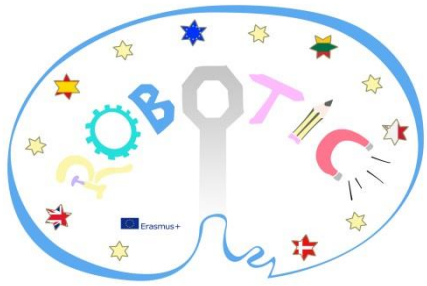


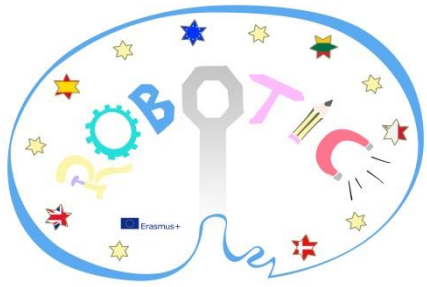
# Outline

- Child-led learning
- What the children say
- Children as teachers
- Self-reflection
- Where to get more information



# Child-led Learning

- Robots allow children to meaningfully express their creative imaginations
  - Personal: Design, programming
  - Concrete: Real-world interaction
- “It's more fun because it's creative and you can play to learn the programming; it's more real.”
- “With coding on a computer you can't work as a team.”



# What the children say

How has it helped you with your knowledge and skills for coding and robotics?

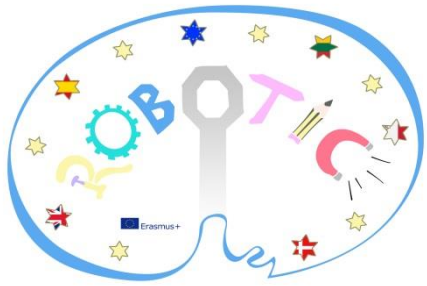
It has helped me learn how to programme and code different robots and learn more about them.

What can you now do that you couldn't do before our sessions with Mindstorms or the First Lego League?

Now I can code, programme and build different robots which I would imagine that I would never be able to do.

What has Mindstorms meant to you?

It has taught me to communicate and control different objects - (robots).

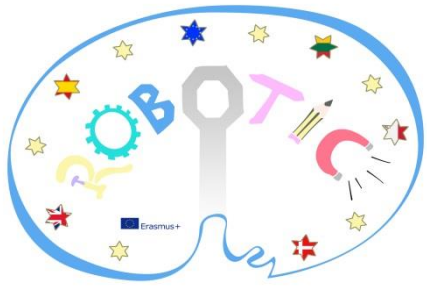


# Children As Teachers

- With new technology, children are naturally curious and unafraid of taking risks.
  - They want to share their discoveries
  - There is embedding of skills in teaching others
- When teaching, the children reported feeling joy at seeing others being able to achieve too
  - Fostered a sense of teamwork
  - Pride at teaching adults something new
- Adults are more reluctant to try new ideas yet the children were supportive

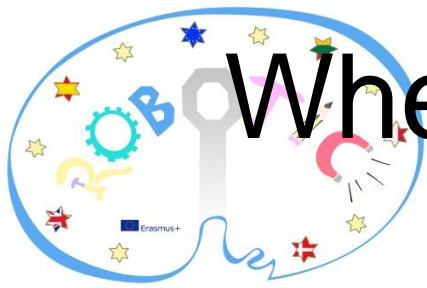
# Children As Teachers





# Self-reflection

- Problem-solving with robots allows children to find their own solutions
  - Often they will move beyond what they have been taught, promoting self-reliance.
- Self-reflection becomes important in the learning process
  - Why didn't my solution work?
  - How could I improve it?
  - How can I help others to achieve the outcomes?



# Where to get more information

- [Robo21c website](https://robo21c.com/)
- Resources, including classroom activities and Primary school curriculum mapping

