



MAD

Make a difference



Coding

This time we try programming!

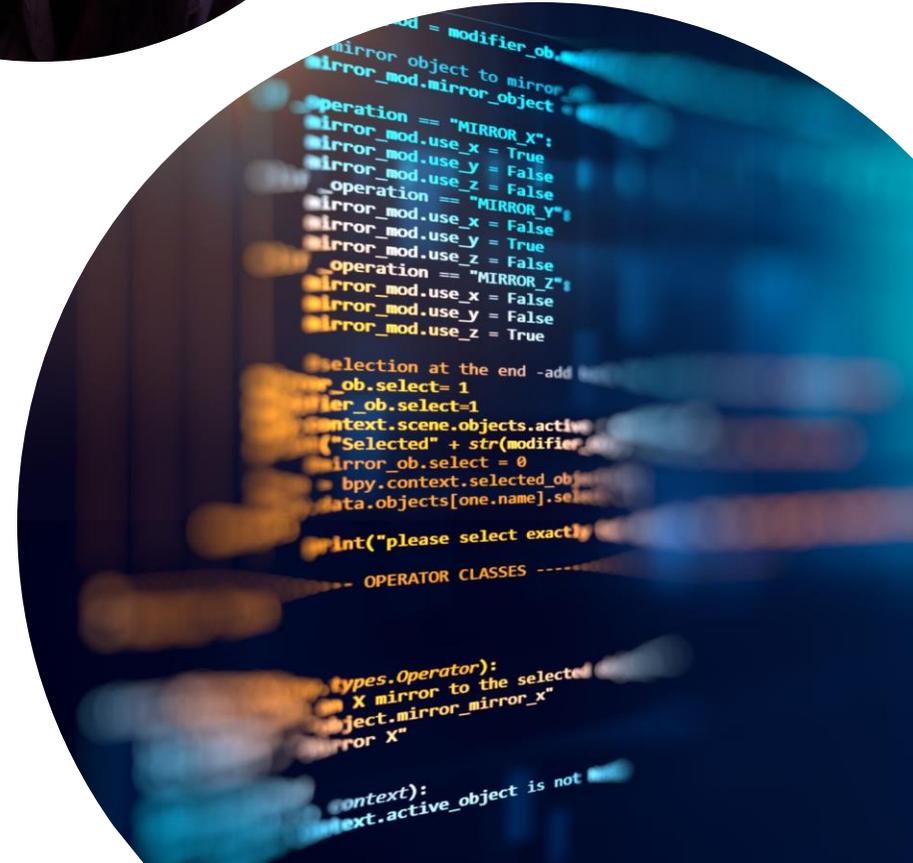
- Have you already done programming or tried coding?
- Has someone for example tried Scratch coding or programmed the Bee-Bot robots?

What is coding and why is it important?



What is coding (and what it isn't)

- Coding isn't anything mystical
- When coding or programming, you just give the computer precise operating instructions, i.e., an *algorithm*, with which it does the desired thing
- When we are programming, we must be precise, because the computer does what we *tell* it to do
 - Not necessarily, what we *want or hope* it would do



Code is everywhere!



- On computers, tablets, in smartphones, cars and refrigerators
 - Where else do you know there is code?
- The amount of code in our lives increases all the time, although we may not notice it
- Without code, computers and smartphones would be just a useless pile of electronics



Tynker

- Tynker is a programming app for kids.
- With Tynker, you can learn the basics of programming by coding your own programs or playing coding games.
- In Tynker, you use block coding, where the code is assembled from ready-made blocks of code

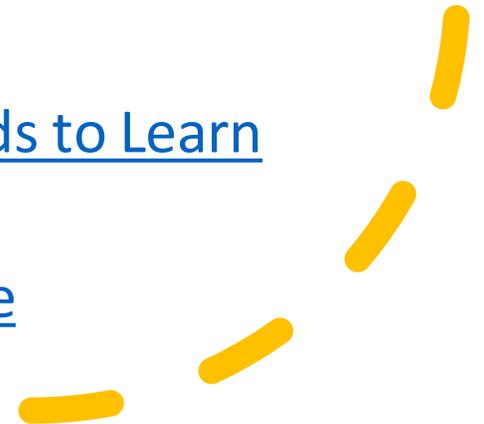
- Videos about Tynker:

[Tynker - Immersive Game Worlds for Kids to Learn Programming - YouTube](#)

[Tynker - What Will You Make? - YouTube](#)

Coding
examples

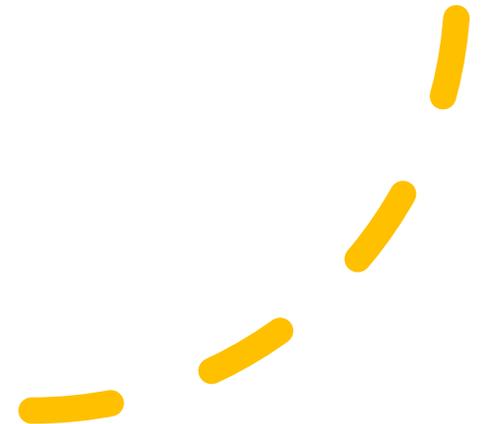
Source: <https://www.tynker.com/>



CodeBug

Coding examples

- CodeBug is programmable and wearable device.
- It has 5x5 red led display for showing graphics and text and touch sensitive inputs.
- There is a Blockly-based online interface for programming with CodeBug.
- Example projects for CodeBug:
<https://www.codebug.org.uk/learn/>



Makey Makey

- Makey Makey is an innovation kit that turns everyday objects into touchpads and makes them connectable to the internet.
- The Makey Makey website has apps to be used with the Makey Makey kit. Alternatively, Makey Makey can be used with coding programs, such as Scratch.

- Video about Makey Makey:

[Makey Makey Banana Piano for New Inventors!](#)

- Example projects for Makey Makey:

<https://makeymakey.com/pages/how-to>

Coding
examples

LEGO Education

Coding examples

- LEGO has a LEGO Education series that contains sets for different schooling levels, from early education to middle schools.
- Sets for elementary and middle schools include the LEGO elements, coding app, lessons, resources, teacher training, and community.

- Videos about LEGO Education:

[New LEGO® Education SPIKE™ Essential for Primary School Students](#)



Exercise

Next you can move onto an example task for Tynker.

In this exercise you will make a button that makes a sound when pressed.



