

# How AI Learns and Solves Problems

SMaILE Project

## Key Information

**Target Group:** 4 - 7 y.o.

**Duration:** 2.5 – 3 hours (Modular)

### Key Learning Goals:

1. **Understanding AI:** See AI as a helpful tool, not magic.
2. **Human Role:** Understand that robots need people to learn.
3. **Curiosity:** Explore real-life examples (vacuums, smart speakers).
4. **Creativity:** Imagine and design a helpful robot.

## Learning Outcomes

Students will be able to:

### KNOWLEDGE & UNDERSTANDING:

- Understand what a robot or AI assistant is.
- Learn that AI can help with tasks but needs human guidance.
- Explore real-life examples of AI helpers.

### SKILLS & ABILITIES:

- Storytelling and discussion about technology.
- Role-playing to understand instructions.
- Creative drawing to express ideas.

### ATTITUDES & VALUES:

- Build curiosity about technology.
- Reflect on the difference between humans and machines.
- Develop responsibility in using tools.



**European Dimension / Erasmus+ Connection**

- **Early Digital Literacy:** Provides an accessible entry point to AI education.
- **Critical Thinking:** Encourages children to question technology's role.
- **Inclusion:** Uses familiar examples to include all children in the conversation.
- **Future Readiness:** Prepares young learners for a digital world.



## 1. Resources and Tools

- **Props:** Puppet or toy robot.
- **Materials:** Printable cards ("Robot guesses right/wrong"), Drawing paper, Pencils.
- **Media:** Short video of robots in everyday life (e.g., SciShow Kids).
- **Assessment:** Checklist (included).

## Activity Overview

Phase	Time	Activity
Intro	20 min	<b>Story:</b> "The Robot Who Got It Wrong". Discussing robot mistakes.
Research	30 min	<b>Real AI Helpers:</b> Video and Voting Game ("Can a robot do this?").
Creative	40 min	<b>Game &amp; Drawing:</b> "Robot Helper or Human Job?" and "Design Your Robot".
Reflection	20 min	<b>Circle Time:</b> Sharing drawings and Memory Box activity.

## 2. Introduction and Motivation

### Activity 2.1: Story: The Robot Who Got It Wrong

**Goal:** Spark curiosity and show that robots need help.

- **Activity:** Teacher reads a story about a robot who gets confused (e.g., putting shoes in the fridge).
- **Discussion:** "Why did the robot get it wrong?" "How do people know better?"
- **Key Concept:** Robots are helpful but don't think like people.

## 3. Research and Learning

### Activity 3.1: Exploring Real AI Helpers

**Goal:** Connect concepts to real life.

- **Video:** Watch a short clip about robots (vacuums, delivery bots).
- **Discussion:** "Can a robot vacuum find your lost socks?" (No). "Can a smart speaker give you a hug?" (No).
- **Voting Game:** Teacher shows cards (e.g., Hospital Robot). Children vote if it needs a person to help.

## 4. Creative Application

### Activity 4.1: Robot Helper or Human Job?

**Sorting Game:**

- Teacher calls out tasks: "Tidy room", "Give a hug", "Paint a picture".
- Children move to zones: **Robot**, **Person**, or **Both**.



## Activity 4.2: Drawing Task: Design Your Robot

**Assignment:** Invent your own robot helper.

- What does it do well? (e.g., carry heavy boxes).
- What does it need help with? (e.g., knowing where to go).

## 5. Reflection and Evaluation

### Activity 5.1: Circle Time & Memory Box

- Children share their robot drawings.
- **Memory Box:** Add drawings/notes of "How AI helped today" (e.g., Mom used a map app).

### Assessment Checklist

- Recognised robot roles vs. human roles.
- Described how their robot helps.
- Engaged with drawing/memory box.
- Shared ideas confidently.