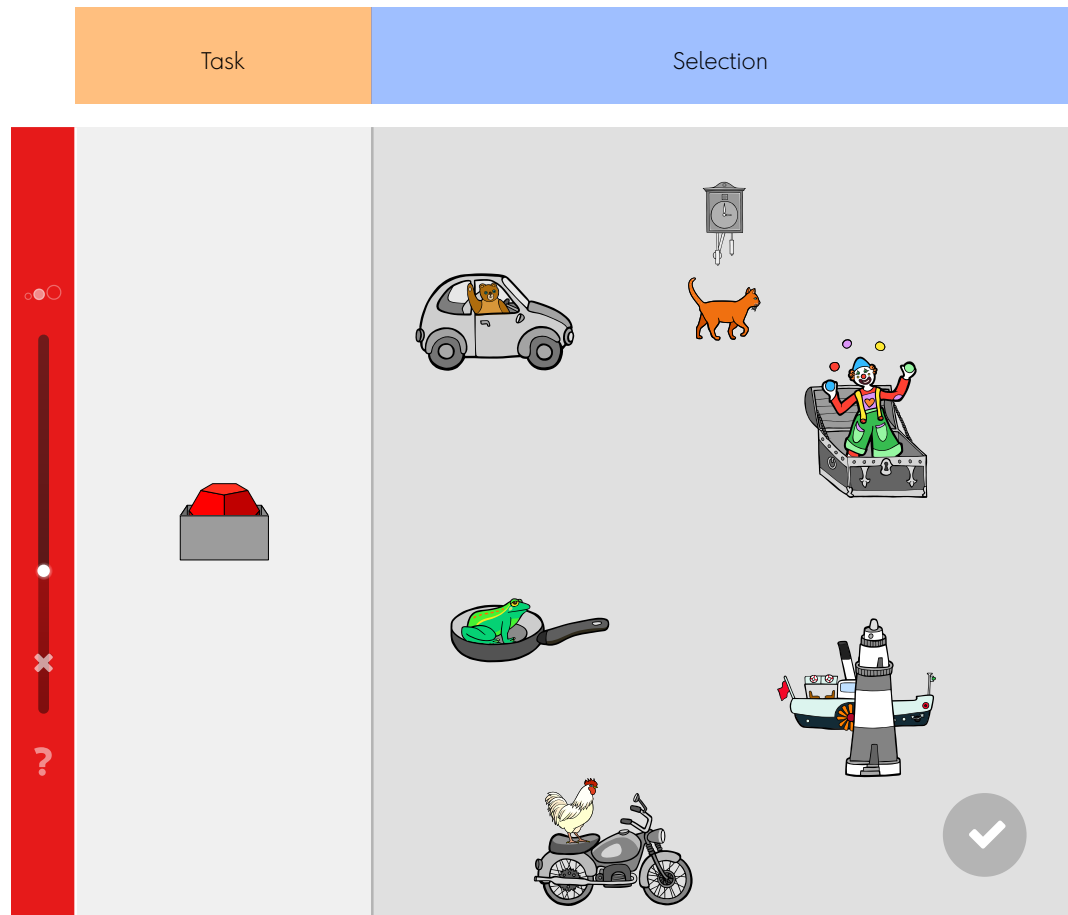
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### 3.2. Task and selection

The exercise screen is usually divided into two areas.

The exercise tasks appear in the left-hand (or upper) area. These can be elements to be searched for, objects that need to be added, objects moving in certain directions, etc.

The right (or lower) area offers a selection of solutions, a comparison picture, symbols matching movements, etc.



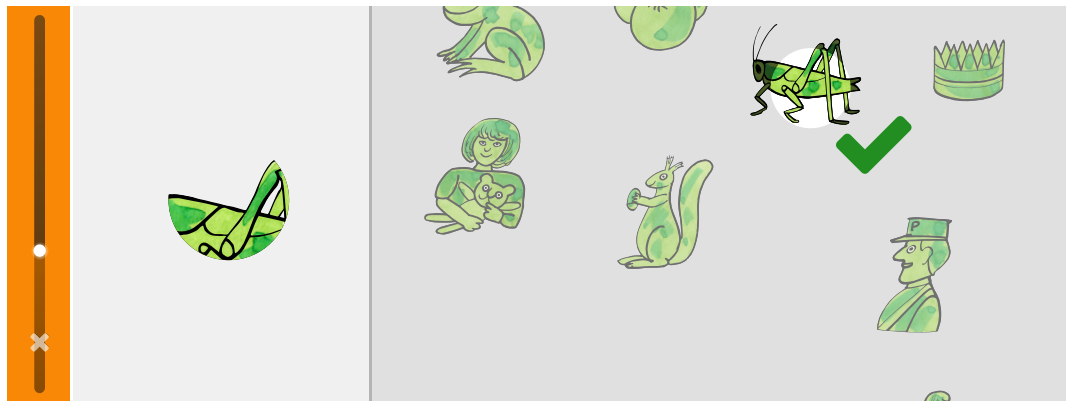
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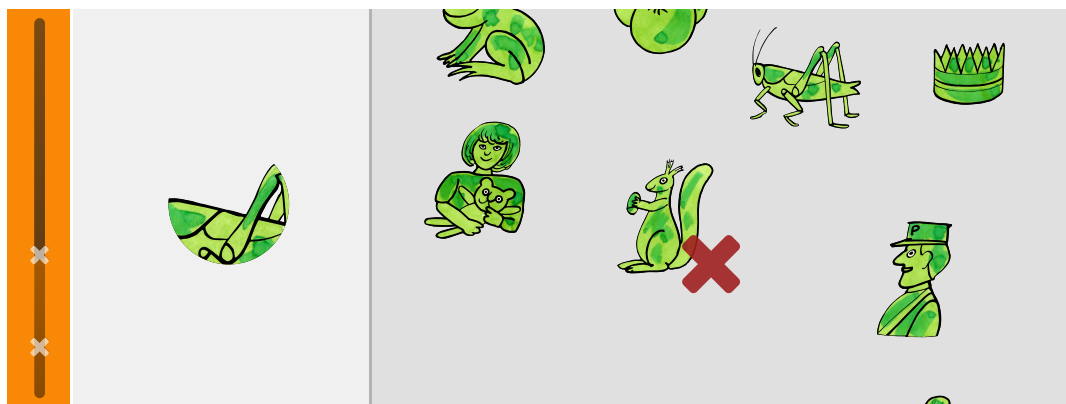
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### 3.3. Feedback

Correctly solved tasks get a green checkmark ✓. An animation often confirms the correct selection.



Incorrectly solved tasks are marked with a red cross in the selection ✗. The error appears as an ✗ on the progress bar.



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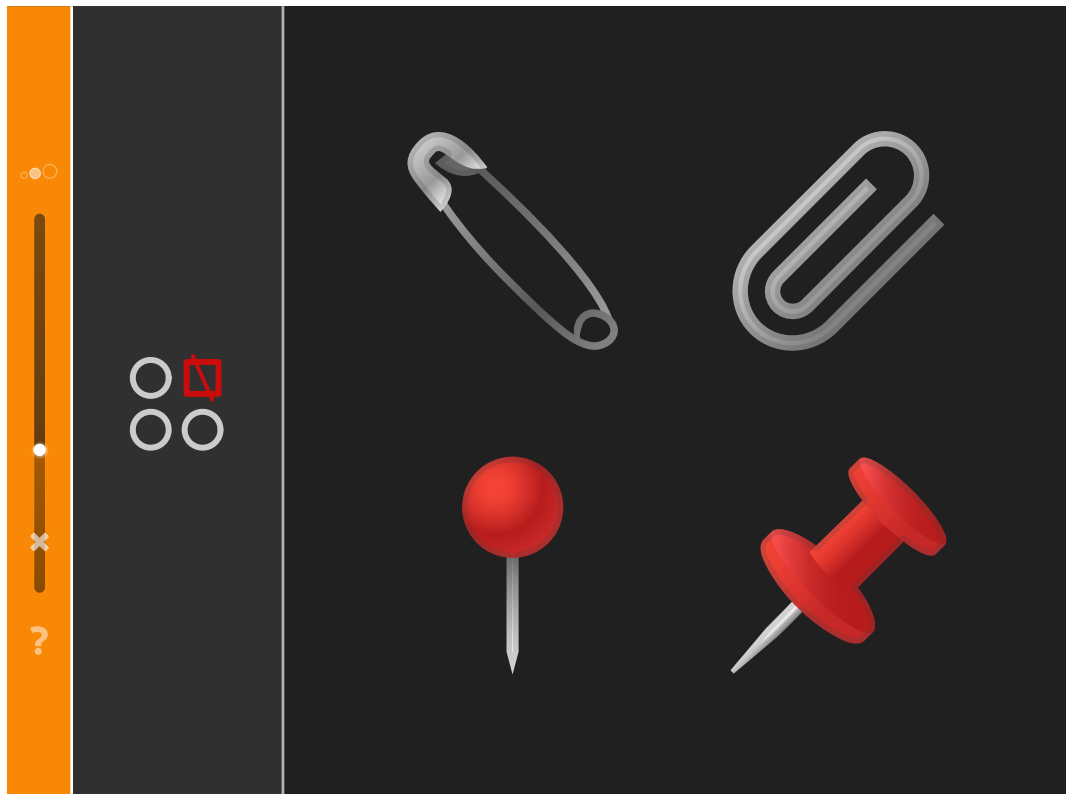
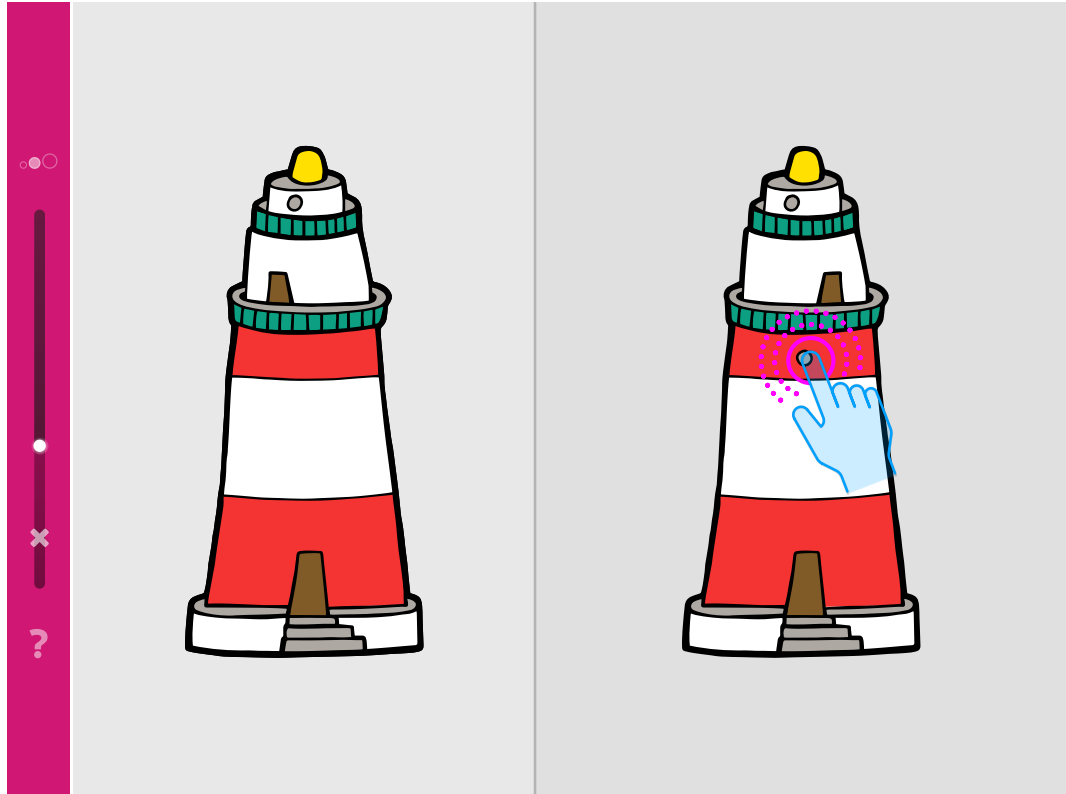
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### 3.4. Types of exercises

#### 3.4.1. Click exercise

Only **one element** is searched for. Click or tap on the element to select it. The feedback as to whether the selection was correct or incorrect is provided immediately.



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### 3.4.2. Multi-click exercise

You are looking for **several elements**. They are selected by clicking or tapping on them. The selection must be confirmed at the end.



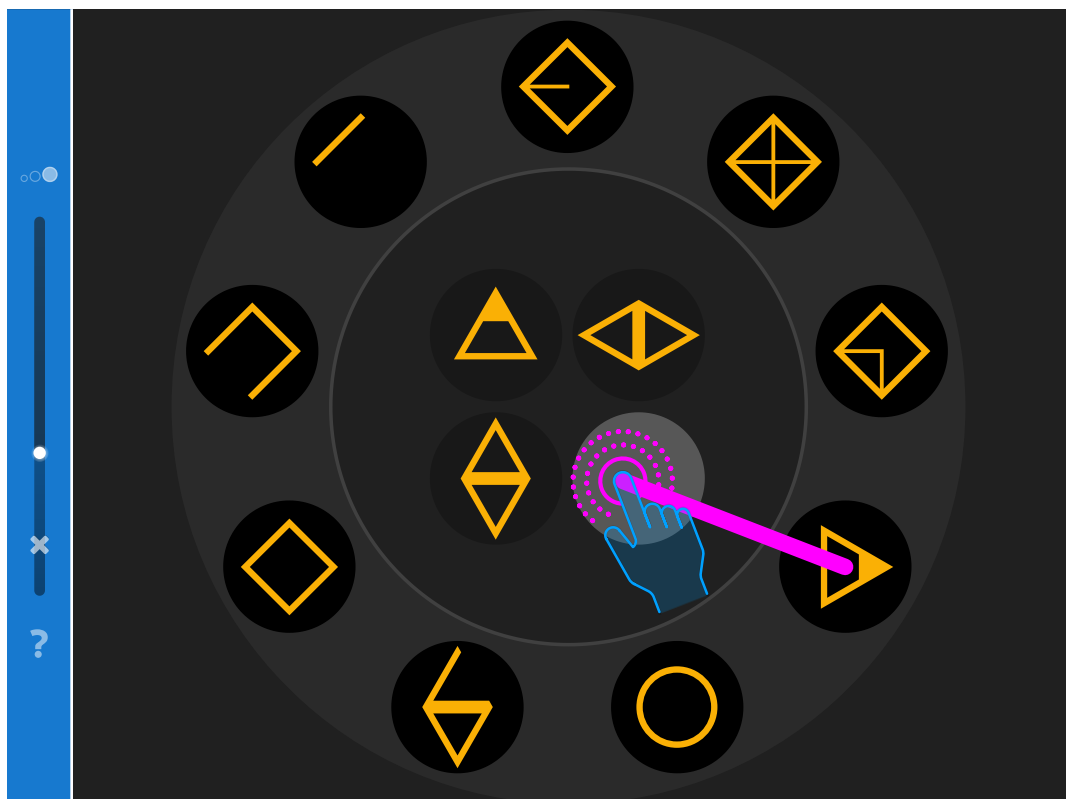
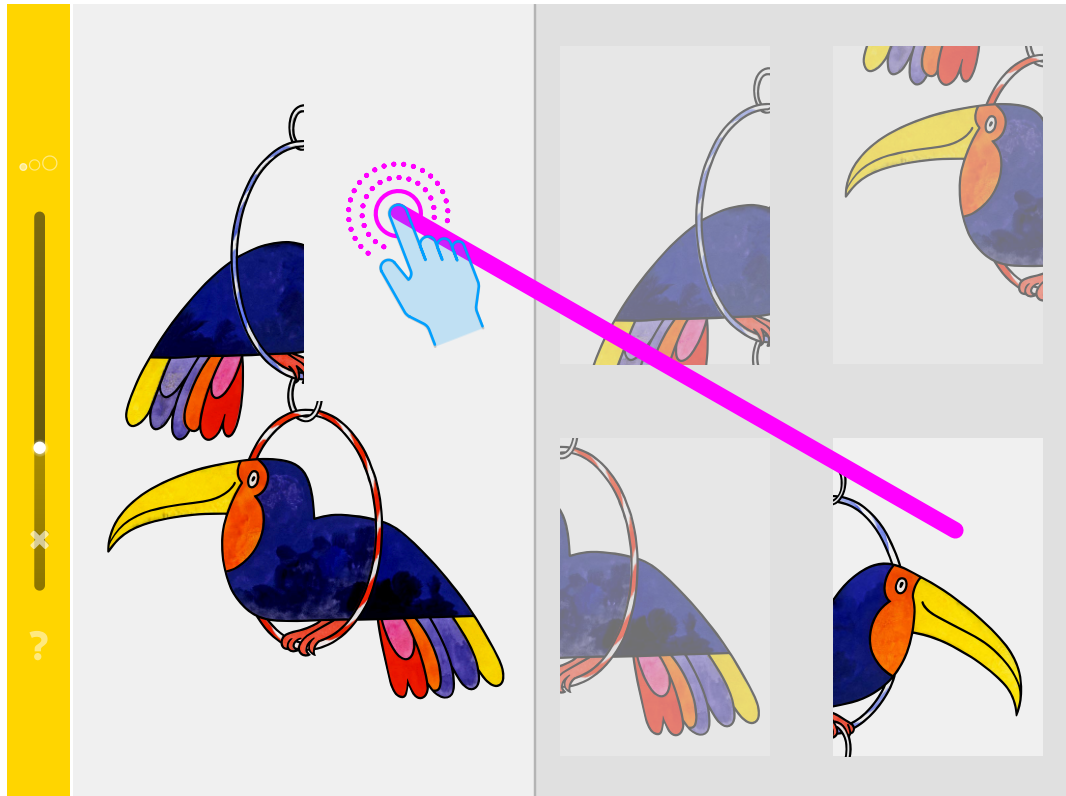
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### 3.4.3. Connect

The elements that belong together are connected by holding down the left mouse button or, on touchscreens, with a finger movement. Feedback as to whether the correct elements have been connected is provided immediately.

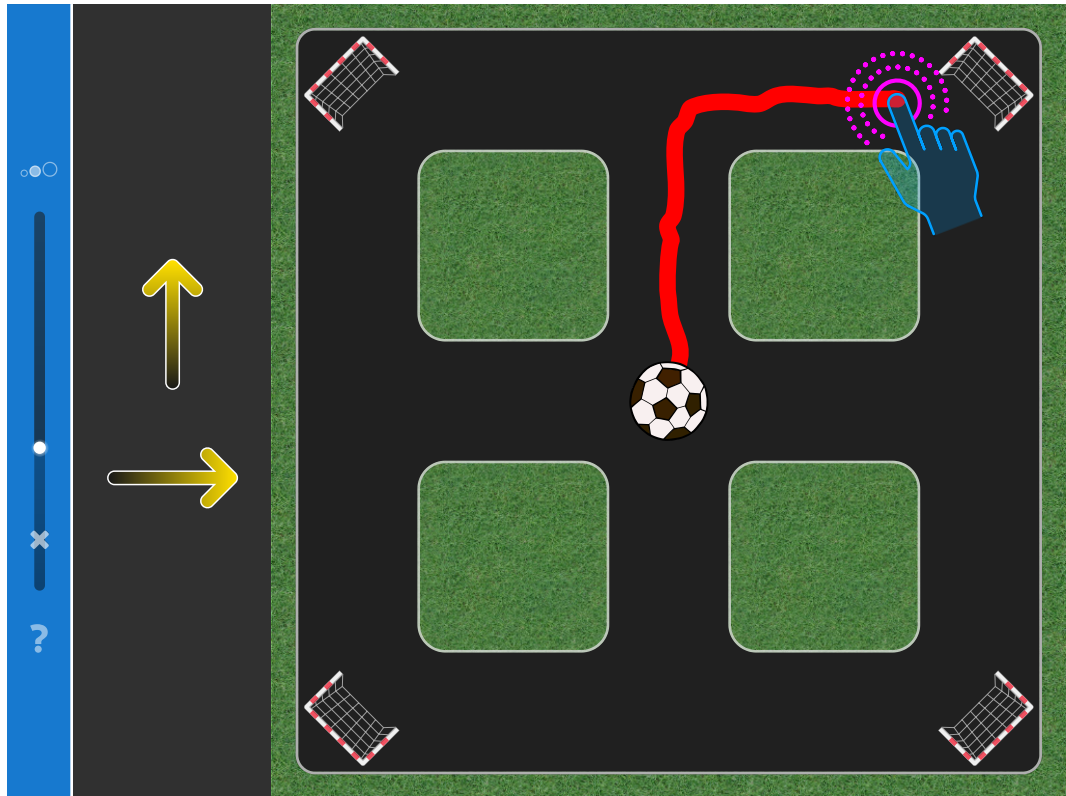


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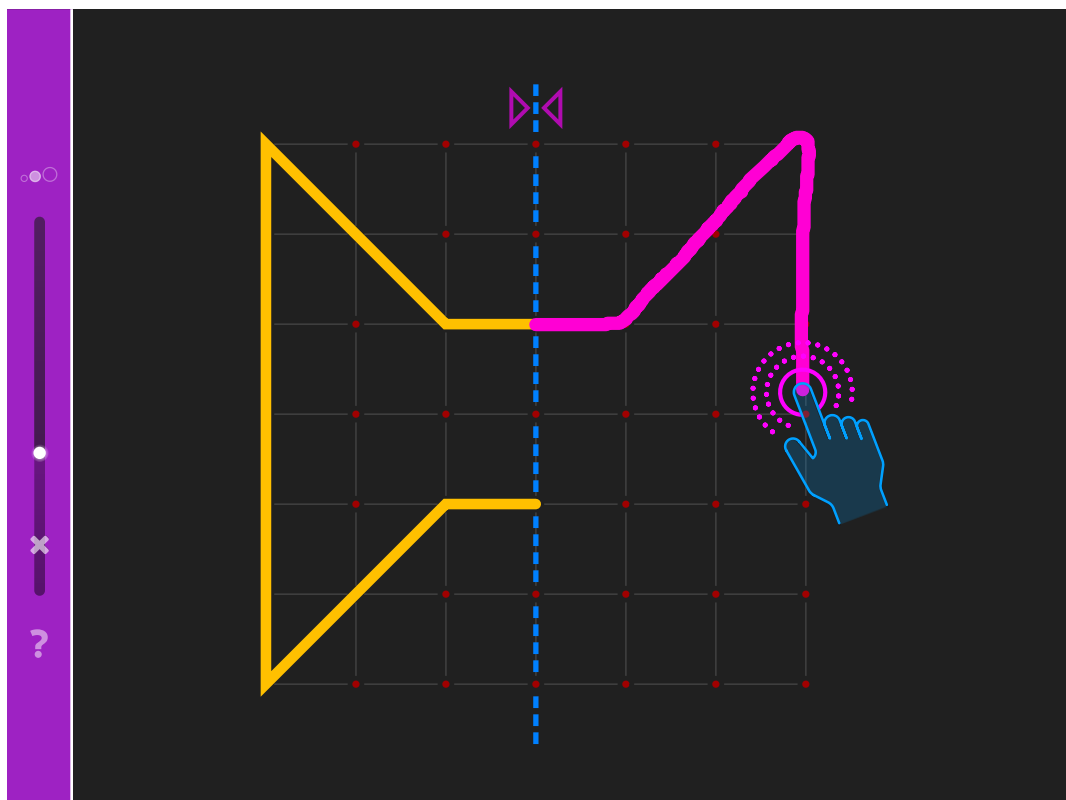
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### 3.4.4. Drag

An element is clicked or tapped on and must be moved to a destination by holding down the mouse button. The path becomes visible when dragging.



Variant: A path is drawn by holding down the mouse button or directly with the finger on a touch-enabled screen.

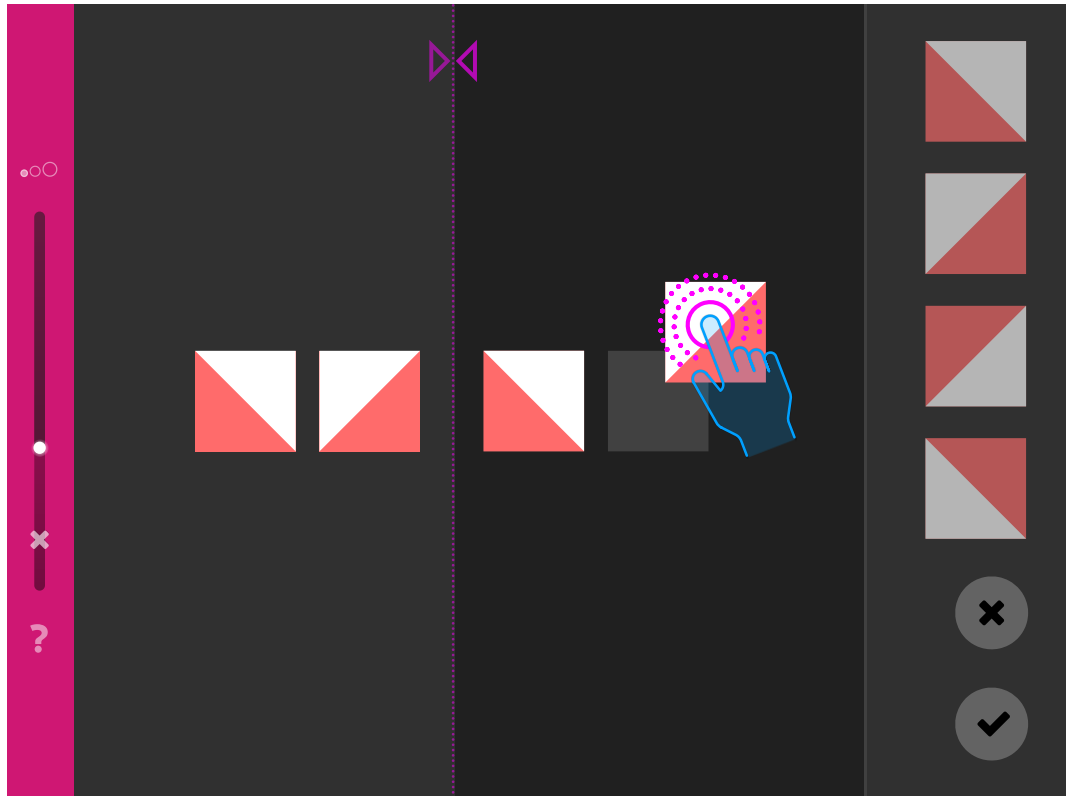


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### 3.4.5. Drag & Drop

One or more elements are clicked or tapped on and must be moved (with the mouse button held down) to a destination according to certain specifications. The assignment must be confirmed at the end.

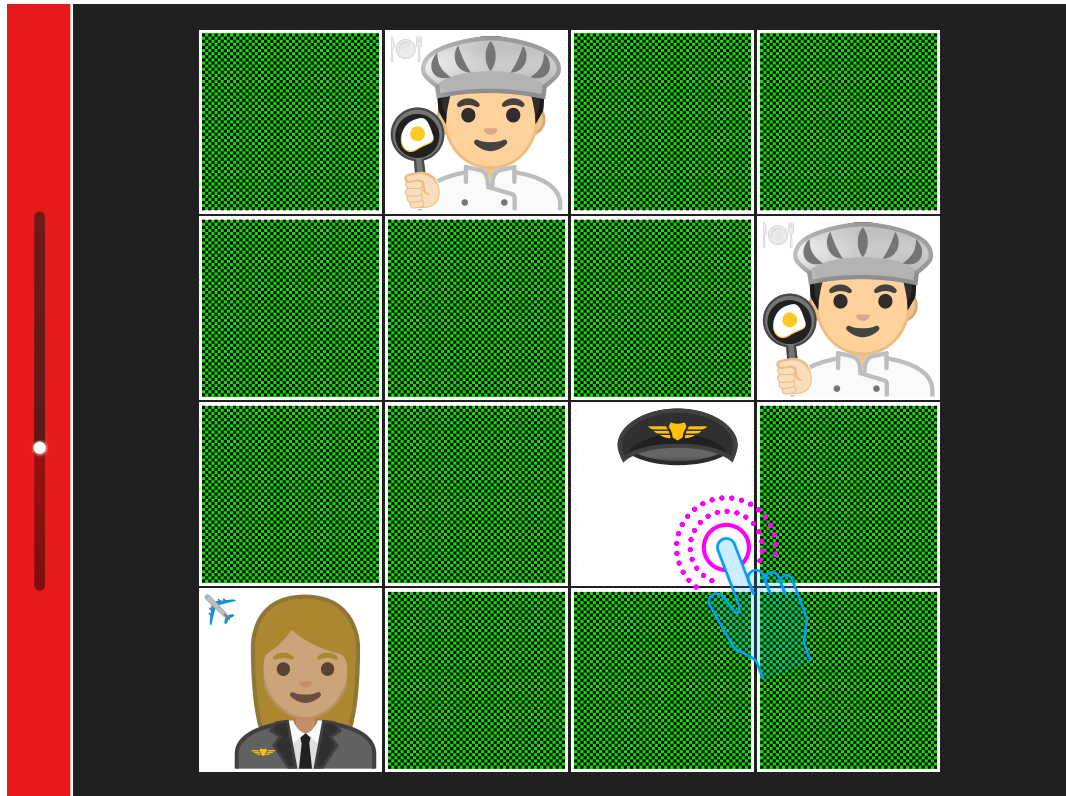


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### 3.4.6. Memory

Pairs of cards that belong together must be uncovered. Once all pairs have been found, the exercise is completed.



The list of exercise types will be continuously updated as the LOGO series is expanded.

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## 4. Overview of all exercises LOGO 7 – Symmetries

Level 1

Level 2

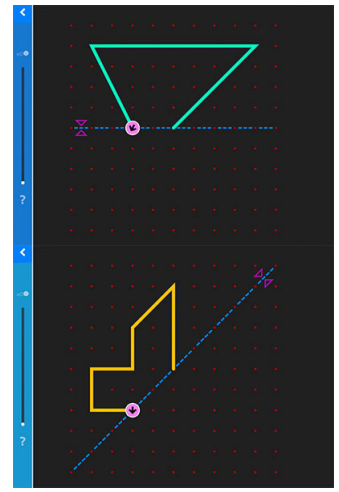
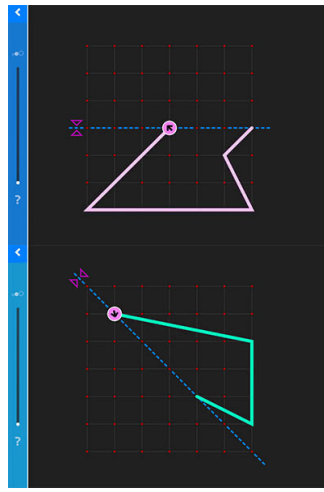
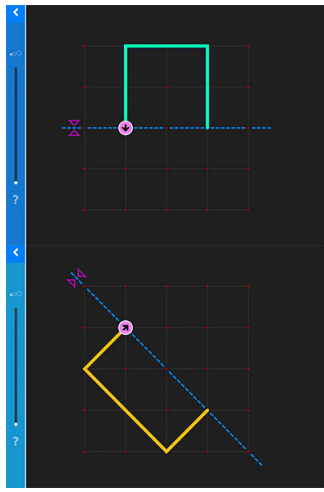
Level 3

The image displays a 3x3 grid of exercise panels for three levels of difficulty. Each panel is divided into three main sections: a stimulus area, a selection area, and a drawing area.

- Level 1 (Left Column):**
  - Stimulus:** A vertical line of symmetry with a white glove on the left and two white gloves on the right.
  - Selection:** A set of shapes including a blue circle, a pink circle, two grey circles, and a green circle.
  - Stimulus:** A vertical line of symmetry with a clown face on the left and two clown faces on the right.
  - Selection:** A set of shapes including a red square, a red circle, a red star, and two grey squares.
  - Stimulus:** A horizontal line of symmetry with a yellow duck on the top and two yellow ducks on the bottom.
  - Selection:** A set of shapes including a blue triangle, a green triangle, and two grey squares.
  - Stimulus:** A vertical line of symmetry with a yellow rectangle on the left and a yellow rectangle on the right.
- Level 2 (Middle Column):**
  - Stimulus:** A vertical line of symmetry with one white glove on the left and three white gloves on the right.
  - Selection:** A set of shapes including a red circle, a green circle, a blue circle, and two grey circles.
  - Stimulus:** A vertical line of symmetry with one clown face on the left and four clown faces on the right.
  - Selection:** A set of shapes including a blue circle, a blue star, a blue square, and a blue circle.
  - Stimulus:** A horizontal line of symmetry with one yellow duck on the top and five yellow ducks on the bottom.
  - Selection:** A set of shapes including a red square, a red star, a red circle, and two grey squares.
  - Stimulus:** A vertical line of symmetry with a yellow rectangle on the left and a yellow rectangle on the right.
- Level 3 (Right Column):**
  - Stimulus:** A vertical line of symmetry with one white glove on the left and six white gloves on the right.
  - Selection:** A set of shapes including a purple circle, a green circle, a blue circle, and two grey circles.
  - Stimulus:** A vertical line of symmetry with one clown face on the left and seven clown faces on the right.
  - Selection:** A set of shapes including a purple square, a purple circle, a purple star, and two grey squares.
  - Stimulus:** A horizontal line of symmetry with one yellow duck on the top and eight yellow ducks on the bottom.
  - Selection:** A set of shapes including a blue triangle, a green triangle, and two grey squares.
  - Stimulus:** A vertical line of symmetry with a yellow rectangle on the left and a yellow rectangle on the right.

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## 5. Overview of all LOGO learning modules

### 5.1. LOGO 1 – Colours and Shapes



### 5.2. Logo 2 – Discover



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### 5.3. Logo 3 – Complete

**LOGO 3**  
Complete

**LOGO 4**  
Directions

### 5.4. Logo 4 – Directions

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### 5.5. Logo 5 – Combine

## LOGO 5

Combine




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### 5.6. Logo 6 – Classify

## LOGO 6

Classify




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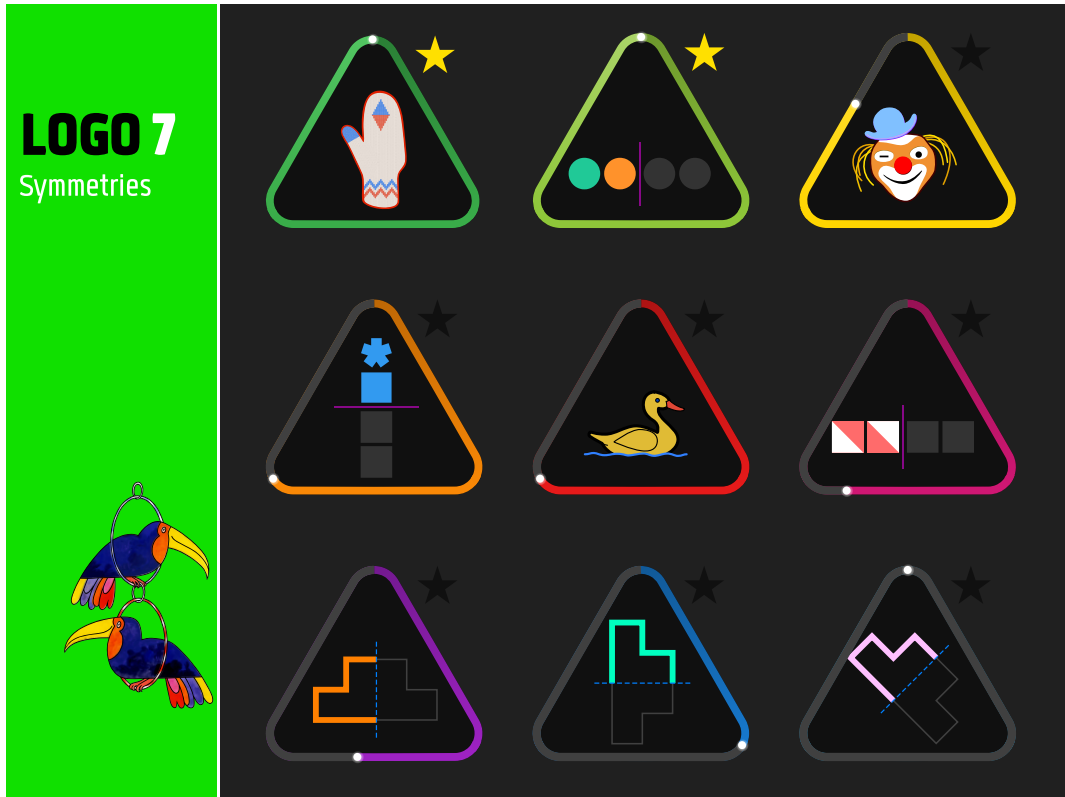

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## 5.7. Logo 7 – Symmetries



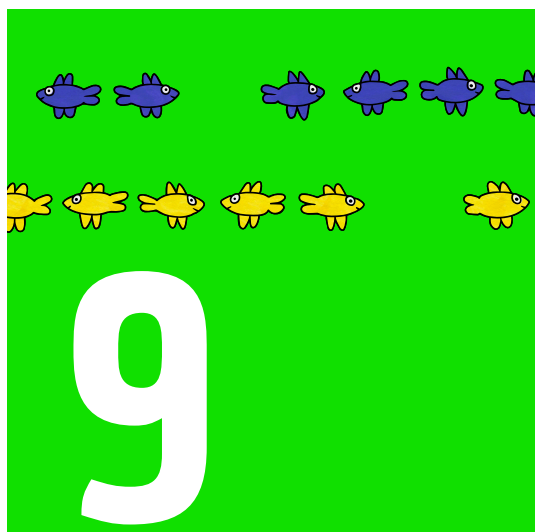
## 5.8. Logo 8 – Series



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## 5.9. Logo 9 – Amounts (in planning)



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Publisher	profax Verlag AG

The LOGO learning booklet series for the *profaxli learning device* forms the basis for the development of the LOGO series on **profaxonline** and as an iOS app. The basic ideas have been further developed to exploit the additional possibilities of digital learning.

Illustrations from the LOGO learning booklets used with the kind permission of Fred Bauer.

The learning modules in the LOGO series are also available as an iOS app in the App Store.

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