

## This works! – a technology education project



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# This Works!

A Technology Education Project

## Teacher's manual



## This works! – How to work through the multidisciplinary learning programme:

**Preparation:** Go through the material pack and read the teacher's manual. The material pack is available online at [www.thisworks.fi](http://www.thisworks.fi). You can follow the guidelines or adapt the programme any way you like. You can add or remove sections, adapt and edit. If you wish, you can also do the construction project without using the story framework.

**The modules:** It may take several lessons to work through a single module, depending on which sections you choose to include and how much time you spend on the discussions.

- 1) Message in a bottle – Rise to the challenge!
- 2) Emotions – Preparing for a new project.
- 3) The jar lid – Together we're more!
- 4) Shapes – Stacking the materials.
- 5) An exciting basement - Design your machine.
- 6) Jobs of the future – From my idea to our idea.
- 7) Breaktime workout – The machine is ready.

**Machine Gala:** Plan your This works! Gala together with your students. It can be a small party at the end of the project or a bigger event with guests.

## Story:

The story runs alongside the entire project and guides the students through the exercises and joint activities. As you read through the story, you'll also find relevant discussion tips and news links. There's also an easy-to-read version that the students can read by themselves. Tip: 1) Gather in a circle and enrich the story by projecting a picture of the characters on the wall. 2) The stick puppets can be used to play with, act out the events of the story, or come up with new stories of your own.

## Game:

Each module contains a suggestion for a game related to the topic of the week. It combines the theme with a wide variety of skills to practice.

## Message for parents:

The package includes pre-written messages that you can send to parents and guardians. They can be copy-pasted directly into, for example, Wilma messages. They can be freely customised for your own use.



## Exercise:

The students will be given a problem to solve in each module. The majority of these exercises should be done in small groups (that is, in the same teams in which the students are building the machine.) The exercises focus on mathematics, the natural sciences and cooperation. After completing an exercise, the team can add their sticker to the door poster, so that everyone can follow the class's shared learning voyage.

## Oops! That was a mistake!

Adversity is the best teacher. In each module, the students are encouraged to persevere, and to try again and again. The guidelines alert you to opportunities for discussing the significance of mistakes in learning situations. If a student makes a mistake and learns from it, they can colour in the 'Oops! Mistake!' sign in their workbook.

## Suggestion for first-grader cooperation:

Each module contains a suggestion for a game or exercise related to the theme. This can be done in cooperation with the pre-schoolers.



## Suggestion for mentor cooperation:

Each module also has a suggested exercise that can be done with older students or mentors. It's a good idea to make use of mentors during the construction phase as well. If you don't have any official mentoring practices, you can choose a group of students to act as mentors for this project.

## CURRICULUM:

This Works program is built according to the Finnish national curriculum. Content and objectives from the curriculum have been raised for each section. These goals will certainly be found in the curricula of other countries as well.

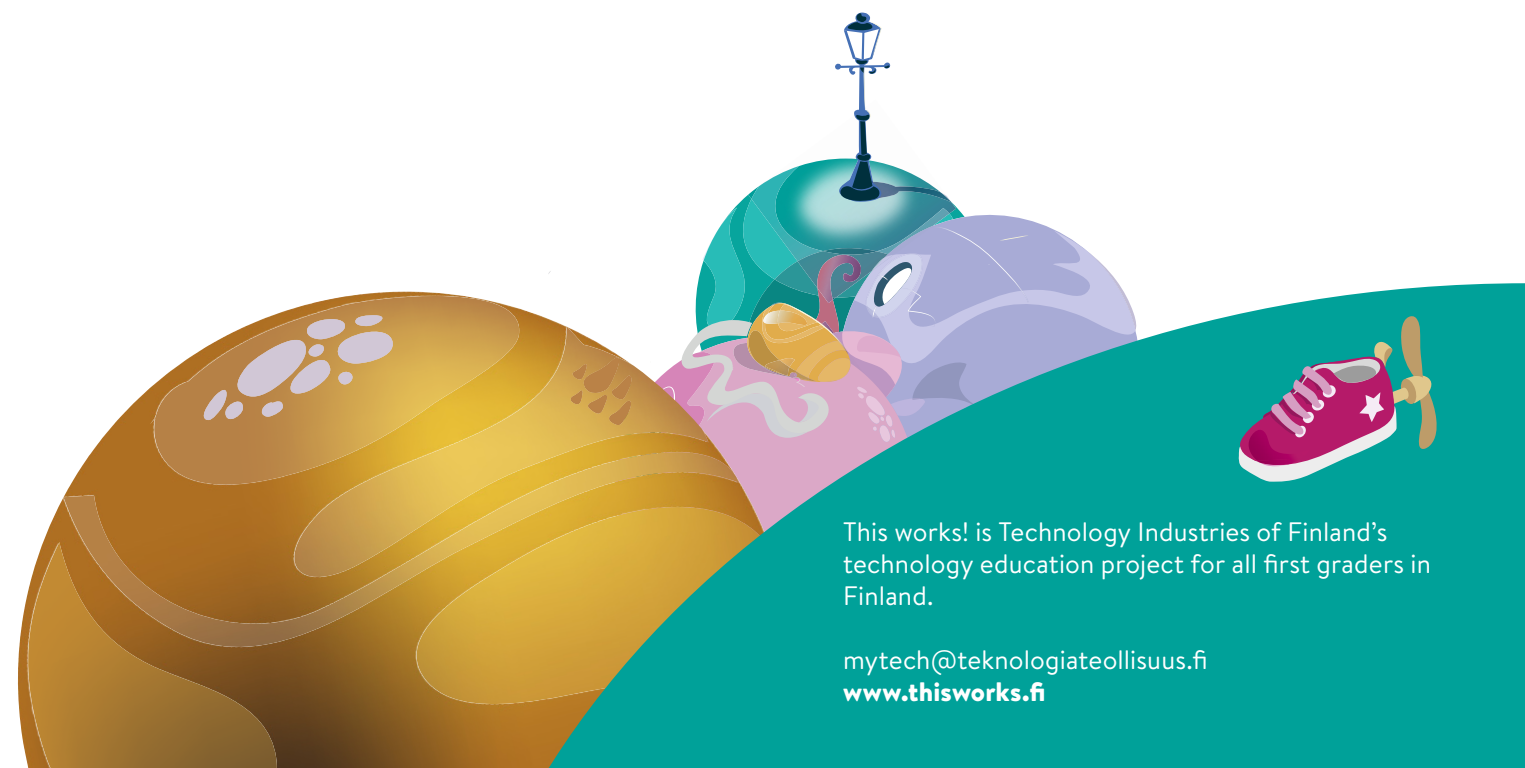
## Documentation tip:

Each module also suggests some stages of the learning process that can be photographed and saved in a digital portfolio or other type of output. If it's not possible to take photos, the journey can also be documented with, for example, drawings in a traditional paper portfolio.

## Homework:

1) Encourage parents to get involved in the homework.

2) At the end of each module, the students are given instructions on which recycled materials they should bring from home in order to build the machine. When all of the module's exercises have been completed, the students can colour in 1–3 stars in their own workbook, depending on how well they feel they have completed the module's tasks.



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