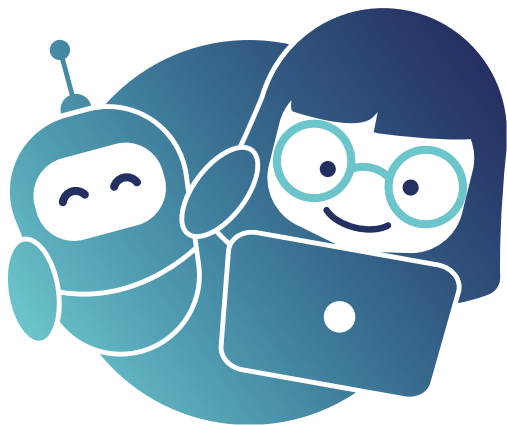# 7

I'm not a Robot

How does a Robot talk?

What is this about?

Language is a prerequisite for successful communication, i.e. communication between humans or between humans and animals, but also between humans and machines. Toolbox 7 is about discovering the specific communication features of robots and artificial intelligence together. The educational professionals support the children in developing an understanding of language as a system.
The main idea is to model the educational situation in such a way that children can use the elementary symbols (colours, signs, etc.) to learn to develop a robot or programming language themselves.

Children's point of view

How do robots talk?
How do robots learn to speak?

Questions from Children
Does a robot understand language as we do?
Who determines how the robot talks?
Is a robot a good speaker?

7 What we know

Among human languages, an essential division is that between spoken language, sign language and written language.

In the animal kingdom, sign systems and communicative behaviours exist via acoustic, chemical or visual signals.

1

2

3

Wolves howl both at territorial boundaries and at central places within the territory.

Ants can smell where it is going.

The dance of the bees serves to guide conspecifics to food.

Robots and AI-controlled devices „express themselves" through sounds. A long-lasting beep sounds from the refrigerator if the door is left open for too long. A text appears on the operating display of the washing machine when the lint filter needs to be cleaned. The floor hoover's light-emitting diodes flash in a specific sequence when it needs to return to the charging station.

Internet-based, AI-controlled voice assistants (Echo, Siri, Alexa, etc.) speak grammatically correct complete sentences, quote film dialogue and give quick-witted answers to seemingly everyday questions: „Alexa, can you drive a car?" „I always turn the music down when I'm reversing into a parking space. Otherwise I can't see anything - you know that, right?"

Goals

Pedagogical professionals

Variety of forms of communication duet to AI
Check and modify if required

Changing communication strategies
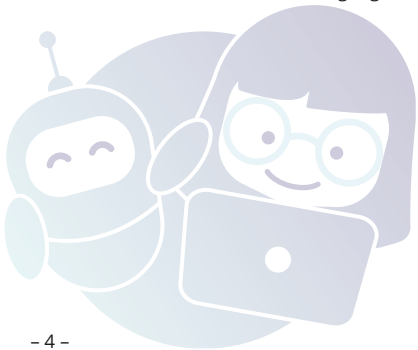Expand your knowledge and apply it in new linguistic situations

Children

Experience human-robot communication
To experience the possibilities, characteristics and
challenges of communicating with a robot

Design and develop a robot language
Use different ways and means to create and test robotic language

Exercise

Experimental approach

Materials

Colored cards   **Printer**
Scissors   **Plasticine**

Implementation

We choose five colours and give them meanings, e.g.:

red	– I am angry	blue	– I don't like
green	– I like something	white	– don't know
yellow	– I agree		

After determining the meaning, colour cards are made by the children themselves.

1

2

3

4

5

Source
[1]Pexels.com | Andrea Piacquadio
[2]Pexels.com | William Fortunato
[3]Pexels.com | Polina Zimmerman
[4]Pexels.com | Puwadon Sangngern
[5]Unsplash.com | Markus Spiske

Reflection

Can you answer all the questions? Why?
Which questions can you not answer and why?
What else do you need to create your own language or robotic language?

Exercise

Level ● ●

Experimental approach

Materials

Colored cards   **Printer**
Scissors

Preparation

No special preparations needed.

Implementation

Now the children think about questions. For example, one child takes the role of a robot and the other takes the role of a journalist who interviews the robot. The robot answers the questions in a conventional language

Reflection

Discuss how people communicate with the robot and how the robots respond, (the children will already have a basic understanding of the logic of creating and talking to the robot).

Variation

The language can be improved by introducing more colours, integrating Morse elements, and introducing different contextual situations (robot talks to a human, robot talks to an animal, robot talks to a robot etc.).

7 Exercise

Level ● ●

Imprint

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