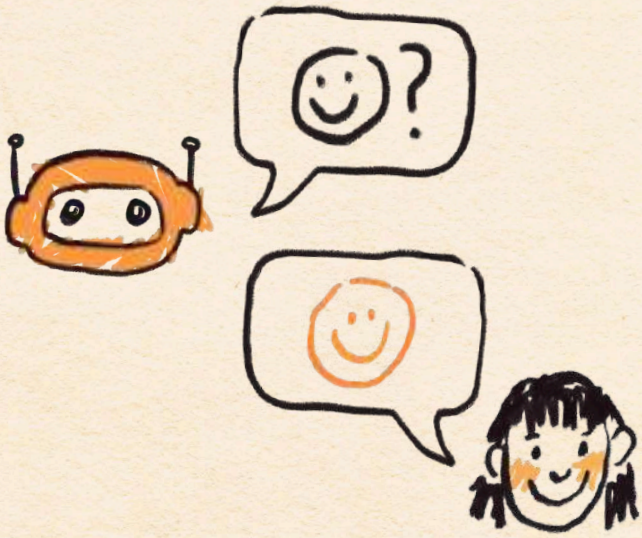
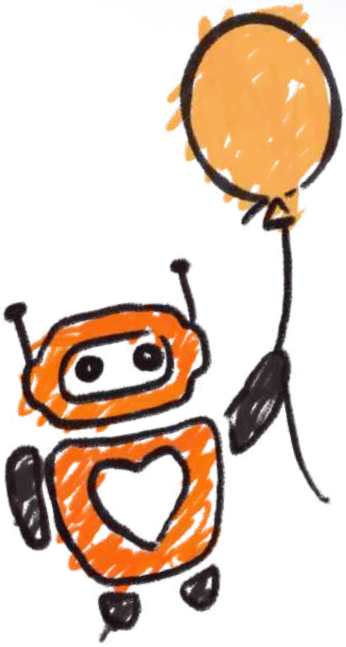
Learning Empathy Through Playful Robotics



Current Approaches and Practical Activity Ideas for Kindergartens



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This handbook includes examples of commercially available educational robots and coding tools. Their inclusion does not constitute an endorsement of any particular product or manufacturer.

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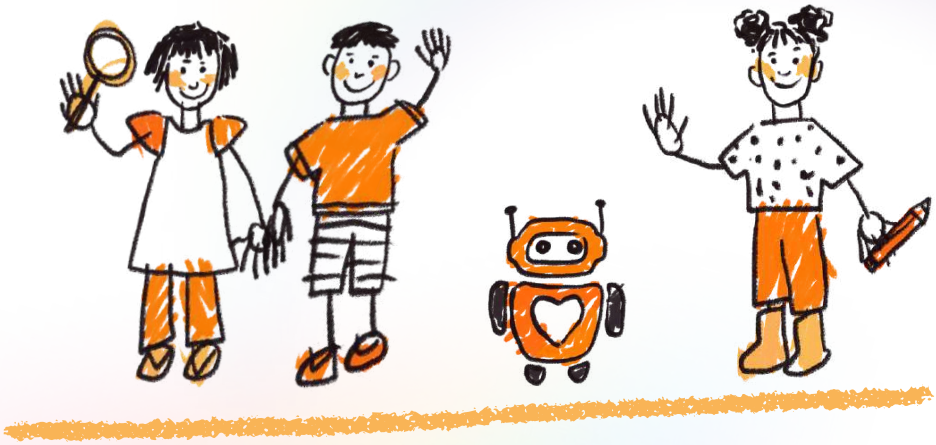






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Key ideas:

- Robots as purposeful learning tools
- Learning through play, cooperation and problem-solving



1 Welcome!

Welcome!

This handbook is designed to be a helpful resource for kindergarten educators working with children aged three to six, including children with special needs.

Its aim is to inspire you to foster children's empathy and help you bridge the gap between technology and meaningful, high-quality learning, even for the youngest learners in your care.

You will find ready-to-use, age-appropriate activities combining coding, non-screen robotics and empathy development that you can easily add to your everyday kindergarten practice. Introduced in a playful way, technology can support curiosity, cooperation and empathy.

With hands-on games and tools that don't rely on screens, you can help children become ready to navigate our increasingly digital world. Through play and natural curiosity, they will discover the importance of cooperation, experience the power of communication and practise the art of problem-solving, as well as playfully develop their consideration for each other.



Why should I use a robot instead of another toy?

You should not!

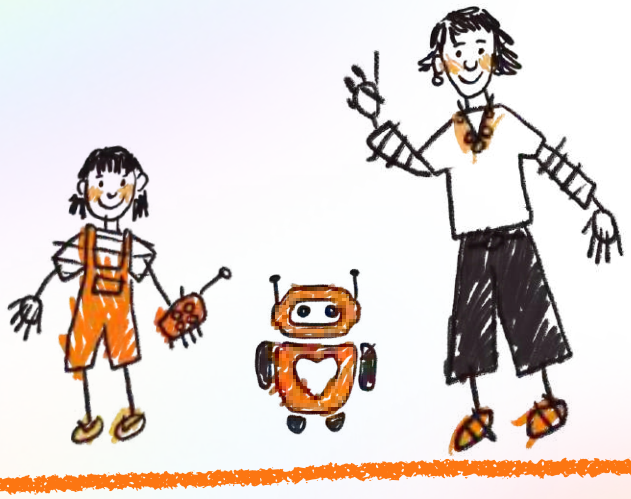
A robot is not a replacement for building blocks, books, dolls, puzzles, or creative play. These are all valuable materials. A robot offers children new ways to learn through play. It invites them to explore, solve problems, work together, and discover what happens when they turn their ideas into action.

What makes a robot different is that children can tell it what to do. They think together, make a plan, test their ideas, and see what happens. If something does not work, they try again. Every mistake becomes another opportunity to learn.

The robot is the right choice when you want children's thinking to become visible.

Imagine a group standing at a farm mat. They want to get the robot from the barn to the pond. They agree: forward, forward, turn right, forward. They press go, and the robot stops one square short, in the middle of the field. Nobody has to tell them it went wrong. They saw it. Now the real conversation starts. Was it the turn, or the number of steps? They change one instruction and try again.

1



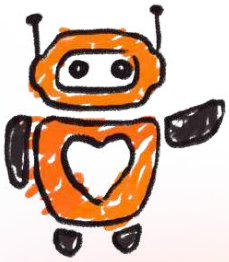
Compare this with moving a toy cow to the pond by hand. The child gets there instantly, and the thinking behind it never leaves their head. The robot does exactly what it was told, not what the children meant, and that gap between intention and instruction is where the learning happens.

That is the pedagogical added value to look for: an activity that asks children to plan, predict, test and revise. If an activity does not ask for those things, the robot adds little. A story, a set of blocks, or a walk outside will serve the children better.

The robot is not the focus. The learning that happens around the robot is. The teacher matters more than the robot. The robot is a tool that supports learning, but children's development depends on how you facilitate discussion, encourage collaboration, ask questions, and guide reflection!

1

Choose a robot that is age-appropriate and free of small detachable parts for the youngest children. Keep battery compartments securely closed and charge devices out of children's reach.



Examples:

Story time

A robot can become part of the story. It might be a lost animal, a brave explorer, or a helpful friend. Children work together to decide where it should go and what it should do next.

Free play

Children can try out their ideas, see what happens, and try again if something does not work. They talk, listen, solve problems together, and celebrate when they find a solution.

Maths and counting

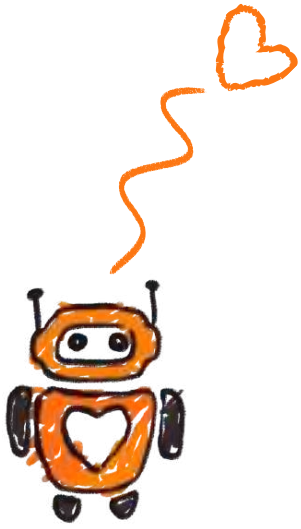
Children can count the robot's steps, compare distances, make simple patterns, and check whether their predictions were correct. Learning becomes active because children can immediately see the result of their thinking.

Circle time

The robot can help children take turns, make choices, answer questions, or tell a story together. Even quieter children often enjoy joining in when the robot becomes part of the activity.

Talking about feelings

A robot can become a character that needs help, has lost its way, or has a problem to solve. Children work together to decide how they can help, giving them opportunities to practise kindness, listening, and caring for others. Encourage children to think about more than just facial expressions when talking about feelings. Remind them to look for other clues, such as what is happening, what the character says, and how they behave.

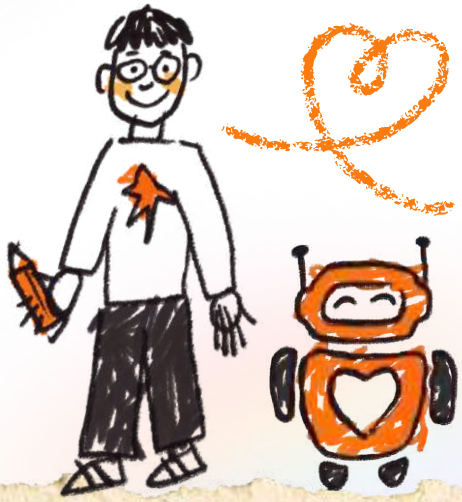


Reflect:

Look at the examples on the previous page and think about children in your group:

What might your children enjoy most?

Which activity could you easily imagine trying with a robot?



What would be your learning goals?

- ☐ Working together
- ☐ Taking turns
- ☐ Solving problems
- ☐ Communication
- ☐ Creativity
- ☐ Empathy
- ☐ Recognizing emotions
- ☐ Expressing emotions
- ☐ Self-regulation
- ☐ Perspective-taking
- ☐ Another goal:

Key ideas:

- Understanding and developing empathy in young children
- Creating opportunities for empathy through everyday kindergarten activities and routines

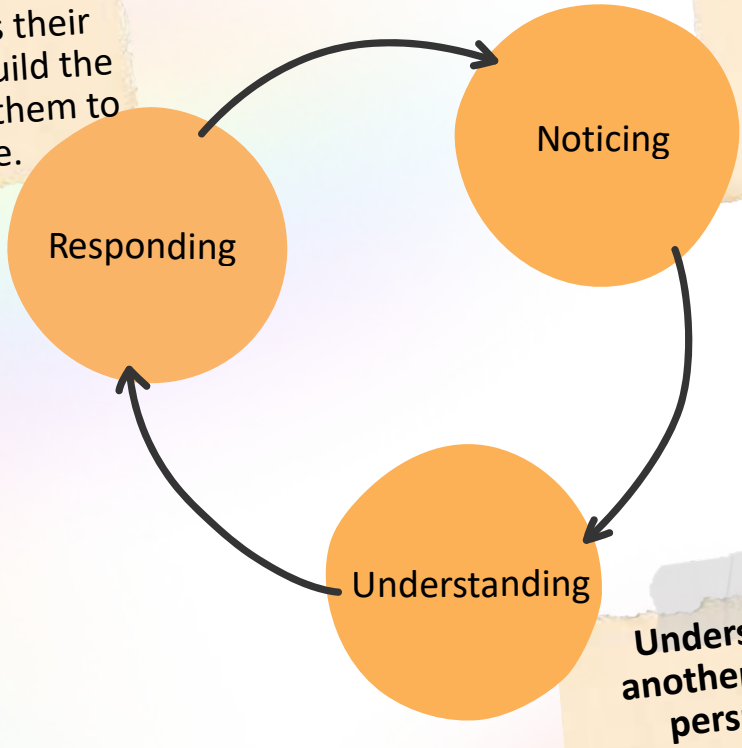


2 Empathy in Early Childhood

What does empathy even mean?

Noticing others' emotions
A child notices that a friend seems upset after their tower falls down.

Caring and taking action
A child comforts their friend, helps rebuild the tower, or invites them to join a game.

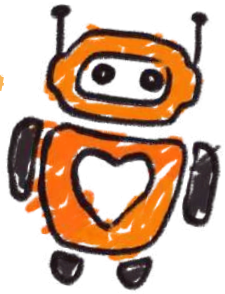


Understanding another person's perspective
A child understands that their friend may be upset because the tower they worked hard on fell down.

Empathy is the ability to notice another person's feelings, understand their perspective, and respond with care and concern.

Based on Hoffman (2000) and Decety & Jackson (2004)

2



How empathy develops in children

3 years	4 years	6 years
Notice and respond to others' emotions	Recognise a wider range of emotions in themselves and others	Understand that two people may feel differently about the same situation
Begin to connect feelings with simple causes	Become better at understanding why someone might feel a certain way	Increasingly consider another person's point of view
Show concern when someone is hurt or upset	Offer comfort or help to others	Offer comfort and support in ways that better match what another person needs
Practise sharing, taking turns, and cooperating	Work with others during play and shared activities	Work together to solve problems and disagreements

Adapted from Simon & Nader Grosbois (2023), and Roth Hanania, R. (2025).

Note: These are general developmental patterns, not a checklist. Children develop empathy in different ways and at different rates, influenced by their experiences, relationships, language, and social environment.

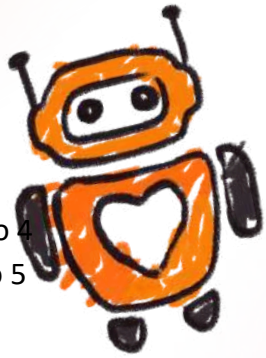


2

How empathy develops in children

Read each example and write the age at which you think the behaviour is most likely to emerge. There is no single correct answer. Children develop at different rates, and the same behaviour may appear at different ages depending on the child and the situation.

Skill	Age
1. A child offers their teddy to a friend who is crying.	
2. A child notices that another child is sad and asks, "Are you okay?"	
3. A child says, "She is sad because she lost her toy."	
4. A child waits for a turn and says, “You can go first.”	
5. A child says, "We can both have a turn."	
6. A child comforts a friend who is upset and offers to help.	
7. A child says, "Maybe she is scared because it is her first day."	
8. A child notices that their friend cannot reach the robot and moves it closer.	
9. Two children talk about different ideas and agree on what to do.	



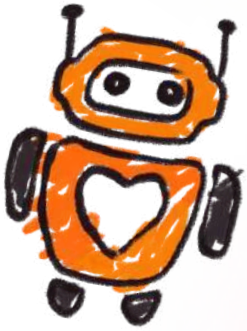
2

Indicative answer key: 1: 3 to 4 years, 2: 3 to 4 years, 3: 3 to 4 years, 4: 3 to 5 years, 5: 3 to 5 years, 6: 4 to 5 years, 7: 4 to 5 years, 8: 3 to 5 years, 9: 4 to 5 years

Existing approaches for developing empathy in young children

Different countries and early childhood curricula use a variety of approaches to help children develop empathy. Here are some of the most common ones.

Approach	Main idea	How empathy is developed
Social and emotional learning (SEL)	Children learn social and emotional skills.	Emotion recognition, self-awareness, self-regulation, relationship skills, social awareness, responsible decision-making, and collaborative activities.
Positive education	Combines wellbeing and positive psychology with learning.	Kindness, gratitude, positive relationships, strengths, and resilience.
Cooperative learning	Children learn by working together toward shared goals.	Teamwork, helping each other, shared responsibility, and communication.
Play-based learning	Children develop through guided and free play.	Pretend play, role play, negotiation, sharing, and collaborative problem-solving.



Existing approaches for developing empathy in young children

Approach	Main idea	How empathy is developed
Perspective-taking	Children learn to understand another person's thoughts and feelings.	Storytelling, discussions, role play, and asking reflective questions.
Resolving conflicts together	Relationships are strengthened by repairing harm after conflicts.	Listening, taking responsibility, understanding others' feelings, and finding solutions together.
Mindfulness	Children develop awareness of themselves and others.	Attention, emotional regulation, kindness, and compassionate responses.
Talking about emotions	Adults actively support children in understanding and managing emotions.	Recognising emotions, talking about feelings, validating experiences, and guiding problem-solving.

Sources: Blewitt et al. (2018), Cheang et al. (2019), Skene et al. (2022)



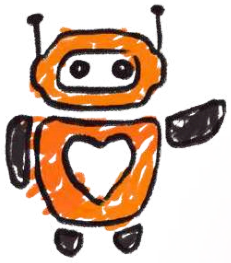
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Creating opportunities for empathy development

Whether guided by research, professional experience, or intuition, teachers naturally create opportunities for children to care for others, understand different perspectives, and build positive relationships. Every day, they encourage children to share, take turns, comfort a friend, solve conflicts peacefully, and work together during play. Many traditional kindergarten activities already help children develop empathy. Reading and discussing stories encourages children to think about how characters feel. Role play and pretend play allow children to experience different perspectives.

However, empathy development can become even more intentional. By making small changes to familiar activities, teachers can transform everyday experiences into opportunities for children to practise kindness, cooperation, and perspective-taking. For example, competitive games can be redesigned so that children work together instead of eliminating players who make mistakes. Group activities can be planned to encourage collaboration rather than individual success. Even routine moments, such as morning circle, snack time, or cleaning up, can become opportunities for children to help one another, notice others' needs, and celebrate shared achievements.

These examples show how familiar kindergarten activities can help children practise empathy in everyday situations.



2

“Celebrating Mistakes”

Traditional approach

Children sit in a circle. Each repeats a rhythm, taking turns around the circle. If someone makes a mistake, they are asked to sit out.

Empathy-focused approach 1

Mistake friendly design: When a child makes a mistake, everyone says:
"Hip, hip, hooray!
We learn every day!"
The child stays in the game and continues playing.

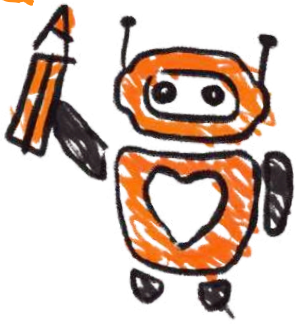
Empathy-focused approach 2

Helping instead of eliminating: Instead of leaving the game, the child asks another child for help. The two children solve the challenge together before continuing.

Skills developed

- Encouragement
- Resilience
- Teamwork

Choose three familiar activities and think about how you could make them more empathy-focused:



2

“Musical Chairs”



Traditional approach

Each round, one chair is removed. The child who cannot find a chair is eliminated.

Empathy-focused approach 2

Before the game starts, children are paired. Children are encouraged to make sure their partner has a seat before finding one for themselves. The teacher asks: "Can you help your friend find a place?"

Empathy-focused approach 1

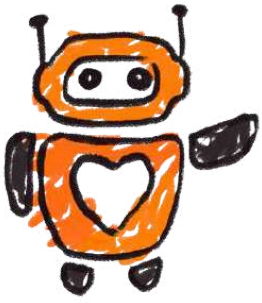
Instead of removing children, remove a chair but keep everyone in the game. Task: "Can everyone help each other fit on the remaining chairs?" Children work together to make space, hold hands, or sit on each other's laps.

Skills developed

- Encouragement
- Resilience
- Teamwork

Choose three familiar activities and think about how you could make them more empathy-focused:

2



“Finish Together”

Traditional approach

Teams compete to finish first. For instance: racing, building towers, treasure hunt.

Empathy-focused approach 1

Small teams or the entire group works together to complete the tasks. Children can stop to encourage teammates or help someone who finds a task difficult. Success is measured by everyone finishing together.

Empathy-focused approach 2

Before the activity, the teacher quietly gives each child the name of another child in the group. Their mission is to watch over that child during the game and help or encourage them whenever possible, without saying who they are supporting.

Skills developed

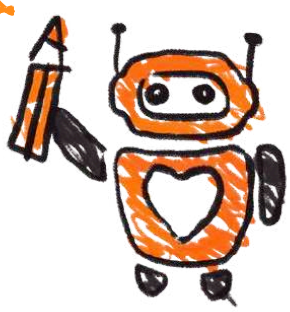
- Paying attention to others
- Helping behaviour
- Perspective-taking
- Inclusion

Choose three familiar activities and think about how you could make them more empathy focused:

2 _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _



“Circle Time”

Traditional approach

Children answer questions individually. For instance: What is your favourite animal? What would you like to play today? What makes you happy?

Empathy-focused approach 1

Children first listen to a friend before sharing with the group.
Teachers ask, "Can you tell us what your friend said?"

Empathy-focused approach 2

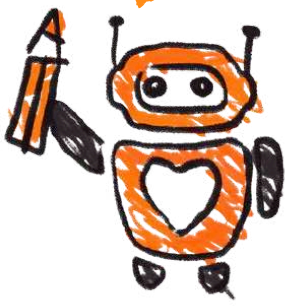
Children are invited to recognise an act of kindness they noticed during that day.
The teacher asks:
"Who would you like to thank today?"
or
"Did someone help you today?"

Skills developed

- Active listening
- Perspective-taking
- Respect
- Gratitude

Choose three familiar activities and think about how you could make them more empathy-focused:

2



Routines with empathy moments

Daily routine

Choose one daily routine from your group. For example: arrival time, free play, snack time, outdoor play, clean up, going home.

Your task

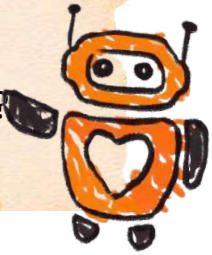
Imagine you are redesigning your classroom through an empathy lens. Ask yourself:

What small change could encourage empathy?

How would children benefit?

Guiding questions

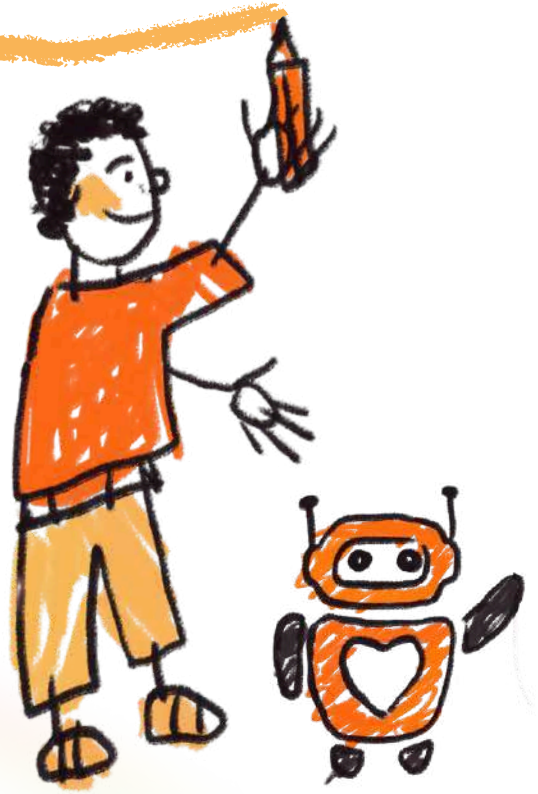
Could children work together instead of individually?
How could children help one another?
How could every child feel included?
Could any child feel uncomfortable or excluded?
How could children practise kindness during this routine?
What could you say or do to encourage empathy?



2

Key ideas:

- Using screen-free robotics to support social and emotional learning
- Hands-on activities combining robotics and empathy



3 Playful Robotics

Existing non-screen robotics

- mTiny
- Bee-Bot
- Blue-Bot
- Ozobot
- Edison
- Tale-Bot Pro
- Cubetto
- KUBO
- Matatalab
- Botley

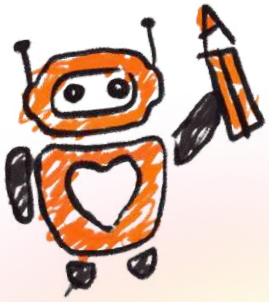
And many more!

There are many educational robots available, and each offers different possibilities. When choosing one, start with your learning goal, the children's age and needs, and the way you want children to work together. The profiles in this chapter highlight practical features that can help you decide what fits your setting.

This handbook includes examples of commercially available educational robots and coding tools. Their inclusion does not constitute an endorsement of any particular product. Most of the activities can be done with any robot - feel free to adapt! You will find suggestions in the activity part.



mTiny



Age: 4 and up

Pairs, small groups.

Features: movement, sound effects, LED display, drawing, gyroscope, optical sensor.

- Screen-free robot for preschool children
- Uses physical coding cards
- Easy use for young children
- Suitable for teachers with and without coding knowledge

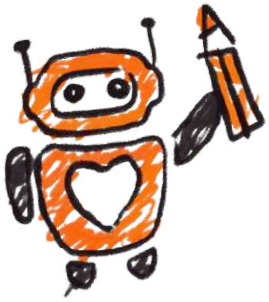
mTiny is a little robot designed to look like a panda, featuring more than ten pre-set emotional expressions and sound effects. Children learn coding and mathematical thinking through themed maps, storyboards, game cards and coding cards. No phone, tablet or PC is required, as the robot is controlled with a remote control or tap pen and ready to use right out of the box.

mTiny is ideal if you are looking for screen-free activities that enable learning through play. It offers countless scenarios for open-ended play, sparking storytelling and imagination.

3

Its limitation is short battery life. mTiny needs to be recharged after 1-2 hours, and the charging lasts the same amount of time. Additionally, the robot set comes with many small parts and needs careful management and storage.

Bee-Bot



Age: 4 and up

Pairs, small groups.

Features: movement, sound effects, recorder, buttons

- Screen-free robot for preschool children
- Uses button controls
- Easy use for young children
- Suitable for teachers with and without coding knowledge

Bee-Bot is a small floor robot designed to look like a bee, with directional buttons on its body. Children enter a sequence of commands using the buttons, and the robot provides feedback through lights and sounds. Children can practise counting, sequencing, direction, problem-solving, and estimation. No phone, tablet, or computer is required, as Bee-Bot can be controlled directly using its buttons. It can also be used with command cards and play mats.

Bee-Bot can be used to introduce children in small groups to programming and sequencing through screen-free activities. Like mTiny, it can be incorporated into open-ended play and everyday classroom activities. Its button controls are relatively straightforward for young children to use.

3

Bee-Bot has a battery life of about 6 hours on a full charge. Compared to other robots the programming possibilities are more limited, but well-suited for the suggested age group.

Blue-Bot



Age: 4 to 11

Pairs, small groups.

Features: movement, sound effects, buttons, transparent shell, Bluetooth.

- Screen-free robot for (pre)school children
- Uses button controls or remote
- Easy use for young children
- Suitable for teachers with and without coding knowledge

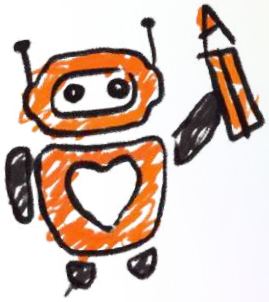
Blue-Bot shares many features with Bee-Bot but has a transparent shell that allows children to see some of the electronic and mechanical components inside. Like Bee-Bot, it can be programmed directly using the control buttons on its body. It can also be programmed through a Bluetooth app on a compatible device. A tactile reader, which uses command tiles for programming without a screen, is available separately, along with a range of play mats.

Blue-Bot can be used with preschool and primary school children. Its basic controls can be used without a screen, while some additional programming functions involve the use of the Bluetooth app. The optional tactile reader and other accessories provide further possibilities for hands-on activities but increase the overall cost of the set.

3

Blue-Bot's battery will last anywhere from 1.5 to 6 hours, depending on how intensively the motor, sound, and Bluetooth features are used.

Ozobot



Age: 6 and up

Pairs, small groups.

Features: movement, sound effects, optical sensors, Bluetooth.

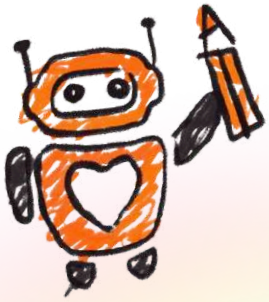
- Screen-free and screen connected options
- Uses colour codes
- Smooth transition between screen-free learning and real coding

Ozobot is a small programmable robot that uses optical sensors to follow lines and read colour codes. In screen-free activities, children can create paths and colour codes on white paper using suitable black, red, green, and blue markers. For the most reliable results, Ozobot recommends its own Color Code markers.

For this handbook, Ozobot is most suitable for older children in the 3 to 6 age range, with appropriate adult guidance. Because the robot is small, activities should be closely supervised and the robot should not be treated as a toy for very young children. Ozobot and its accessories contain small components.

Ozobot's battery lasts about 60 to 90 minutes, depending on the model and the intensity of use. There are currently two different Ozobot models on the market, Ozobot Evo and Ozobot Bit.

Edison



Age: 4 and up

Individual, pairs, groups.

Features: movement, sound effects, sensors, LEGO-compatibility, plotter.

- Screen-free robot for preschool children
- Uses button controls
- Easy use for young children
- Suitable for teachers with and without coding knowledge

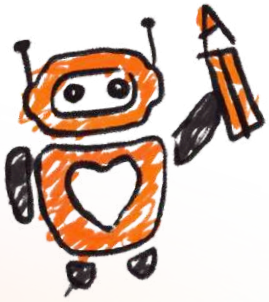
Edison is a robust, LEGO compatible educational robot designed to support different levels of robotics and programming. It offers four different levels of exploration for different ages and levels of experience.

From age four, children can use Edison with adult support by scanning pre-printed barcodes that activate programs already stored in the robot. From age seven onwards, children can use EdBlocks, a visual drag and drop programming language. From around age ten, they can progress to EdScratch, a block based programming language, while from age 13 upwards, they can explore EdPy, a text-based programming language based on Python.
The programming software is available free of charge.

3

Edison can run continuously for 60 to 90 minutes after a charging time of 4 hours. The battery on the original version of the robot is interchangeable.

Tale-Bot Pro



Age: 3 to 6

Pairs, small groups

Features: movement, sound effects, recorder, buttons, sensors, LEGO compatibility.

- Screen-free robot for preschool children
- Uses button controls
- Easy use for young children
- Suitable for teachers with and without coding knowledge

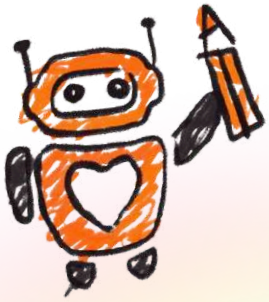
Tale-Bot Pro is a smart, screen-free educational robot in the form of a little square. Using an optical sensor, it recognises fields on specially coded interactive play mats and responds with voice output. Like Blue-Bot, it's controlled with buttons directly on the robot, but also offers a wider range of language-based tools and interactive features. Playful speech recordings connect coding with storytelling, and Tale-Bot Pro can even support early foreign language learning, with 11 languages available.

It also comes with several extension arms, which make it LEGO-compatible and allow a pen to be attached for drawing programmed geometric shapes.

3

Tale-Bot Pro can last up to 4 hours on one charge, depending on the use of LEDs and audio.

Cubetto



Age: 3 to 6

Pairs, small groups.

Features: movement, sound effects, interface board, Bluetooth.

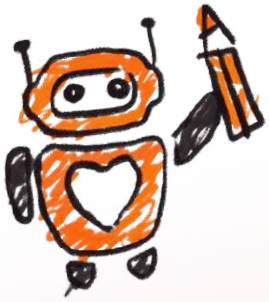
- Screen-free robot for preschool children
- Made from wood
- Battery powered
- Suitable for teachers with and without coding knowledge

Cubetto is a screen-free educational robot inspired by Montessori principles, with a wooden outer construction. It works without screens, smartphones, or text based instructions and introduces young children to basic programming through hands-on play. The robot is a small wooden block that moves across a play mat and provides sound feedback as it follows commands. Children control Cubetto by placing colour-coded coding blocks into an interface board. The board provides a physical way to create a sequence of instructions, which are then sent wirelessly to the robot.

3

Contrary to most educational robots, Cubetto uses 6 regular AA batteries, which provide a continuous run time of about 5 hours.

KUBO



Age: 4 to 10+

Pairs, small groups.

Features: movement, sound effects, puzzle system coding cards.

- Screen-free robot for preschool children
- Puzzle card system
- Easy use for young children
- Suitable for teachers with and without coding knowledge

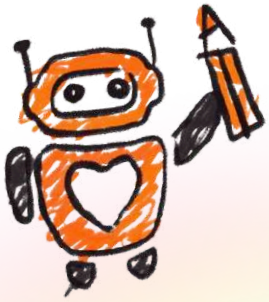
KUBO Coding Robot is a screen-free educational robot that uses a puzzle card system. The robot moves along the cards and stores the sequence of commands. Once the sequence has been created, the robot can replay it. This gives children a hands-on way to explore how command sequences work.
KUBO consists of two magnetic parts. Additional coding sets are available to introduce more complex commands as children develop their skills.

A digital simulation platform is also available, where children can practise coding activities on a tablet or PC. This means that while KUBO can be used entirely without a screen, optional screen based activities are also available.

3

KUBO can last up to 4 hours after a charging cycle of about 2 hours, which is a rather strong run time, compared to other educational robots.

Matatalab



Age: 4 to 9

Pairs, small groups.

Features: movement, sound effects, recorder, buttons.

- Screen-free robot for preschool children
- Text free controls
- Easy use for young children
- Suitable for teachers with and without coding knowledge

Matatalab Coding Set is a screen-free coding system designed for young children. Children place colour-coded coding blocks onto a programming board. The Command Tower reads the blocks and sends the commands to the robot, which then moves across a play mat according to the programmed sequence.

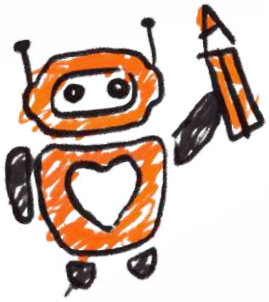
The system is text-free, making it accessible to children who cannot yet read or who are beginning to learn the language.

With add ons, the robot can draw shapes or be used to create simple pieces of music.

3

Both Bot and Tower can run up to 5 hours with one full charge. Charging takes about 2 hours for the robot and 4 hours for the Tower.

Botley



Age: 5 to 9

Pairs, small groups

Features: movement, sound effects, remote, sensors.

- Screen-free robot for preschool children
- Uses button controls
- Easy use for young children
- Suitable for teachers with and without coding knowledge

Botley is a screen-free educational robot designed to introduce young children to basic coding concepts through play. No phone, tablet, or computer is required, as programming is done using a tactile remote programmer. There are two versions of Botley, with the newer version offering additional features such as more directional commands and light sensors. Botley is typically available in sets that include accessories such as detachable robot arms, direction cards, obstacles, and play mats.

3

Both versions of Botley run on five AAA batteries. Without power-hungry features such as Bluetooth, they are highly energy-efficient.

Playful robotics activities

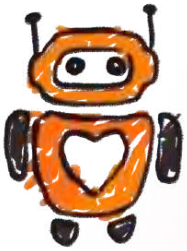
The following activities allow children to connect technology and emotions through play, use language to explain feelings, and practice making decisions together. Project partners have used these activities in practice with preschool children. Use them as starting points and adapt the materials, timing, group size, and level of challenge to suit your group.

Use them as inspiration for your own playful robotics activities or as a starting point for new ideas and adventures. Feel free to adapt and customise the activities to suit the needs, interests, and abilities of the children in your group.

The specific theme of an activity is less important than the quality of children's participation and interaction. Pedagogical guidance plays an important role in turning a playful activity into a meaningful learning experience. For example, when two children play with robots, simply completing the task together does not necessarily support empathy. The teacher can encourage empathy by asking questions such as, "How do you think your friend felt when the robot did not move as planned?" or "What could you do to help?" This helps children notice others, consider their perspectives, and respond with care.

Through these activities, children have opportunities to work towards a shared goal, listen to other children, wait for their turn, solve problems, make agreements, and manage their emotions.

As previously mentioned, a specific robot might be listed in the activity, but do not let that stop you. Most activities can be done with other robots, too. Try what works for your group!



A little robot you have never seen before joins your group. What might their name be? The robot can show different emotional expressions. What might each expression mean? Think about what has happened, what the robot is saying or doing, and whether the expression could represent more than one emotion.

"Meet the Robot"

In this activity, children playfully practise observing, recognizing and naming emotions.

They also make group decisions and empathetically connect situations with emotions.



3

“Meet the Robot”

Prep Time	5-10 min
Group Size	any
Ages	3+



Materials

- mTiny
- mTiny emotion cards

Tech-Free Materials

- Stuffed animal
- Socks
- Textile marker

additional

- Printed pictures of different facial expressions

Instructions

First, children meet the robot without knowing its name.

Using the emotion cards, let mTiny display different emotional expressions. Ask children which emotion the expression might represent. Encourage them to explain their ideas.

Add simple situations: The robot was building something and it fell down. What might the robot be feeling? Ask: “What happened?” “What is the robot doing?” “What clues can we use?” and “Could the robot be feeling something else?”

Invite children to suggest names for the robot. Give **everyone** a chance to share. Decide together which name the group would like to use.

“Meet the Robot”

Tech-free version

If you do not have a robot, you can do this activity with a picture or a toy that shows different facial expressions instead. For a DIY version, you could use a stuffed animal with different socks that have faces drawn on them.

Notes:

3

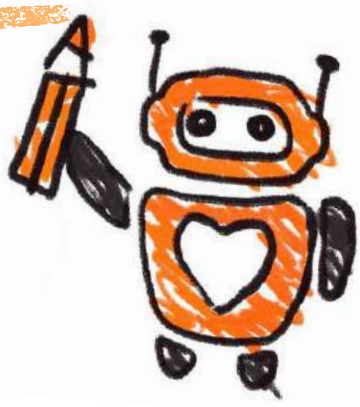


There is a little robot who has just arrived at the kindergarten. They do not know their way around and have no idea who everybody is. They need your help! Introduce them to one of your friends by leading them in the right direction and tell them how you would like to spend your time together.

"Finding Friends"

In this activity, children playfully practise directional thinking.

They also present information to a group and talk positively about a friend. For shy children, talking might be easier because the attention is focused on the robot instead of entirely on them.



3

“Finding Friends”

Prep Time	10-15 min
Group Size	4-6 children
Ages	4+



Materials

- Blue-Bot
- Big sheet of paper
- Marker
- Photos, drawings, symbols, or name cards for each child

Instructions

On a big sheet of paper, mark as many squares as there are children in the group. Together, place a photo, drawing, symbol, or name card in each square to create a grid representing the group.

One child now chooses who the robot should travel to. Program the robot and send it on its way. Once it reaches the chosen picture, the child introduces their friend (name, their favourite activities to do together).

The friend now chooses who to find next on the map and so on.

3

“Finding Friends”

Tech-free version

Without a robot, you can still play this game the same way. Prepare the photo grid, and use a toy or figure instead of the robot. The children move it by hand to the chosen picture.

Notes:

3

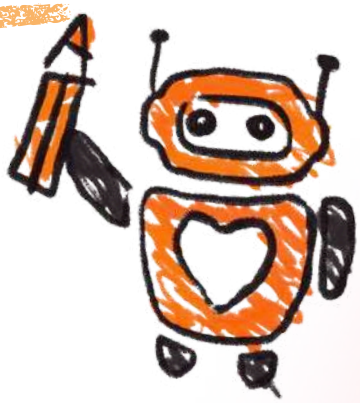


Our robot comes across many emotions on their path, but they are not sure what those emotions are. Help them make sense of their feelings by naming the emotions and thinking of situations in which you might feel the same way.

"Emotion Journey"

In this playful activity, children practise giving and following directions while helping the robot find its way.

At the same time, they develop empathy and social awareness by exploring feelings together. Children learn that people can have different feelings about the same situation, and that all of these feelings can be understood and talked about.



3

“Emotion Journey”

Prep Time	10-15 min
Group Size	4 - 6 children
Ages	4+



Materials

- Ozobot
- Ozobot marker
- Emotion cards
- Big white sheet of paper

Tech-free materials

- Emotion cards
- Big white sheet of paper
- Marker
- Toy

Instructions

Draw a spiral on the paper and place different emotion cards along the path. Send Ozobot along the path.

When Ozobot reaches a card, ask the children to name the emotion and describe a situation in which someone might feel it.

Encourage children to think of different possibilities. Explain that people can experience different emotions in the same situation. For example, starting kindergarten might make one child feel excited and another child feel nervous.

With younger children, use a small number of basic emotions and familiar, concrete situations.

3

“Emotion Journey”

Tech-free version

Create emotion cards and place them along a spiral path. Children can move a toy along the path, stopping at each emotion to name it and talk about situations in which someone might feel that way. This version keeps the focus on recognising emotions, perspective-taking, and discussion, but does not include the coding, planning, and testing involved in programming a robot.

Notes:

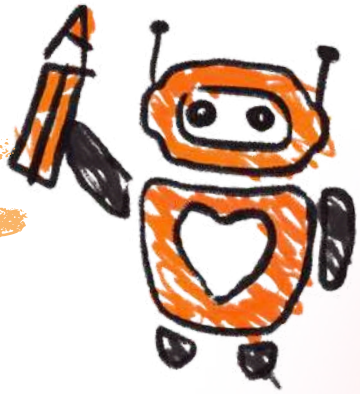


Two robots play a game of strength inside a ring. Which can push the other out first? What does it feel like to win or lose a game like this?

"Sumo Wrestling"

This activity helps children recognise and talk about feelings that can come with success, disappointment, and trying again. With support from an adult, children can use their own experiences to think about how someone else might feel and how they can respond with kindness and encouragement.

Children can practice coping with frustration, trying again, and discover that making mistakes is a natural part of learning.



“Sumo Wrestling”

Prep Time	15-30 min
Group Size	2-4
Ages	5+



Materials

- 2 Edison
- Legos
- Tape

Tech-free materials

e.g.

- Marbles
- Paper towel rolls
- Building blocks
- Sheets of paper

Instructions

Start by marking a shape on the floor using tape. Children customise two robots with lego bricks and program them. The robot able to push the other robot out of the shape wins.

After each round, give children a moment to talk about what happened. Encourage them to describe how they felt and consider how the other child might have experienced the game. Ask questions such as:

“How did you feel when your robot won or lost?”

“How do you think your friend might feel?”

“What makes you think that?”

“What could you say or do if someone feels disappointed?”

“How can we celebrate winning kindly?”

3

“Sumo Wrestling”

Tech-free version

Create a simple tabletop challenge in pairs. Children take turns rolling or moving an object toward a target. After each turn, encourage them to notice their own reaction and their partner’s response. Practise celebrating success kindly, offering encouragement, and supporting one another when something does not work.

Notes:

3



The robot knows how to draw wonderful circles, but drawing the face of a person is much more difficult. Help it out and turn the circles into portraits of yourself and your friends. What emotion did you draw on your face?

"Me Today & You Tomorrow"

In this activity, children playfully learn to recognise and name emotions. They pay attention to their partner and their defining characteristics.

They also practise social sensitivity, empathy and pen control skills.



3

“Me Today & You Tomorrow”

Prep Time	15-20 min
Group Size	any
Ages	6+



Materials

- Tale-Bot Pro
- Marker
- White paper for each child
- Coloured pencils

Instructions

Fold a sheet of paper in half for each child. Program Tale-Bot Pro to draw a circle on one half. Children turn the circle into a self portrait and choose an emotion that describes how they feel. They can select an emotion card, use a symbol, write an initial letter, or dictate the emotion to an adult.

Next day, children work in pairs. Tale-Bot Pro draws a circle on the other half of the paper. Children ask their friend how they feel and what details they would like included in their portrait. They then use these details to draw their friend.

Children can add their friend’s name or emotion by writing, choosing a card or symbol, or asking an adult for help.

3

“Me Today & You Tomorrow”

Tech-free version

Without a robot, children can do the activity by drawing or tracing the circles themselves. On the first day, each child turns a circle into a self portrait and adds an emotion that describes how they feel. On the next day, children work in pairs. Each child draws a circle for their friend, asks how their friend feels and what details they would like included, and then completes the portrait. This version keeps the focus on recognising emotions, listening to others, and paying attention to what is important to a friend.

Notes:



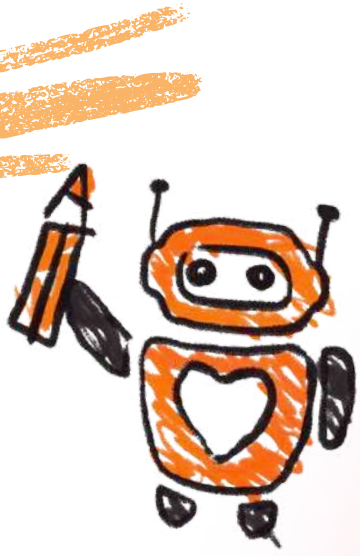
3

The robot has a destination to reach. Perhaps they are in a new city and looking for their friend's house, or they are trying to find a way through a big forest. They need somebody to lead them and a good team that follows the leader's instructions to get them there.

"Lead the Way"

In this activity, children playfully explore what it means to lead and work together as a team.

They learn to pay attention to their teammates, listen to one another, and practice giving and following directions.



3

“Lead the Way”

Prep Time	15-45 min
Group Size	4-5 children
Ages	5+



Materials

- mTiny
- play mat with a path or landscape

alternatively

- *B*ig sheet of paper
- Marker
- Coloured pencils

Tech-free materials

- Obstacle course made from pillows, chairs, tape on the floor, etc…

Instructions

Split the children into small groups. One child starts as the leader. If there is no play mat, draw a path or landscape on a large sheet of paper for the robot to navigate.

The group discusses which path the robot should take. The leader listens to the group, helps coordinate their ideas, and makes sure everyone has a chance to contribute. Teammates program and guide the robot according to the group’s plan.

Rotate roles so that every child has an opportunity to be the leader. After each round, discuss: What worked and what did not? What makes a good leader? What makes a good teammate? What makes a good team? How did you feel when you were leading or following someone else’s instructions?

3

“Lead the Way”

Tech-free version

Without a robot, try building an obstacle course out of objects in the classroom. One of the teammates becomes the “robot” and can only be moved by safe touch or verbal instructions. The team guides the “robot” through the obstacle course following the instructions of their leader. Rotate roles so that everyone has a chance to lead, guide, and be the robot.

Notes:

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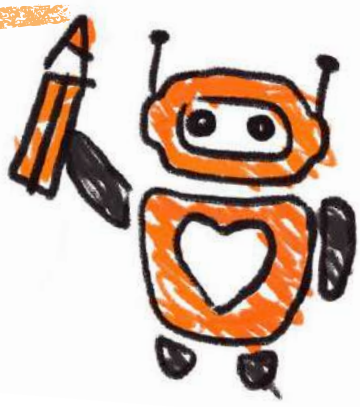


There are some problems in the city that need to be fixed. What solutions can you find? Guide the robot around the map to complete the tasks and make the city a better place together!

"Let's Fix the City!"

In this activity, children playfully learn about emotions, compromise and teamwork.

They pay attention to their teammates and practise their problem-solving skills, as well as directional thinking.



3

“Let’s Fix the City!”

Prep Time	15-45 min
Group Size	any
Ages	5+



Materials

- mTiny
- Play mat with a cityscape

alternatively

- Big sheet of paper
- Marker
- Coloured pencils

Tech-free materials

- Big sheet of paper or play mat with a cityscape
- Toy

Instructions

Prepare a play mat with a cityscape, or draw one on a big sheet of paper. Add a few familiar places, such as a school, a park, a hospital, or some shops.

Explore the problems in the city: rubbish in the park, a tree that needs planting, or flowers that need to be delivered to the hospital. Ask the children to choose one task and decide where the robot needs to go to help.

Let them plan the route, for instance: forward, forward, right. Then program the robot and send it on its way. Continue with a new task or let children create their own.

Ask perspective-taking questions: Who is experiencing the problem? How might they feel? What do they need? Is the solution suitable for everyone?

“Let’s Fix the City!”

Tech-free version

You can explore the same city problems without a robot by using a toy or figure. Children decide where the toy needs to go, discuss who needs help, and think together about possible solutions. Encourage them to describe the route before moving the toy so that they still practise planning and directional thinking.

Notes:



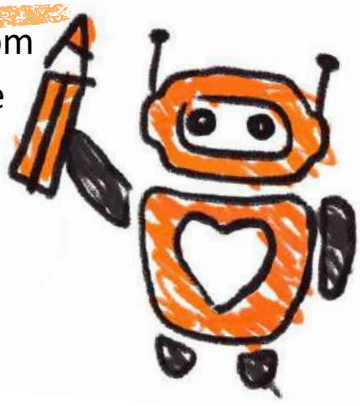
A butterfly goes through an amazing transformation as it grows. Follow its journey from a tiny egg to an adult butterfly and discover what happens at each stage.

"The Life Cycle of a Butterfly"

Not every robotics activity needs to focus directly on empathy. This activity shows how the same playful robotics approach can also support STEM learning, sequencing, and collaboration.

In this activity, children explore the life cycle of a butterfly through play. They learn to recognise and sequence the four stages: egg, larva or caterpillar, pupa or chrysalis, and adult butterfly.

By programming the robot to move from one stage to the next, children practise sequencing, directional thinking, and working together.



3

"The Life Cycle of a Butterfly"

Prep Time	20-40 minutes
Group Size	any
Ages	5+



Materials

- mTiny
- Pictures of the butterfly life cycle
- Large sheet of paper
- Markers

Tech-free materials

- Lesson material
- Big sheet of paper
- Markers
- Toy

Instructions

Prepare pictures showing the different stages in the butterfly's life cycle: egg, larva or caterpillar, pupa or chrysalis, and adult butterfly.

Create a path on a large sheet of paper and place the four stages along it. Children program and guide the robot along the path, stopping at each stage to explore what happens.

Encourage children to name each stage, put the stages in the correct order, and talk about how the butterfly changes as it grows. Encourage children to think about how people can care for butterflies and other living things in their environment.

3

“The Life Cycle of a Butterfly”

Tech-free version

Without a robot, children can use a toy or butterfly figure and move it along the path from one stage of the life cycle to the next. Before moving it, encourage them to decide together where it should go and explain the sequence. This keeps the focus on understanding the butterfly’s life cycle, sequencing, and working together.

Notes:

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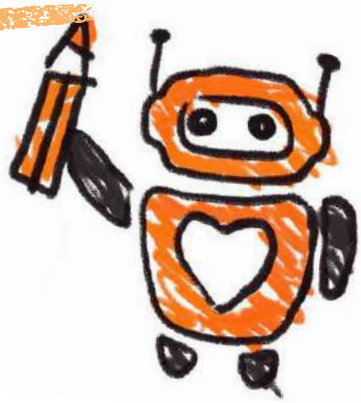


Help the robot find matching emotion cards. Along the way, explore what different emotions are called, when we might experience them, and what can help us express and manage them.

"Emotion Pairs"

In this activity, children practise recognising, naming, and talking about emotions. They explore situations that may be connected with different feelings and learn that people may feel differently in the same situation.

They also explore safe ways of expressing and regulating emotions and practise listening to other children's experiences.



3

“Emotion Pairs”

Prep Time	15-40 min
Group Size	3 - 5 children
Ages	4+



Materials

- Blue-Bot
- Emotion dice
- Emotion card pairs
- Different pictures of situations/objects
- Play mat

Tech-free alternative

- Emotion dice
- Emotion card pairs
- Pictures
- Toy

Instructions

Place one card from each emotion pair around the play area. Keep the matching cards together near the starting point.

Children take turns rolling the emotion dice and identifying the emotion shown. They then find the matching emotion card at the starting point.

Together, choose pictures of situations that might be connected with that emotion and use them to create a path. Talk about the pictures: What is happening? How might someone feel? Could another person feel differently? What might help?

Children then program Blue-Bot to follow the path and reach the matching emotion card at the end.

“Emotion Pairs”

Tech-free version

Use a toy instead of Blue-Bot. Place one card from each emotion pair around the room and keep the matching cards at the starting point. A child rolls the emotion dice, identifies the emotion, and chooses the corresponding card. Together, create a path using pictures of situations that might be connected with that emotion. The child then moves the toy along the path, stopping to discuss the pictures before reaching the matching emotion card.

Notes:



Empathy Activity Formula

Use this activity formula to prepare your own empathy activities. These are the core ingredients:



Storytelling & Guided Discussion

Set the scene with a storyline. Give the children a goal: What are we trying to do? Then guide a discussion: What emotions appear? How are they shown? How can we manage them?

Activity

A robot moves around a field of activities. Children listen to short prompts about a situation and work out which emotion(s) it shows. Then they plan a sequence of steps and guide the robot to the goal.

Reflection

It is time to talk as a group again. Discuss what could be done differently, when someone might feel this emotion, and share personal experiences.

3

Literature

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CordiKids Partners

Bildungsinstitut PSCHERER gGmbH (Germany)

The project coordinator is a training and education institute based in Saxony that runs international projects in early childhood education.

GoINNO Institute (Slovenia)

Specialises in turning complex STEM topics into fun, hands-on activities for children.

University of Maribor, Faculty of Education (Slovenia)

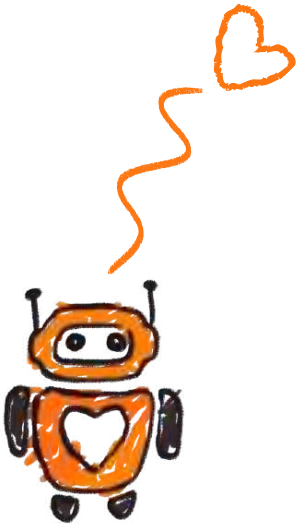
A Slovenian university faculty that trains teachers and conducts research on how young children develop computational thinking and digital skills without screens.

Primera – Zentrum für pädagogische Fortbildung Wien (Austria)

A teachers' association with thousands of members across Europe that provides professional development courses and webinars for educators.

MLA Viimsi Lasteaiad (Estonia)

A network of eight Estonian kindergartens with experience in using educational robots and digital tools in everyday play.





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