

Recognize what a living being and what a robot needs for its existence

Recognize what is human and what is not

## Children

Recognize the difference between feelings and sensations

Observe the children's emotions and physical sensations

Compare feelings and perceptions with technical realizations (sensory)

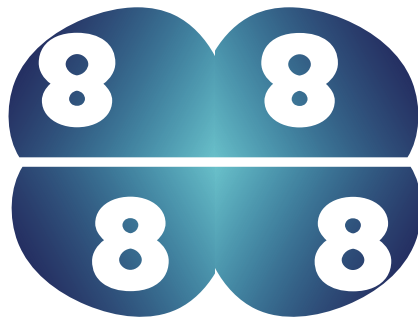
## Pedagogical professionals

### Goals

Recognize the difference between feelings and sensations

## Sensitivities - feelings

Exercise Level



## 'I'm not a Robot

## Tips for in-depths study

### Literature

**Computer e programmazione. Sollevo e scopro**

by Rosie Dickens ISBN 9781474916318

**Hello Ruby - Journey inside the computer**

by Linda Liukas

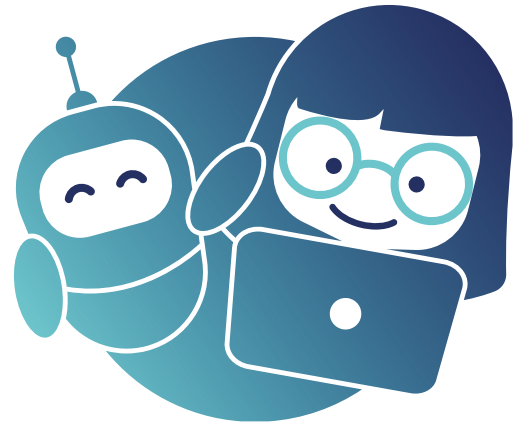
### Links

**Robots/AI & Feelings**

<https://medienportal.siemens-stiftung.org/en/artificial-intelligence-practical-example-facial-recognition-112808>

**Treasure chest of feelings & needs**

<https://hoeller-spiel.at/produkt/giraffen-schatzkiste/>



## Imprint

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## Toolbox #8

# Does a robot have feelings?

**Variation**  
Use a robot with sensors that are affected by for example different temperatures. Have a discussion about whether a robot have actual feelings or is only imitating feeling.

**Implementation**  
The children test their own body sensitivity compared to the sensitivity of a robot. A group of children is shown the robot and the different materials. Each child starts by stretching out one arm. The educator takes an ice cube and rubs it against each child's skin to feel the cold. Make a short film of the children's reactions. Show the film to the children and talk about their reactions: How did it feel? Now take the ice cube and put it on the robots "skin", how does the robot react? Discuss the difference between the children's and the robot's reactions. Do the same with all the materials and be creative, have fun.

**Preparation**  
Prepare all the different materials and the robot by placing them on the floor or on the table, depending on where you want to do the activity. Set up the camera or hold it yourself. Be aware if you are holding the camera during the activity, the children may be more focused on the camera than on the activity.

**Materials**  
Any robot/technology  
A camera  
materials with different temperatures and surfaces, e.g. ice cubes, hot water in a bottle, fabric, soft/smooth and rough/hard.

## Introduction

# What is this about?

With this toolbox, sympathy, empathy and feelings are addressed and thus emotional competences are promoted. The aim is to think about emotions with the children and to realize that there is a main difference between robots, AI-controlled devices and the rich emotional world of humans. In the process, the body and bodily sensations are also included and thus the knowledge about one's own body is expanded. Thematically, this Toolbox No. 8 follows on from Toolbox No. 2, in which essential differences between humans and robots or AI-supported devices are clarified.

## Children's point of view

### Questions from Children

- Does a robot have feelings?
- Is a robot always in the same mood every day?
- How do I look when I am angry, sad, happy, etc.?
- Can a robot feel? How does a robot feel, how does a human feel?
- What is the difference between a human and a robot?
- Do I feel safer when a robot does the task?

Robots or AI-powered devices can measure temperatures and recognize different materials and surfaces with the help of various sensors. Robots and AI-based devices can also determine whether a person is happy, sad or angry by decoding facial expressions and body language. By comparing these different human expressions, a classification can also be made, e.g. from happy to very happy. But a robot or an AI-controlled device cannot feel and reproduce emotions such as hate, sadness, love and joy by itself, even if it appears so in the interaction between robot/AI and humans.

In addition, robots or AI-controlled devices do not feel fatigue, hunger or thirst. Robots/AIs do not have physical needs.

However, robots are humanized in the child's imagination as well as in the imagination of adults in order to better understand these complex systems. For this, a robot does not even have to look like a human being for feelings to be attributed to it.

## What we know



# Compare robot to human body

### Materials

- Old or broken technical device and/or a broken robot.**
- Pictures of human organs** (or buy real organs from animals in the supermarket)
- A poster** with a full-size human body.

### Implementation

Using whatever tools are needed, take apart the broken device or robot. Depending on the children's age or skills, they can assist you in the process. All the different parts are lined up on the floor or the table, e.g. the battery, wires, wheels, chips etc. Discuss what you see inside the robot/technical device. Now put the poster of the human body on the floor/table and have a group discussion about human organs. Ask the children if they know where the heart, brain, veins etc. are located. Now compare the parts of the robot with the human organs and body parts. Discuss with the children about which part is probably the brain of the robot (the chip), the heart of the robot (battery), the legs of the robot (the wheels), the veins of the robot (the wires), etc.

### Reflection

- Do you think a robot looks like a human inside?
- Do you think a robot actually has feelings?
- Do you know that a robot has feelings?

### Variation

If you would like to use a more digital approach to looking at the human body, you can find t-shirts that you can scan with your tablet, and it shows what you look like inside. One version of this t-shirt is called "Magic T-shirt."

# Memory with feelings

### Materials

A camera

pictures of the children's facial expressions

Symbols for feelings (emojis)

A picture of a robot

### Preparation

- Have the children take pictures of each other with different facial expressions
- Print out the photos and add an emoji to each that corresponds to the facial expression in the photo
- Now you need as many pictures of the one robot as you have facial expressions. Now add symbols to the pictures of the robots as well, e.g. picture of robot

### Implementation

- And now it's time to play memory!
- After the game, discuss with the group of children what happened during the memory game. How did the children recognize the robot's feelings?
- Does a robot have feelings at all? Have they even seen a robot express emotion, maybe in a movie?

### Variation

To demonstrate that some AI-technology is already coded to recognize emotions, you can play with Siri and command her to play some sad music. Give the command: "Siri I am sad today, play some sad music." And Siri can activate your music app and play quiet melancolic music, or happy music.

# Instruction

Print front and back on one sheet. (Turned over long side)

Fold

