

# EU Code Week

## Icebreaker course 2020

### ***TeachMeet: Teachers and Parents' Best Practices in EU Code Week***

***8 June, 17:00 CEST***

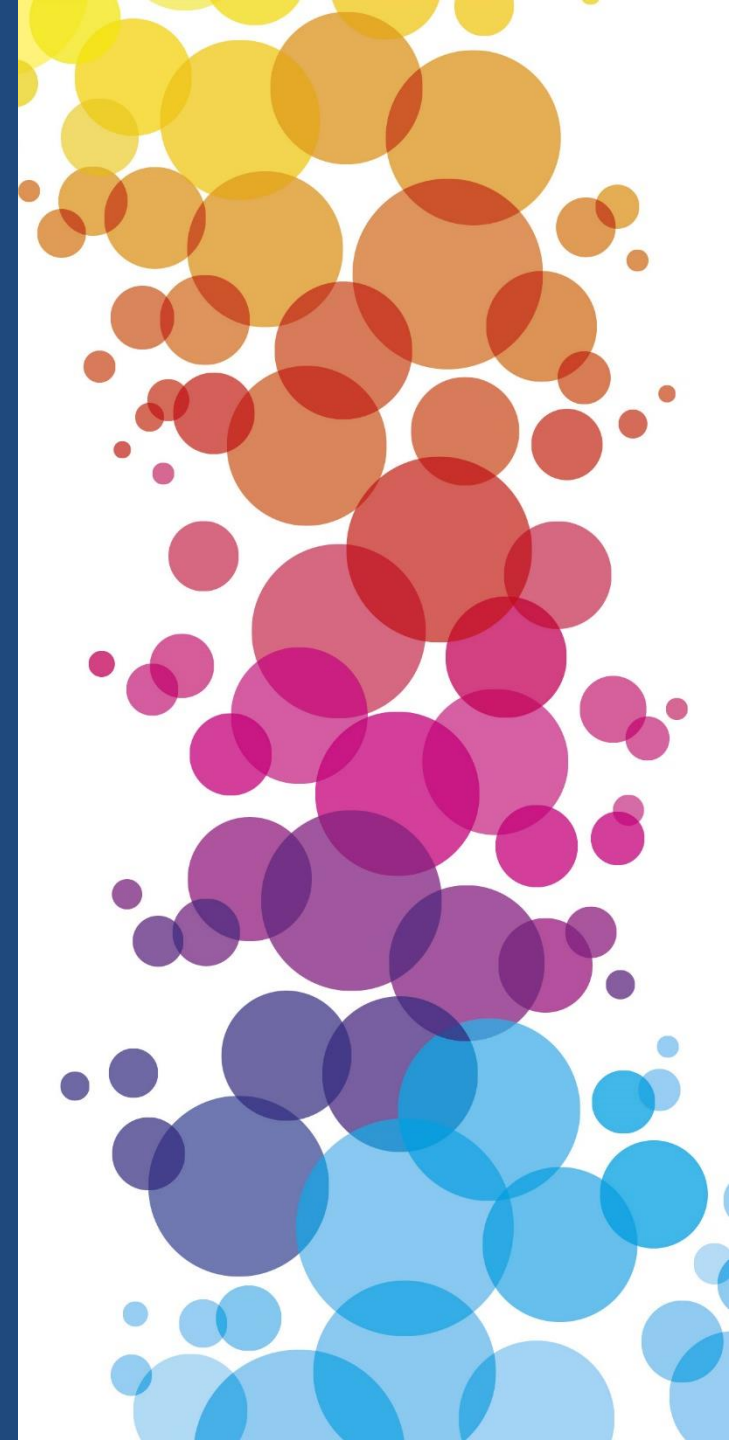
- Naír Carrera (@na\_carrera)
- Tommaso Dalla Vecchia
- Konstantinos Andronikidis



# Meet the Teachmeet presenters

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1. Moreno Concezzi (Italy)
2. Leticia Gil (Spain)
3. Imen Taktak (Tunisia)
4. Elka Veselinova (Belgium)
5. Fatma Bouaziz (Tunisia)
6. Yana Tsykunkova (Ukraine)
7. Julio Bigas (Portugal)
8. Selcuk Arslan (Turkey)
9. Francisco J. Masero (Spain)
10. Stefania Altieri (Italy)



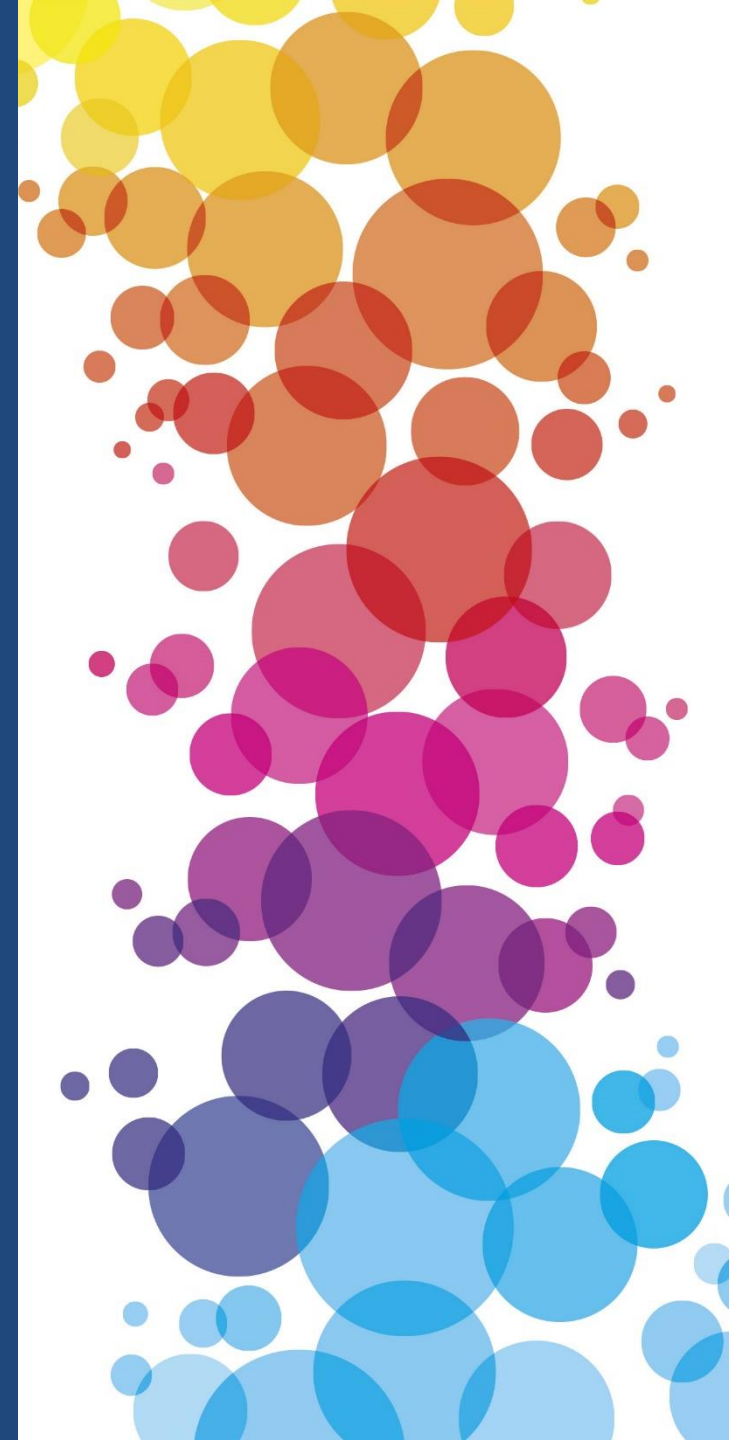


**Moreno, Concezzi**  
*Italy*

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## ***A MATHEMATICAL MODEL FOR COVID-19 EPIDEMIC ANALYZED BY USING ICT***

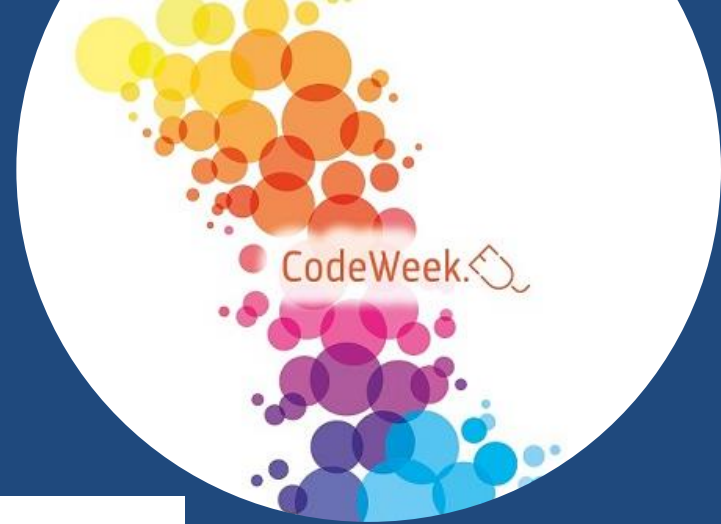
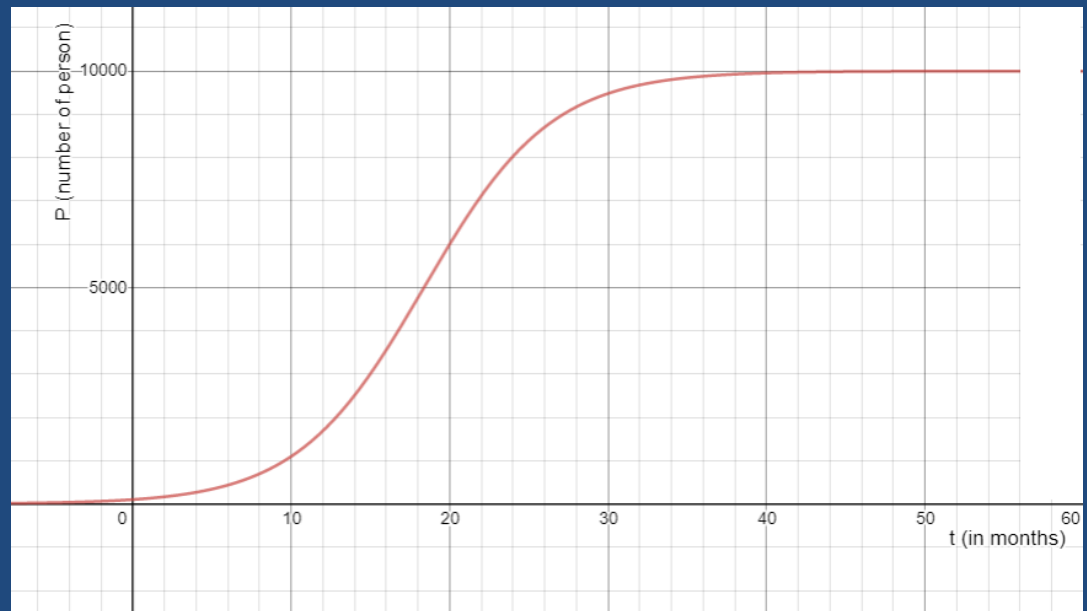
- Where do you teach: Italy, Magliano Sabina (RI)
- Age of students: 15-19 years old
- Subjects taught: Mathematics and Physics
- Data science, artificial intelligence and mathematical models, which reduces to the basis of programming language and then applied for a STEM computational thinking.



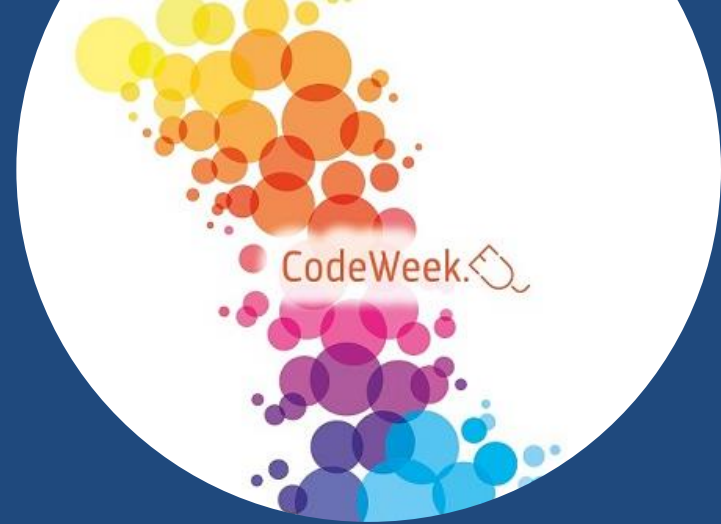
# The model

- This function describes the number of **person**  $P$ , during the **time**  $t$  (expressed in months), **infected** by the Covid-19 when for the population no measure is adopted measures to control the epidemic.
- Students will start by making a **graphic** which reproduces the behavior of the dynamics, in particular for very long time, students can use **Desmos**.
- Here  $e \approx 2.7$  (Euler-Neper constant).
- **10 000** is the total of the population.

$$P(t) = \frac{10\,000}{1 + 99e^{-0,25t}}$$



# Reflect and compute



- Now students have to reflect about the **behaviors of the graphic**. In particular
- Students will compute, by using a **spreadsheet**, the **number of infected** person by considering different values for  $t$ .
- Students compute  $P$  for very **high values** of  $t$ , they will understand that after a certain time all the population will be infected.

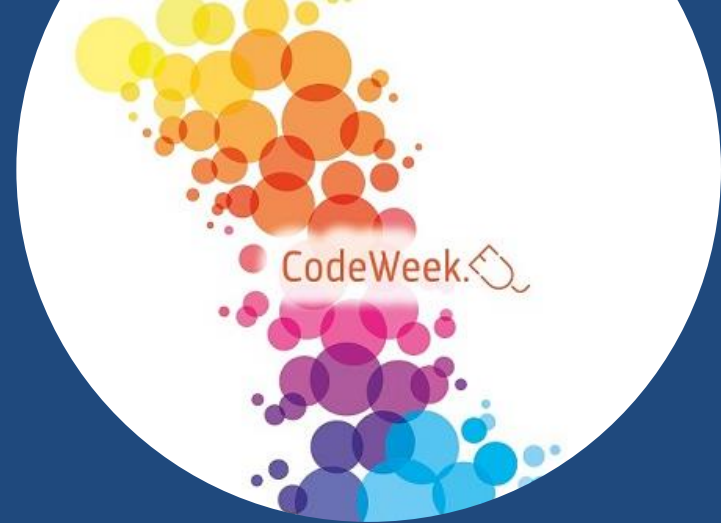
	A	B	C	D
1	t	P		
2	0	100		
3	3	209,3614		
4	6	433,0901		
5	12	1686,648		
6	25	8395,495		
7	40	9955,255		
8	50	9996,312		
9	60	9999,697		
10	100	10000		
11	200	10000		
12	500	10000		
13	1000	10000		
14				
15				

# The variability of the epidemic

- By using a spreadsheet, students have to compute the **velocity** about the **number of infected** in a certain **time interval**.
- Students have to create a **recursive** function
- We consider for the time interval a value equal to **10 months**.
- Students we'll understand that the **greater velocity is at the beginning** of the epidemic and then the velocity **goes toward zero**.

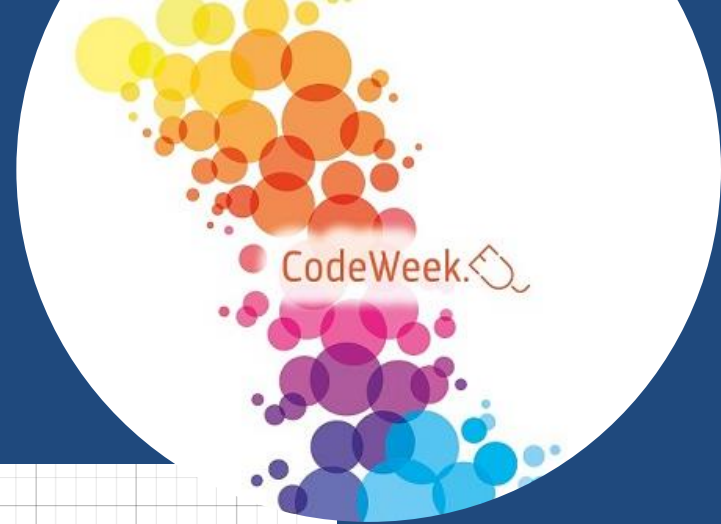
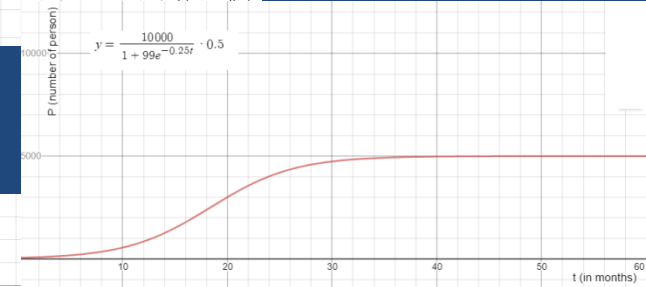
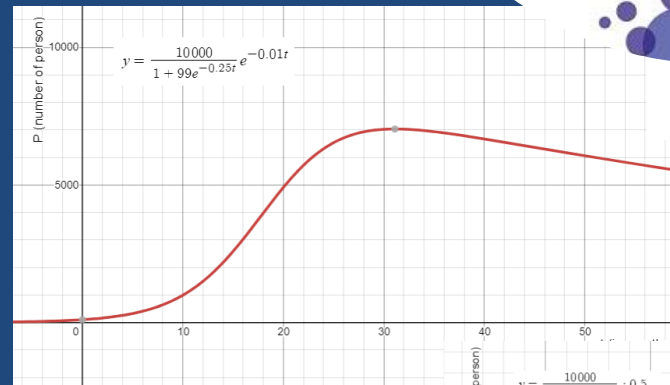
$$\frac{P_f - P_i}{10}$$

fx				
	A	B	C	D
1	t	P	velocity	
2	0	100		
3	10	1095,721	99,57205	
4	20	5998,596	490,2876	
5	30	9480,872	348,2276	
6	40	9955,255	47,43836	
7	50	9996,312	4,105679	
8	60	9999,697	0,338519	
9	70	9999,975	0,027798	
10	80	9999,998	0,002282	
11				
12				



# Try by yourself

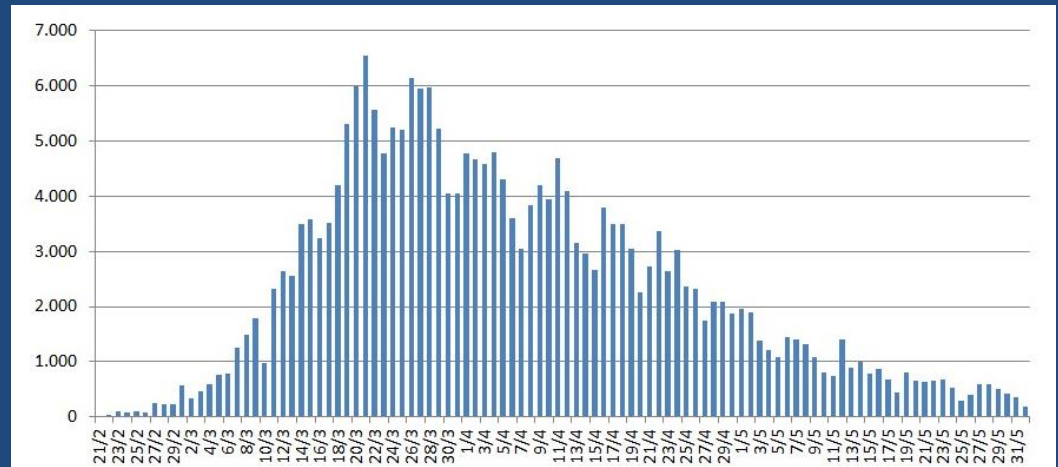
- Now students has to modify the initial function putting inside the definition some terms which recreate a stop criteria to the epidemic. They can
  1. To add a **constant decay factor**
  2. To add an **exponential decay factor**
  3. By adding an **linear factor** (the amount explodes!)



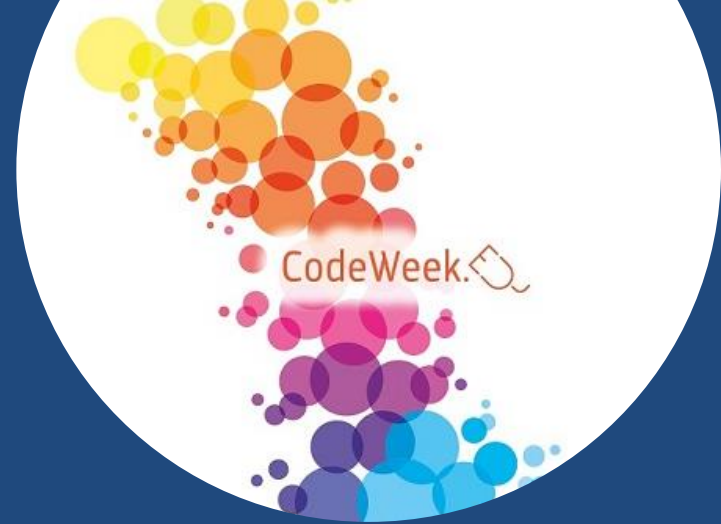


# Analysis of real data

- Now students have to find **online data** regarding the **real data** of the infection in their country, and they have to **compare the graphic** with the data.
- They have to understand if the **damping strategies have been valid** in term of velocity of the infection, by **scaling the amount of population** and the duration of the dynamic.
- Students can consider **new variables** for the problem, and their interaction.



**DEAD**      **IMMUNES**  
**HEALED**  
**IMMIGRANTS**      **EMIGRANTS**







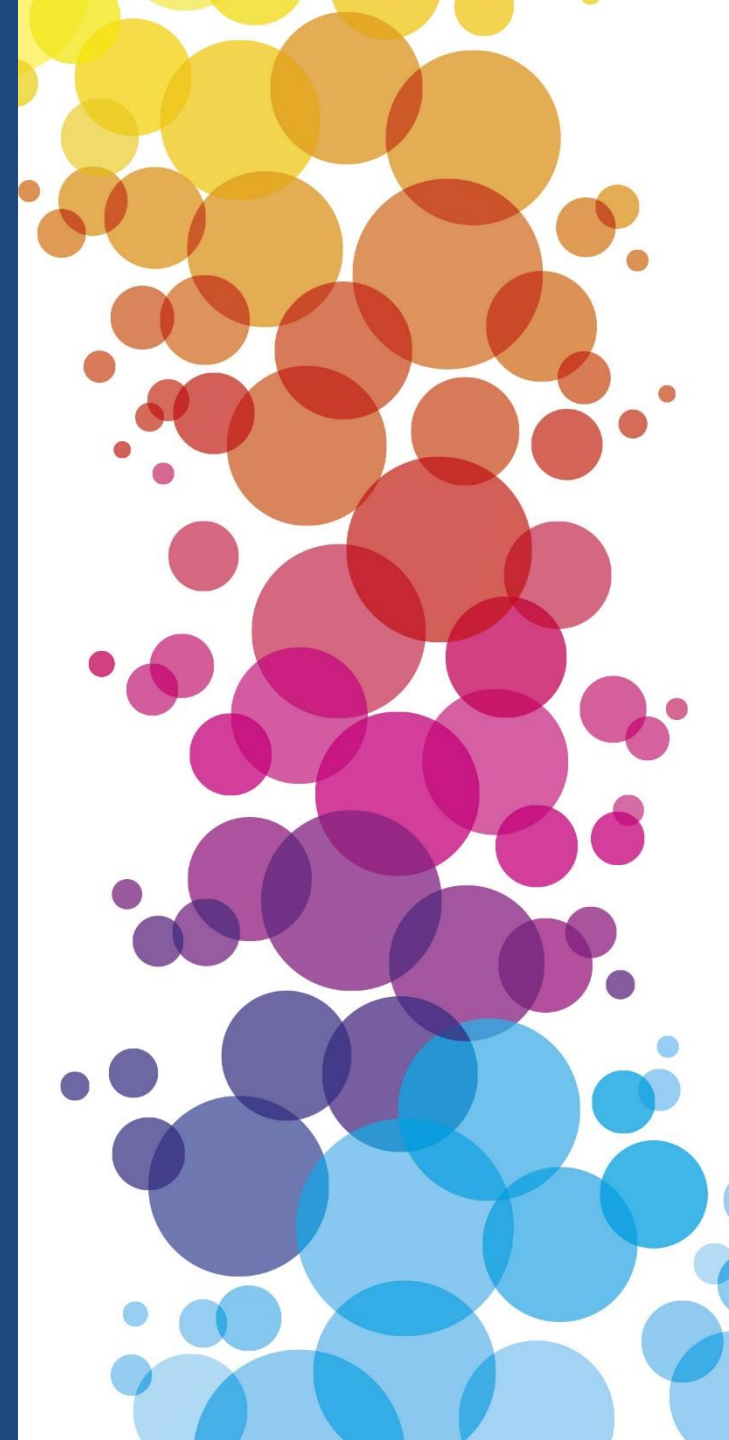
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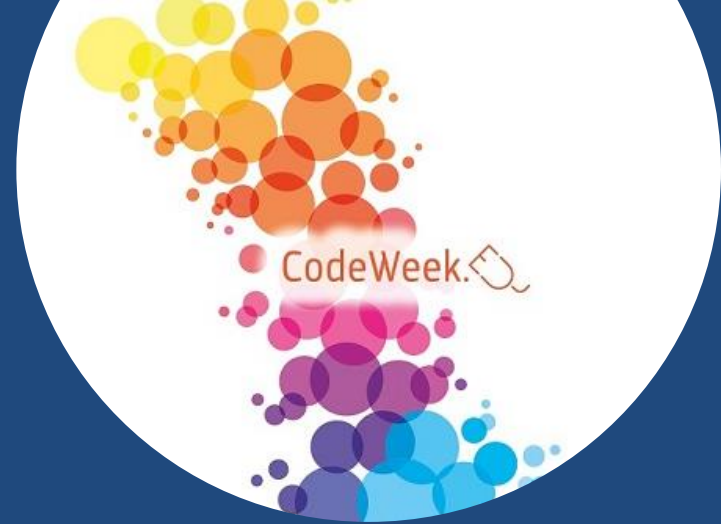
Leticia Gil Ramos,  
Spain

### ***CODING WITH 5-6 YEAR OLDS***

- I teach in a public school in Toledo, Spain.
- My students are 5-6 years old.
- All areas: Self-knowledge and personal autonomy, Knowledge of the environment and Languages: communication and representation.
- ***INTRODUCE CODING WITH 5-6 YEAR OLDS***



# 1. WHY CODING AT THE BEGINNING



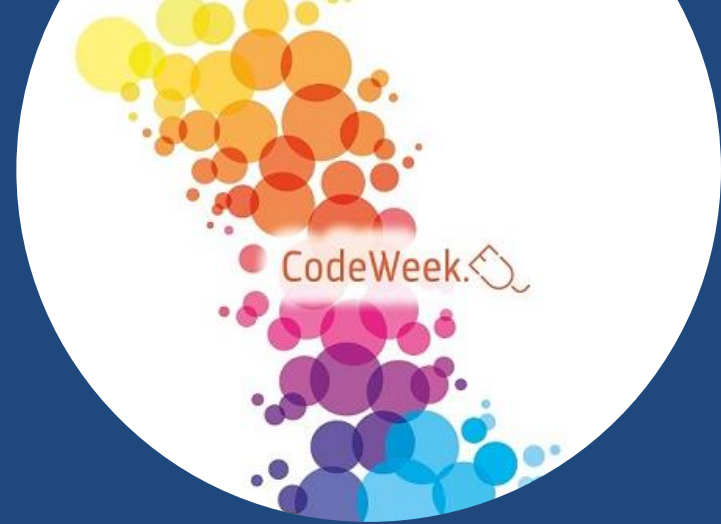
- Children: Digital natives.
- BENEFITS:
  - ✓ New ways of thinking by breaking up big problems into smaller steps.
  - ✓ Take the fear out of making mistakes or failing. It teaches persistence in finding a way to solve your problem.
  - ✓ Young children learn best through play.



## 2. CURRICULUM

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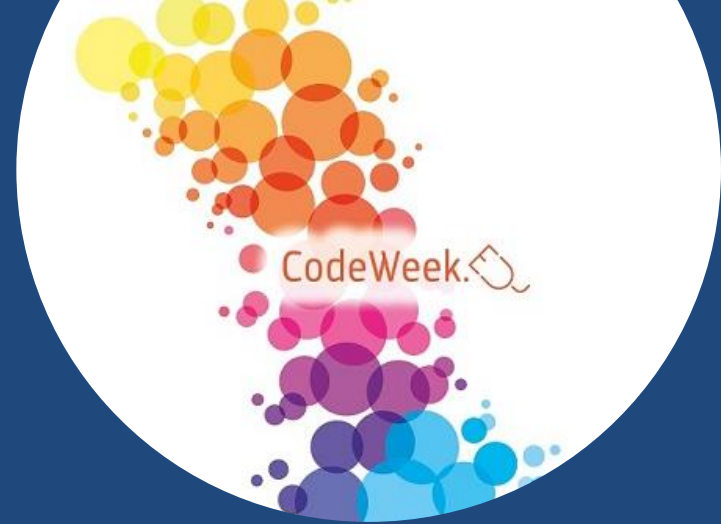
- MY OWN EXPERIENCE WITH CHILDREN.
- CURRICULUM.
- WORKING IN GROUPS: THEY DEVELOP THEIR SOCIAL AND LANGUAGE SKILLS.





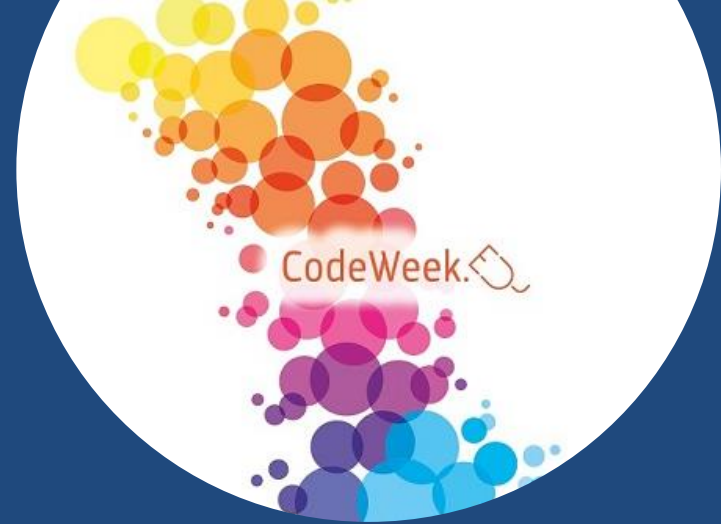
# 3. UNPLUGGED ACTIVITIES

- UNPLUGGED ACTIVITIES: OUR BODY, DANCE, CODY&ROBY



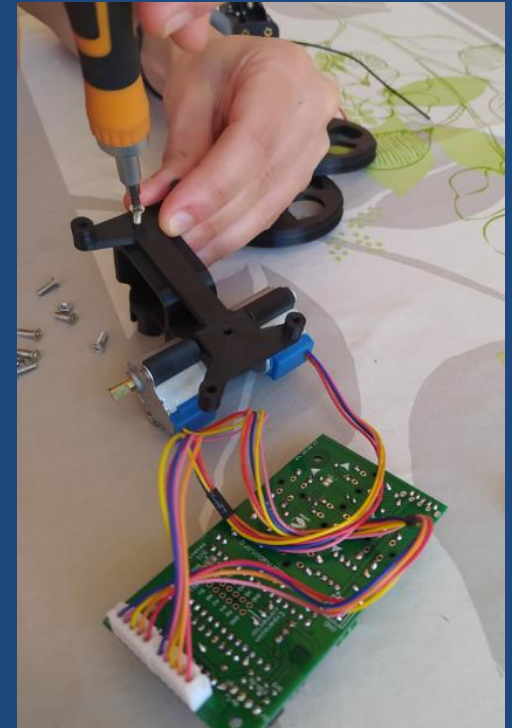
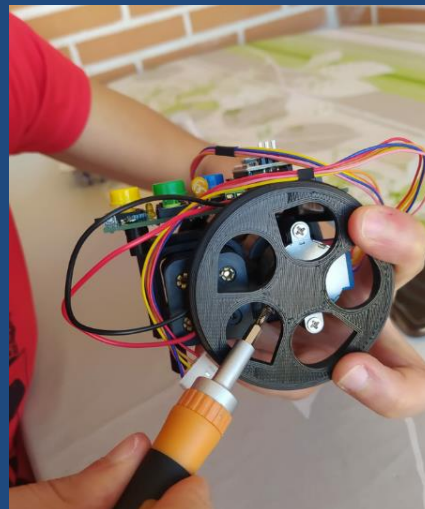
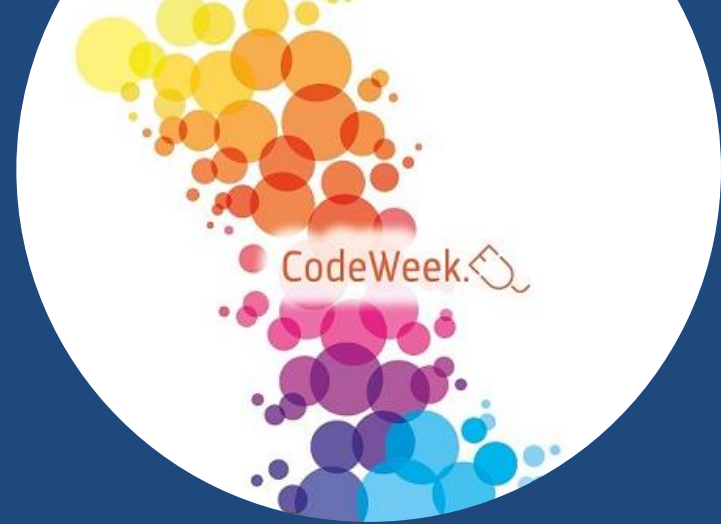
## 4. BEE BOT/DOT

- Concentration
- Motivation
- IDEAS: Create your own mats.



## 5. WHAT ABOUT THE FUTURE?

- CONTINUE CODING.
- ESCORNABOT.
- FAMILIES. SUPPORT.







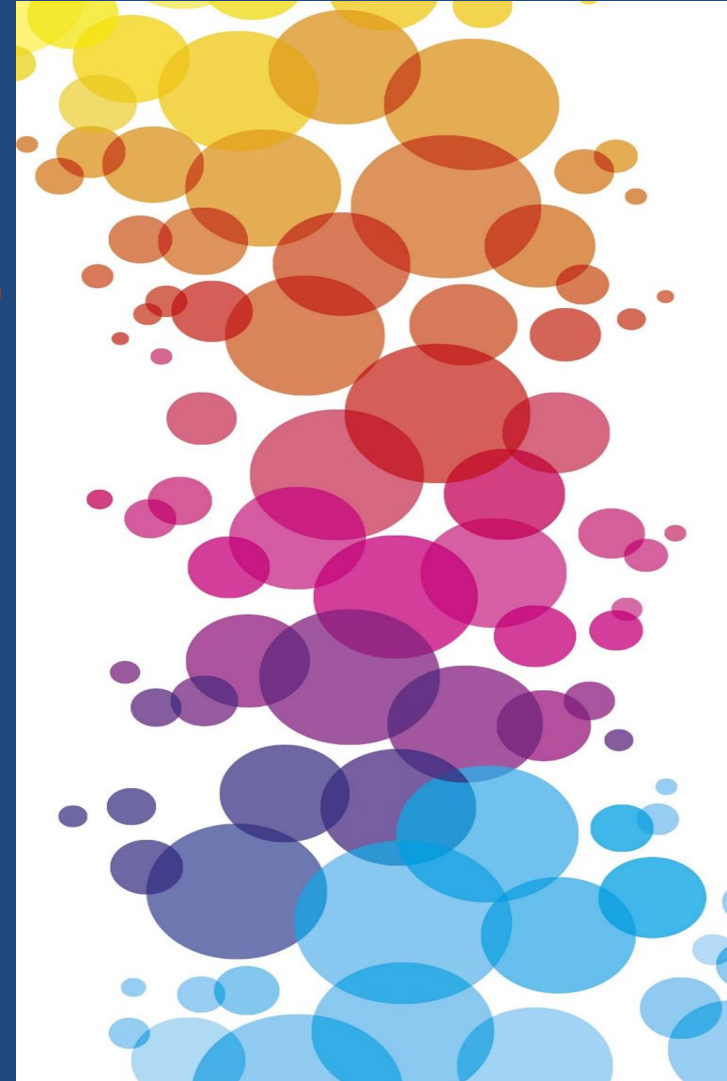
Thank you!



**Imen Taktak  
Marzouk  
*Tunisia***

## ***Netiquette Through Robotics***

- Pioneer Middle School Sfax Tunisia
- Age of students: from 13 to 15 years old
- Subjects taught: Computer Science
- eTwinning ambassador and Mentor
- Code Week ambassador





## The 2020 STEM Discovery Campaign

Participants of SCIENTIX competitions are invited to blog about their activities for the 2020 STEM Discovery Campaign here!

Say Yes to STEM!



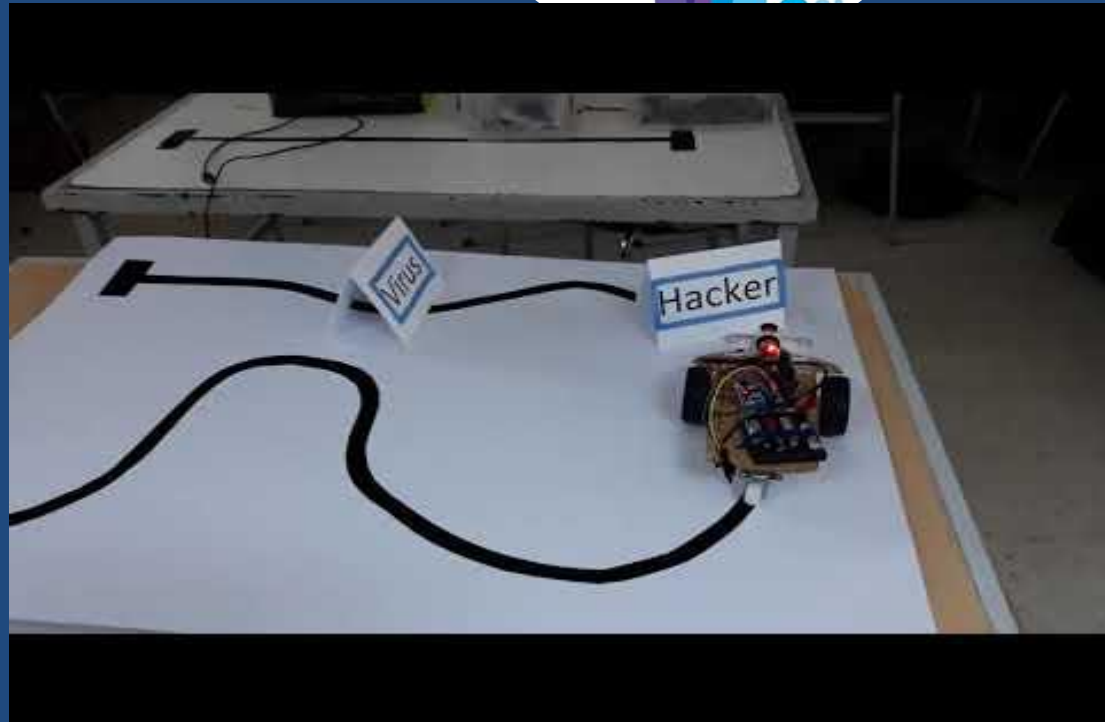
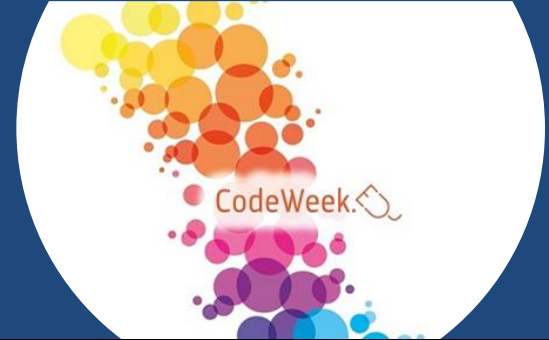
## Netiquette through robotic activity

Author: Imen Taktak



## Relation with SID

- The obstacles are chosen according to the slogan. In fact, when the robot detects that there is a VIRUS or HACKER or SPYING, it stops with making a sound.



# Activity's Schedule

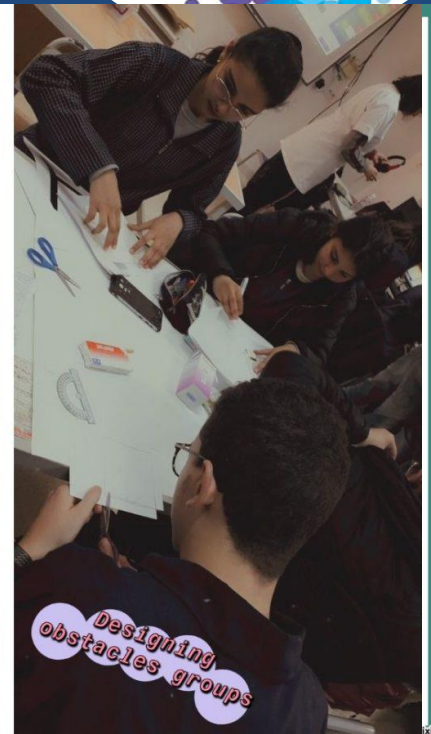
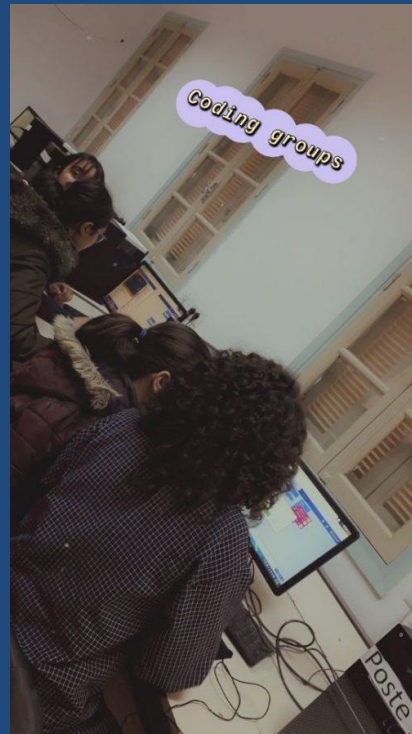
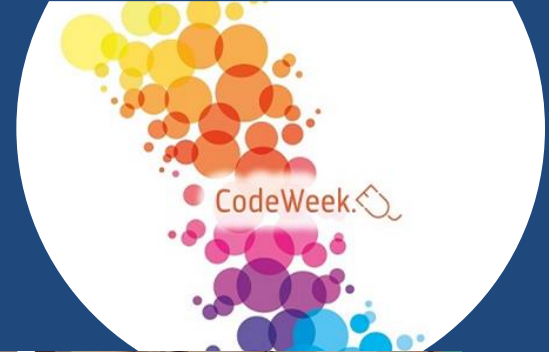
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Preparing the  
macket with the  
different objects:



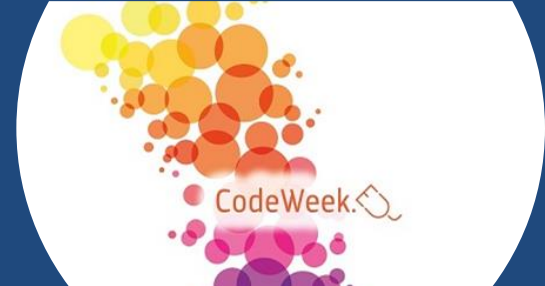
# Coding the micro:bit

- Students write the different needed blocks and functions using the micro:bit simulator.





# Dissemination of the activity



When we design this activity, we indicated that Coding is a basic literacy in the 21st century and it is important for kids to understand and be able to work with. Having children learn coding at a young age prepares them with the future. Coding helps children with communication, creativity, maths, writing and teamwork. We consider the leadership of the eTwinning good netiquette.

PSA.







<https://blogs.eun.org/sdw-blog/2020/04/07/netiquette-through-robotic-activity/?fbclid=IwAR3iEsPzFusVpdzb1jQ2y1NYbsU5egBrsiMBwby2ZusvoAkent96IU8n13o>

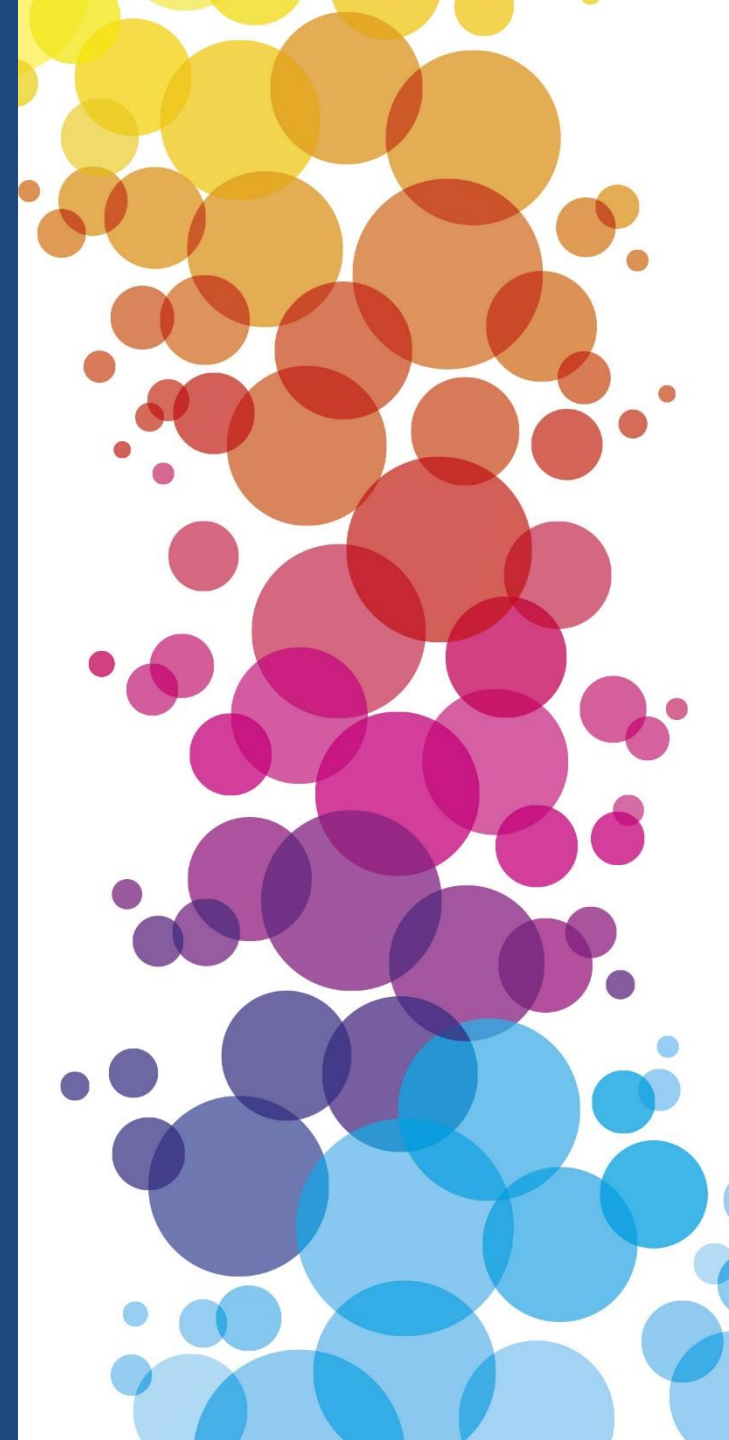
Thank you!  
Contact: @ImenMarzouk



**Elka Veselinova**  
*Belgium*

***Let's code and play in... Scratch:  
"Questions and Answers"***

- Where do you teach: European School Brussels III
- Age of students: 11 - 17
- Subjects taught: Mathematics, English as a foreign language, Information and Communication Technologies (ICT)
- Title of presentation: Let's code and play in... Scratch: "Questions and Answers"

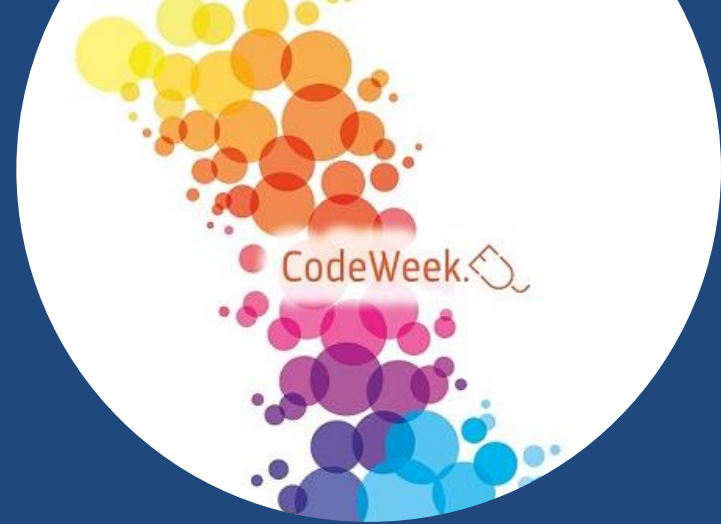


# Slide 1

[www.eeb3.eu](http://www.eeb3.eu)

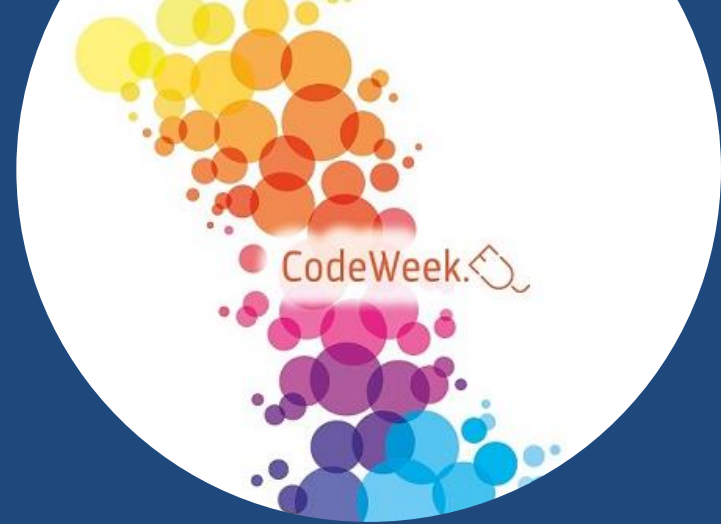
The European School of Brussels III is one of the 13 European Schools situated in 6 countries (Belgium, Luxembourg, The Netherlands, Germany, Spain and Italy) and one of the 4 located in Brussels.

The school combines nursery, primary and secondary education with approximately 3200 students spread over seven language sections (English, French, German, Dutch, Spanish, Greek and Czech).





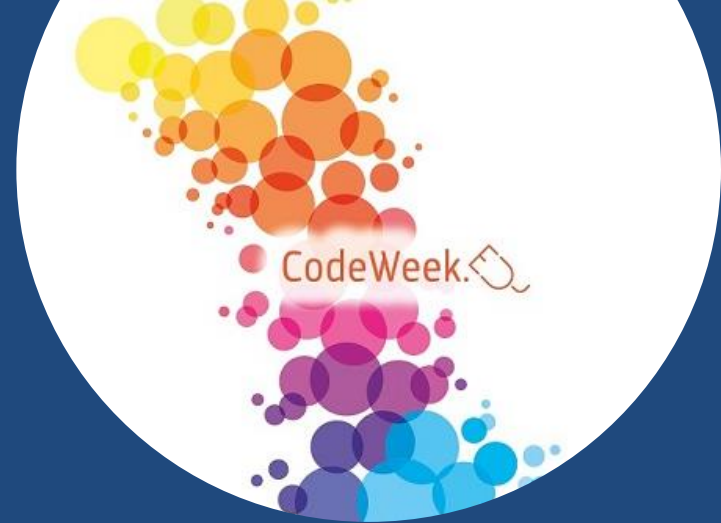
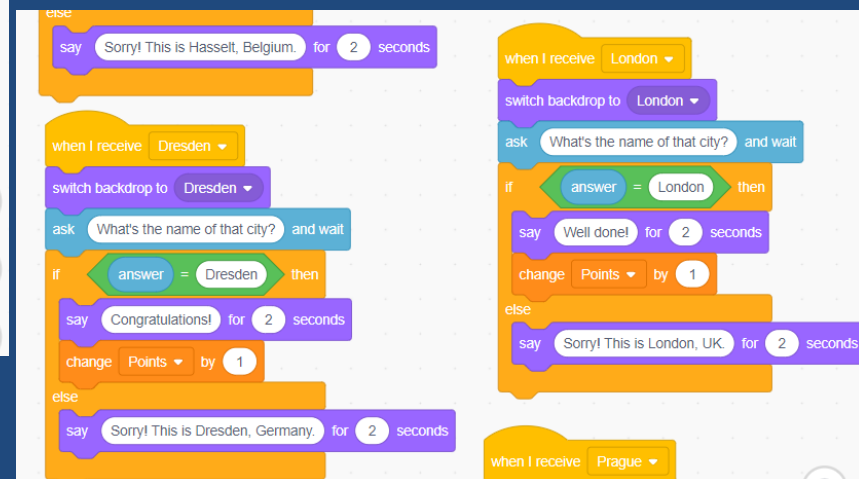
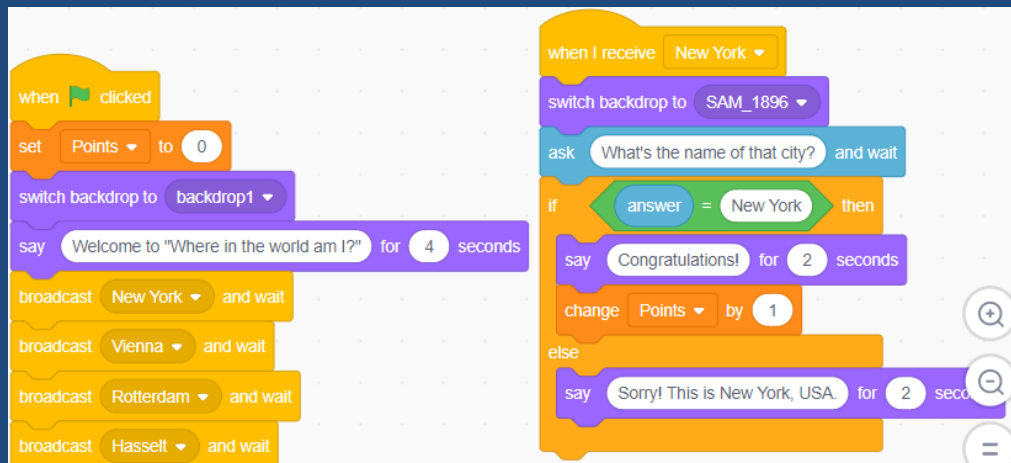
## Slide 2



- After students master the skills in coding their own “Questions and Answers” game, they can apply these skills in creating similar games in all school subjects
- Very suitable activity for revision lessons, developing students’ creativity and evaluating the level of consolidation
- Great fun – students continue creating their own games on enjoyable topics and involve their friends and families
- Instructions: In order to program your own game you must visit <https://scratch.mit.edu/> and click on “Create”. Students are given a worksheet with detailed instructions and an example how to “broadcast” and “receive” a message as well as which blocks to use as a response when the answer of the question is correct or wrong.
- The teacher has made her own example of “Questions and answers” (“Where in the world am I?”): <https://scratch.mit.edu/projects/395877687>

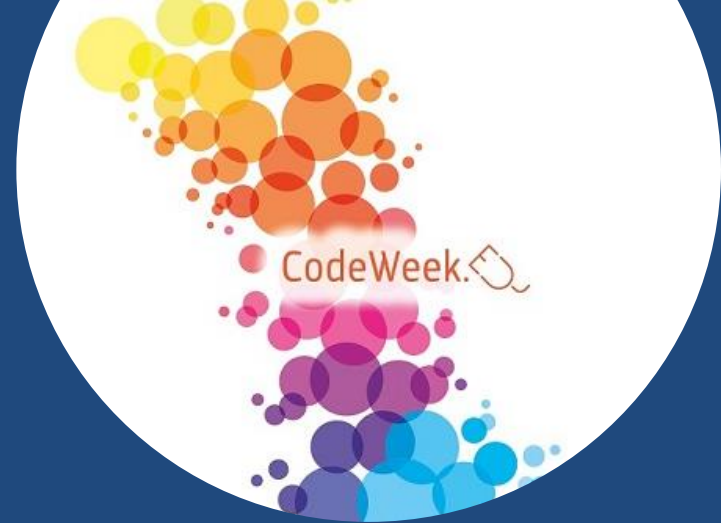
## Slide 3

- Some disadvantages: The longer the game is, the more boring the coding could be as there are a lot of repetitive parts.
- However, students love it, especially when they see their final version and make their friends or family members play the game.



# Slide 4

<https://scratch.mit.edu/projects/395877687>



scratch.mit.edu/projects/395877687?fbclid=IwAR26HKCcBMA6CWOGcwlS7BPqCJFmMsUUFXBvfwU8LD4xtxRreDRKgqBYzhU



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## Where in the world am I?

by teacherV-EEB3

See inside



### Instructions

Click on the green flag and try to answer as many questions as possible to prove your knowledge about different cities in the world.

### Notes and Credits

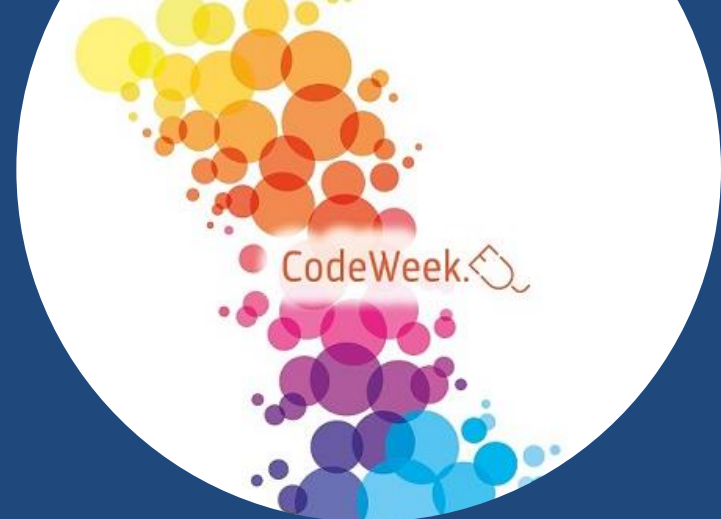
All the pictures I used to create this project are from my personal album. This is my example of the "Questions and Answers" assignment which I set to my 11-13 year-old students.

If you want to see how I programmed the game, click on "See inside"



# Slide 5

<https://scratch.mit.edu/projects/395877687>



Scratch editor interface showing a project titled "Where in the world am I?" by teacherV-EEB3. The project is a quiz game where the user is asked to identify cities based on a description and a list of options. The game tracks points and provides feedback for correct and incorrect answers.

**Code:**

- When clicked:** Set Points to 0, switch backdrop to backdrop1, say "Welcome to 'Where in the world am I?' for 4 seconds, broadcast New York.
- When I receive New York:** switch backdrop to New York, ask "What's the name of that city?" and wait, if answer = New York then say "Congratulations!" for 2 seconds, change Points by 1, else say "Sorry! This is Rotterdam, the Netherlands." for 2 seconds, when I receive Rotterdam, switch backdrop to Rotterdam, ask "What's the name of that city?" and wait, if answer = Rotterdam then say "Congratulations!" for 2 seconds, change Points by 1, else say "Sorry! This is Budapest, Hungary." for 2 seconds, when I receive Budapest, switch backdrop to Budapest, ask "What's the name of that city?" and wait, if answer = Budapest then say "Congratulations!" for 2 seconds, change Points by 1, else say "Sorry! This is Hasselt, Belgium." for 2 seconds, when I receive Hasselt, switch backdrop to Hasselt, ask "What's the name of that city?" and wait, if answer = Hasselt then say "Well done!" for 2 seconds, change Points by 1, else say "Well done!" for 2 seconds.
- When I receive Vienna:** switch backdrop to Vienna, ask "What's the name of that city?" and wait, if answer = Vienna then say "Well done!" for 2 seconds, change Points by 1, else say "Sorry! This is Vienna, Austria." for 2 seconds.
- When I receive Rotterdam:** switch backdrop to Rotterdam, ask "What's the name of that city?" and wait, if answer = Rotterdam then say "Congratulations!" for 2 seconds, change Points by 1, else say "Sorry! This is Rotterdam, the Netherlands." for 2 seconds.
- When I receive Budapest:** switch backdrop to Budapest, ask "What's the name of that city?" and wait, if answer = Budapest then say "Congratulations!" for 2 seconds, change Points by 1, else say "Sorry! This is Budapest, Hungary." for 2 seconds.
- When I receive Hasselt:** switch backdrop to Hasselt, ask "What's the name of that city?" and wait, if answer = Hasselt then say "Well done!" for 2 seconds, change Points by 1, else say "Well done!" for 2 seconds.

**Stage:**

- Points: 0
- Backdrop: St. Peter's Basilica
- Sprite: sprite
- Size: 30
- Direction: 90





**HAPPY CODING!**

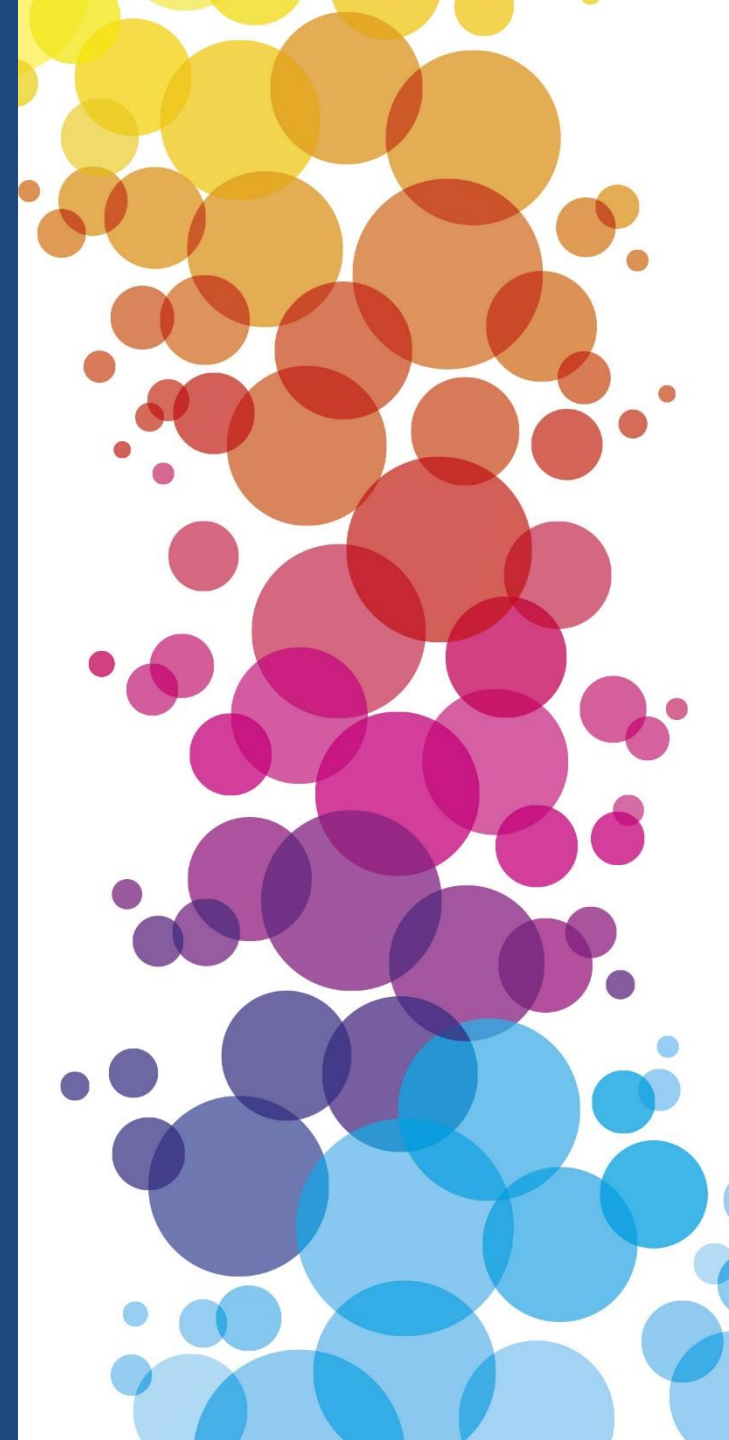
Thank you!



**Fatma Bouaziz**  
*Tunisia*

## ***Coding With Minecraft Education***

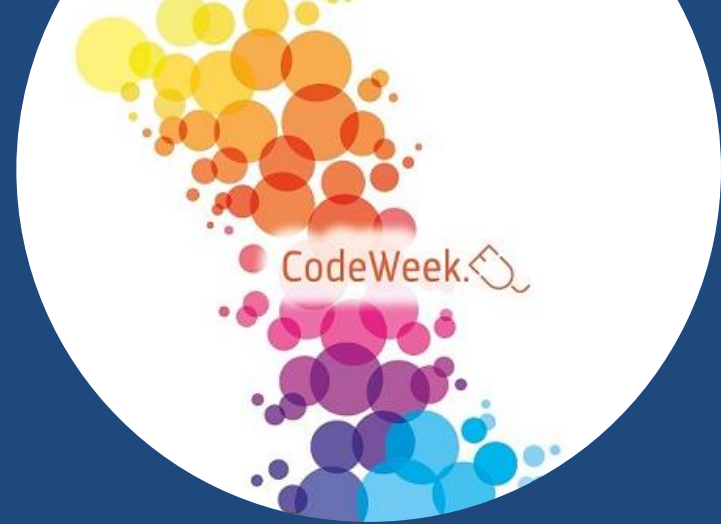
- **Where do you teach:** Ali Ennouri prep school
- **Age of students:** 13-15
- **Subjects taught:** Computer Science
- **Title of presentation:** Coding With Minecraft Education



# Minecraft Education Edition

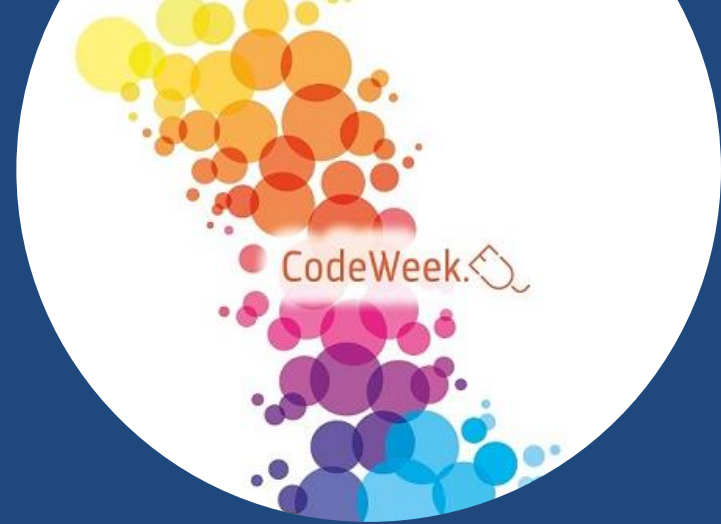
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- Minecraft: Education Edition is an open-world game that promotes creativity, collaboration, and problem-solving in an immersive environment where the only limit is your imagination.
- Minecraft: Education Edition helps prepare students for the future workplace, building skills like collaboration, communication, critical thinking and systems thinking. The open learning environment gives students the freedom to experiment, encouraging creative self-expression and problem solving.



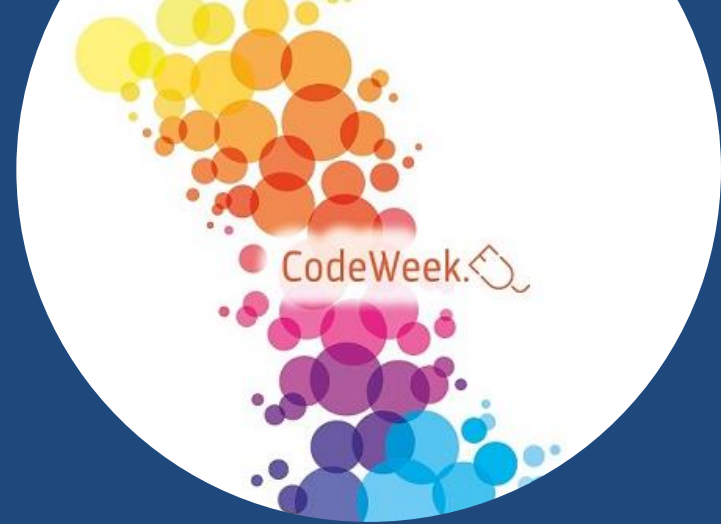
# Learn to Code in Minecraft

- Code Builder is a feature that allows students to learn coding in Minecraft using tools including Code.org, Tynker, Scratch and Microsoft MakeCode. Students can use blocks of code or JavaScript to build and create in Minecraft. Minecraft Hour of Code also offers a free, one-hour introduction to coding basics.





# Agent moves

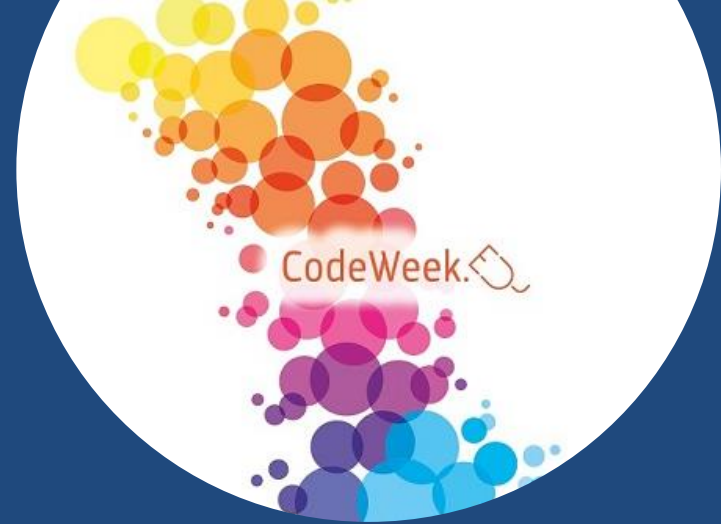
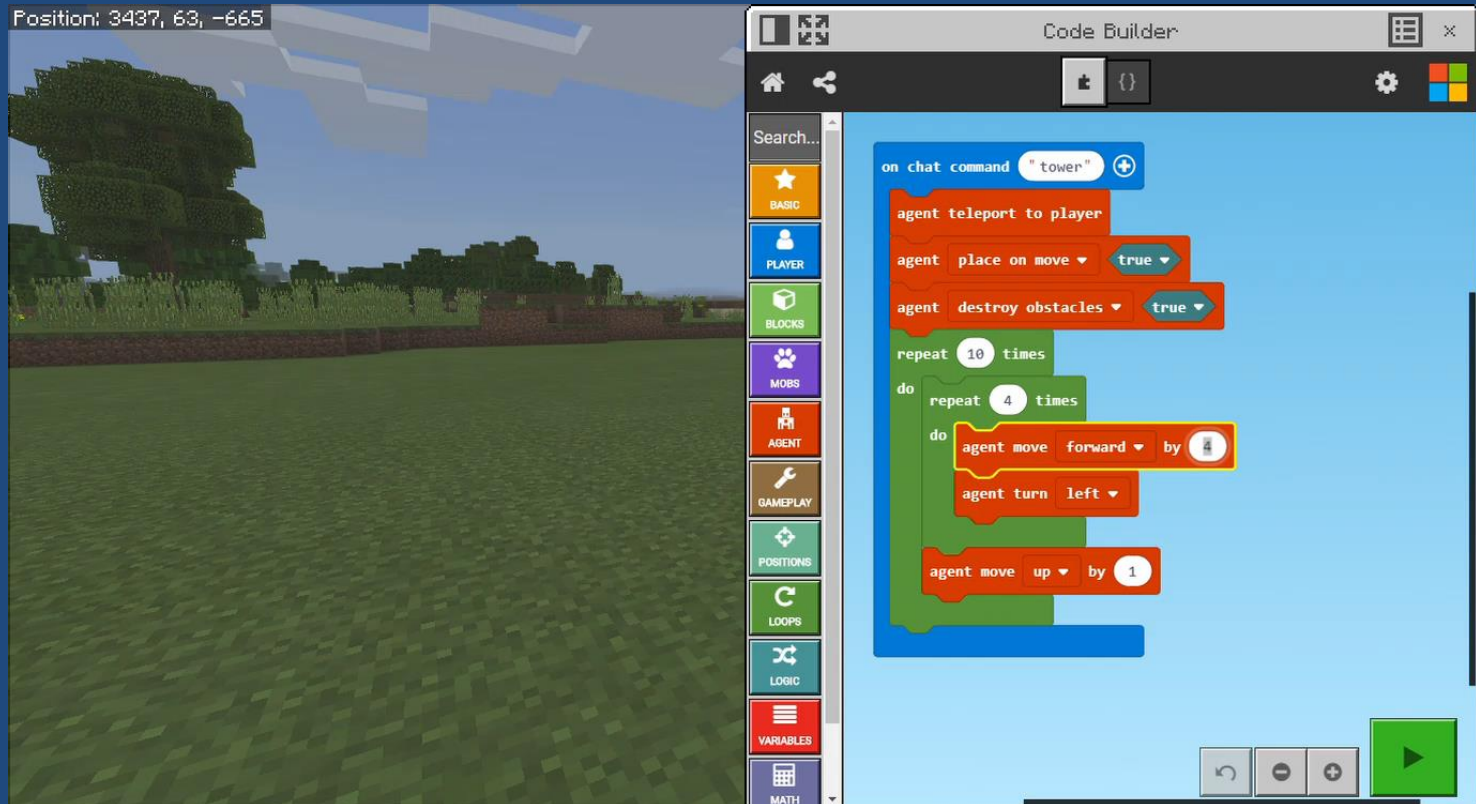


- In this example, the student must code the agent so that he moves through the labyrinth on the shortest path.



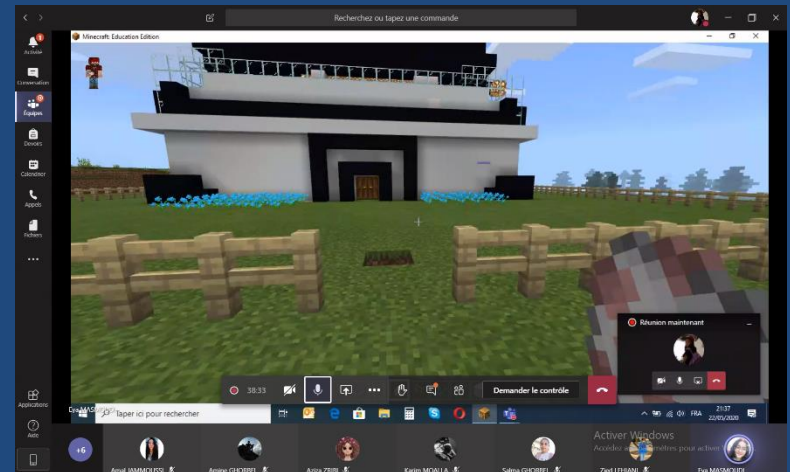
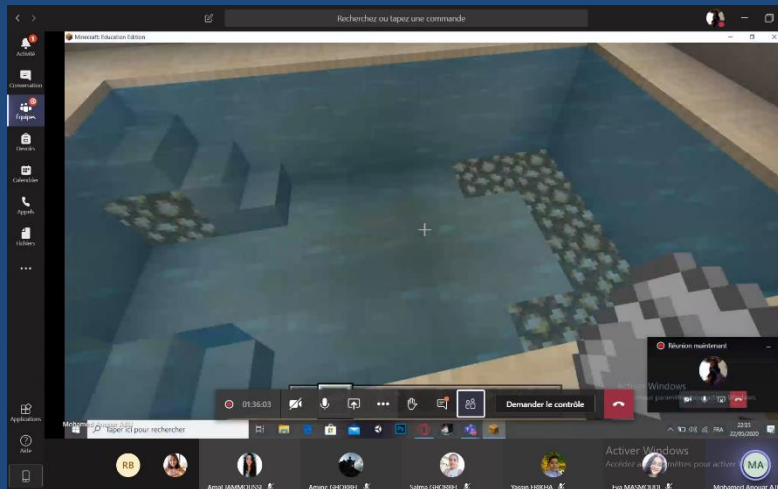
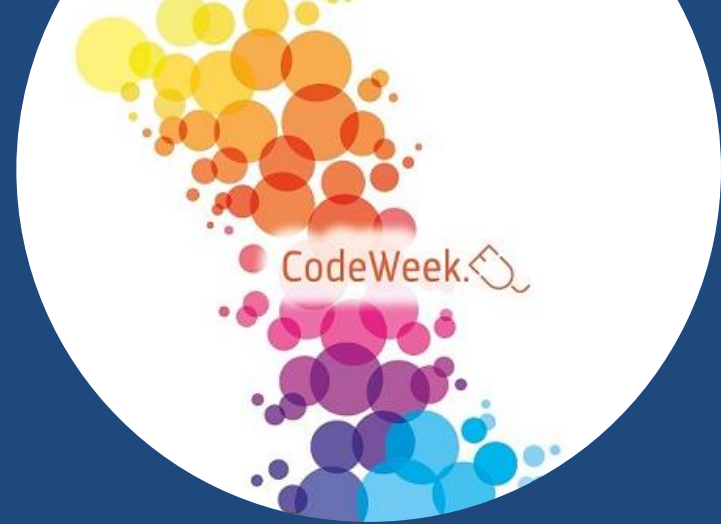
# Agent built

- This example, the agent will build a square with code builder



# Coding with Minecraft remotely

- I use Microsoft Teams with my students to continue coding sessions with Minecraft, and always, I encourage my students to create games via Minecraft Education, and each session I give them a challenge to do it for the next session, really Minecraft Education motivates them to learn block coding







Thank you!

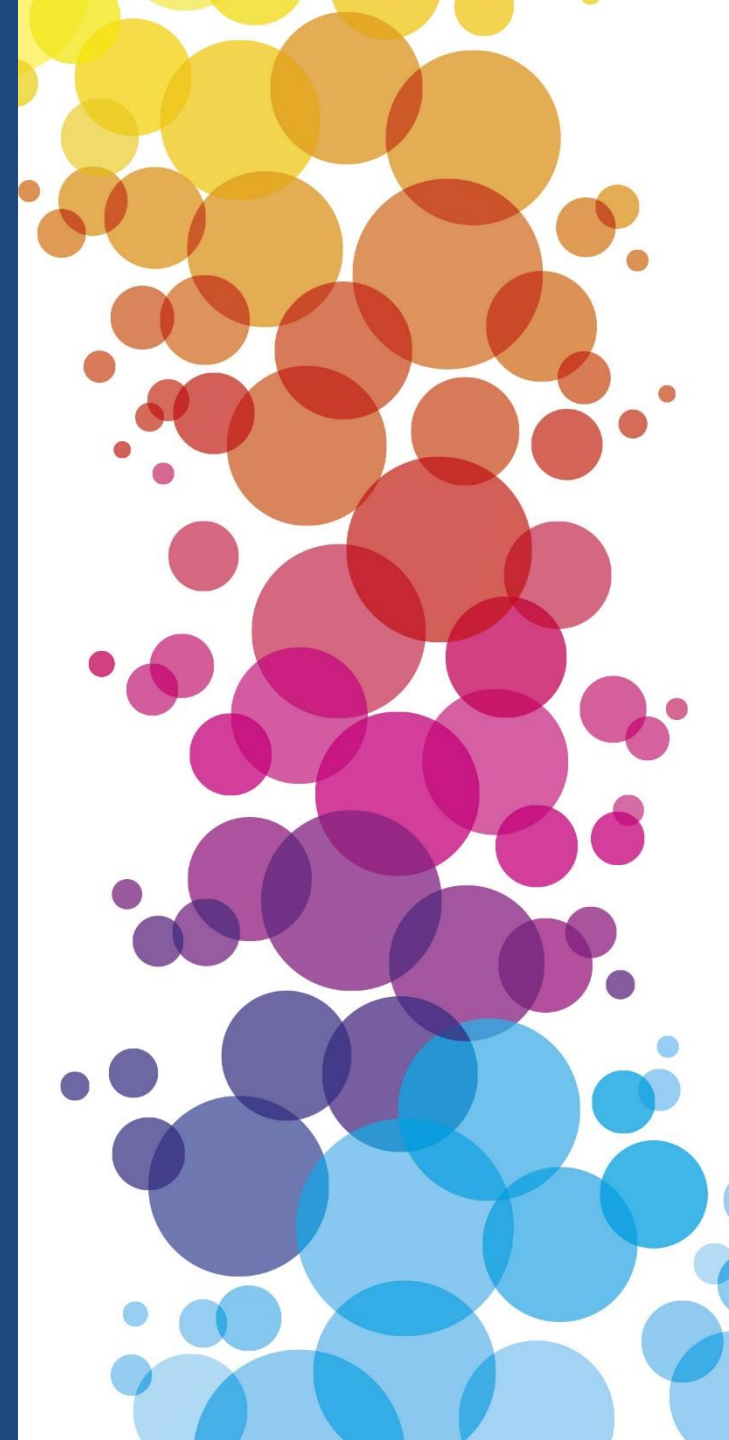


**Yana Tsykunkova,  
*Ukraine***

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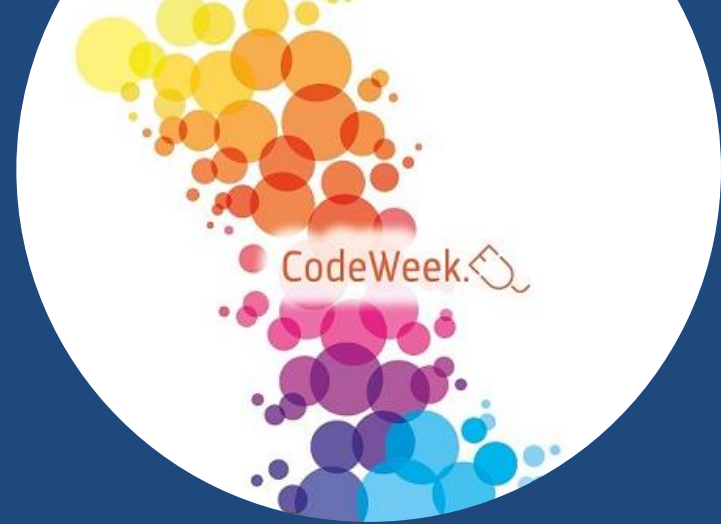
## ***TreasureBox of human Dignity with Simple Coding Activity***

- **Where do you teach :** Educational Complex Secondary School 10
- **Age of students:** 10-17
- **Subjects taught:** English, German
- **Title of presentation:** eTwinning Project with Coding Activities



# Slide 1

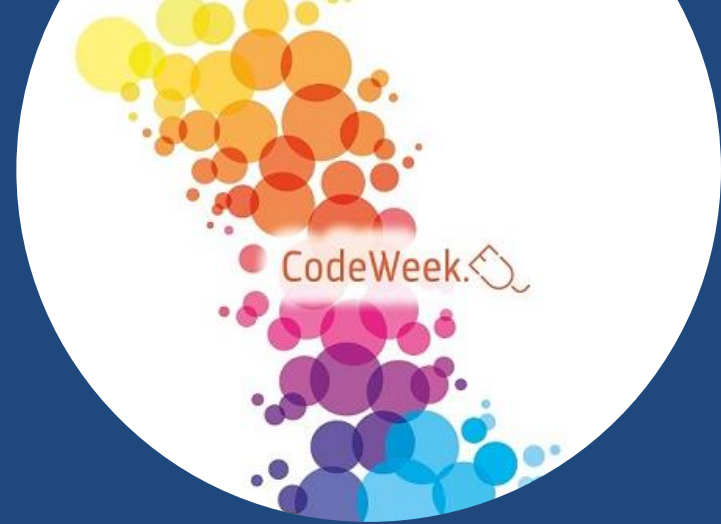
- The project “TreasureBox of Human Dignity” celebrates taking care of the Ss in European schools. The national, lingual, emotional, cultural diversity is the common heritage of humanity and we would like to discover it with our students. As the project is going to be in English, students will get better knowledge of English language and realize the word DIGNITY through simple coding. Moreover, they will learn a lot of new ICT tools and will be able to use them.



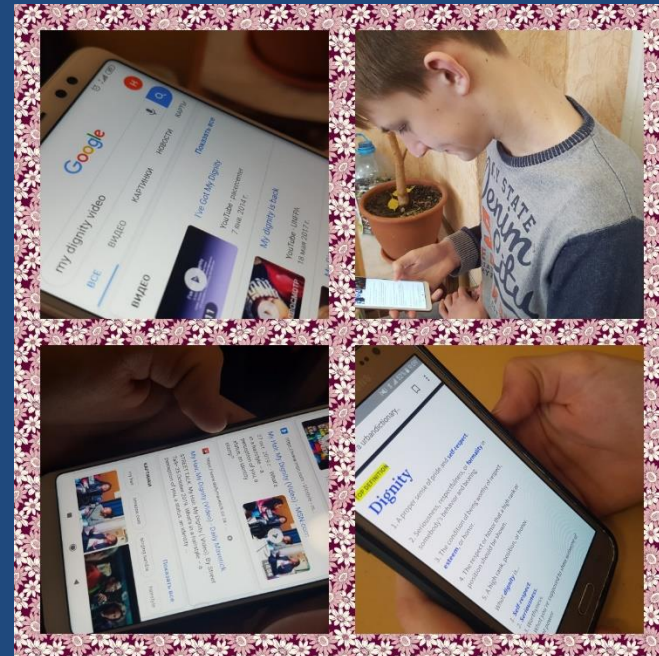
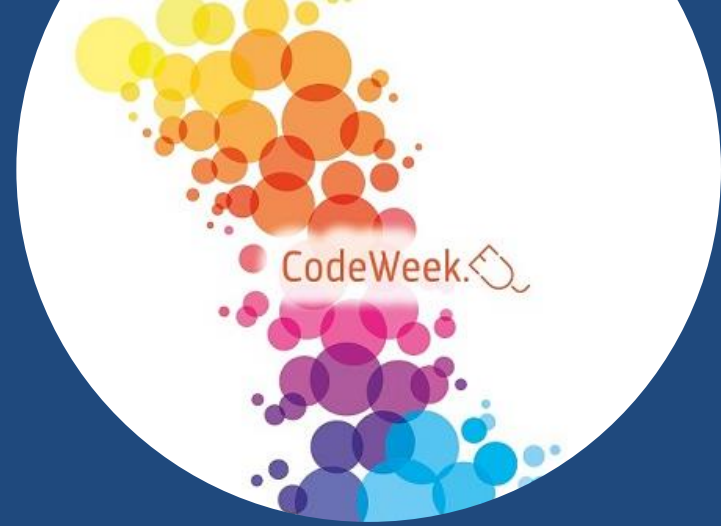
## Slide 2

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- List of Project iTools:
- Movavi Video Editor Mentimeter
- Avatarmaker
- Wakelet
- Padlet, Edupics, Doodle, Strawpoll, QRGenerator, Movavi, PicsArt, Tricider, Linoit, Fotoram, LearningAppsGenerator, Pinup, CANVA, Popplet, OurBox



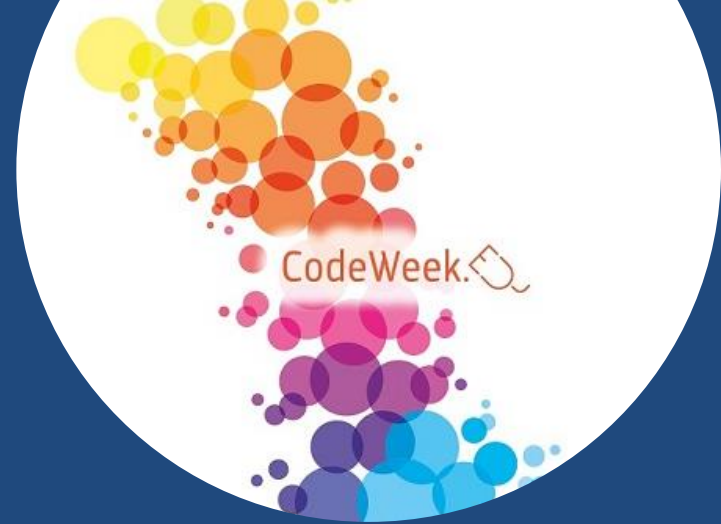
# Slide 3





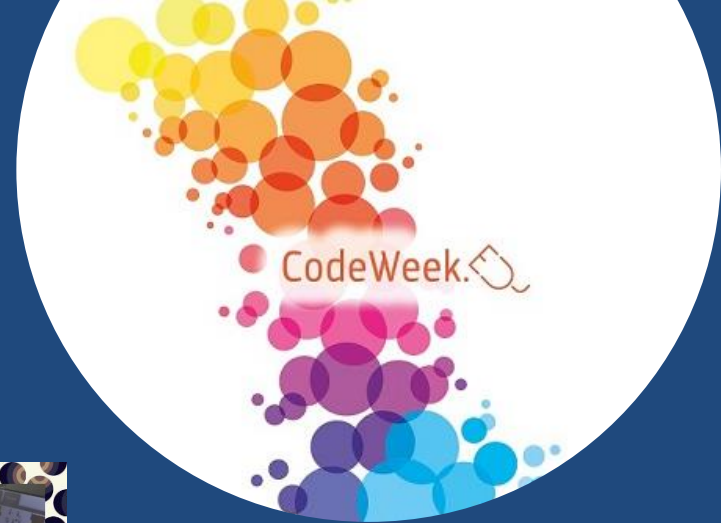
## Slide 4

- They will work in pairs/small groups to create the algorithm to present their subject realizing and develop problem solving, creative and critical thinking and soft skills, promote positive behavior. Students will try to become familiar with special vocabulary. They will prepare their coding letters for future generations after doing some pre-activities, collecting the letters, they will discard the useless definitions and order all the materials to create their letters for the TEASUREBOX.

A screenshot of a survey titled "What are HUMAN RIGHTS for you?". The survey consists of four sections, each with a horizontal slider scale from 10 (Simple) to 10 (Complex) and a "Skip" button. The sections are: "Respect" (Complex: 9, Luxury: 7), "Education" (Simple: 10, Necessity: 7), "Recognition" (Simple: 9, Necessity: 7), and "Recognition" (Complex: 2, Luxury: 2). A small inset photo shows a person's hands typing on a keyboard in front of a computer monitor.

Category	Simple	Complex	Luxury	Necessity
Respect	10	10	7	9
Education	10	10	7	10
Recognition	10	10	2	7
Recognition	10	10	2	2

## Slide 5





Thank you!

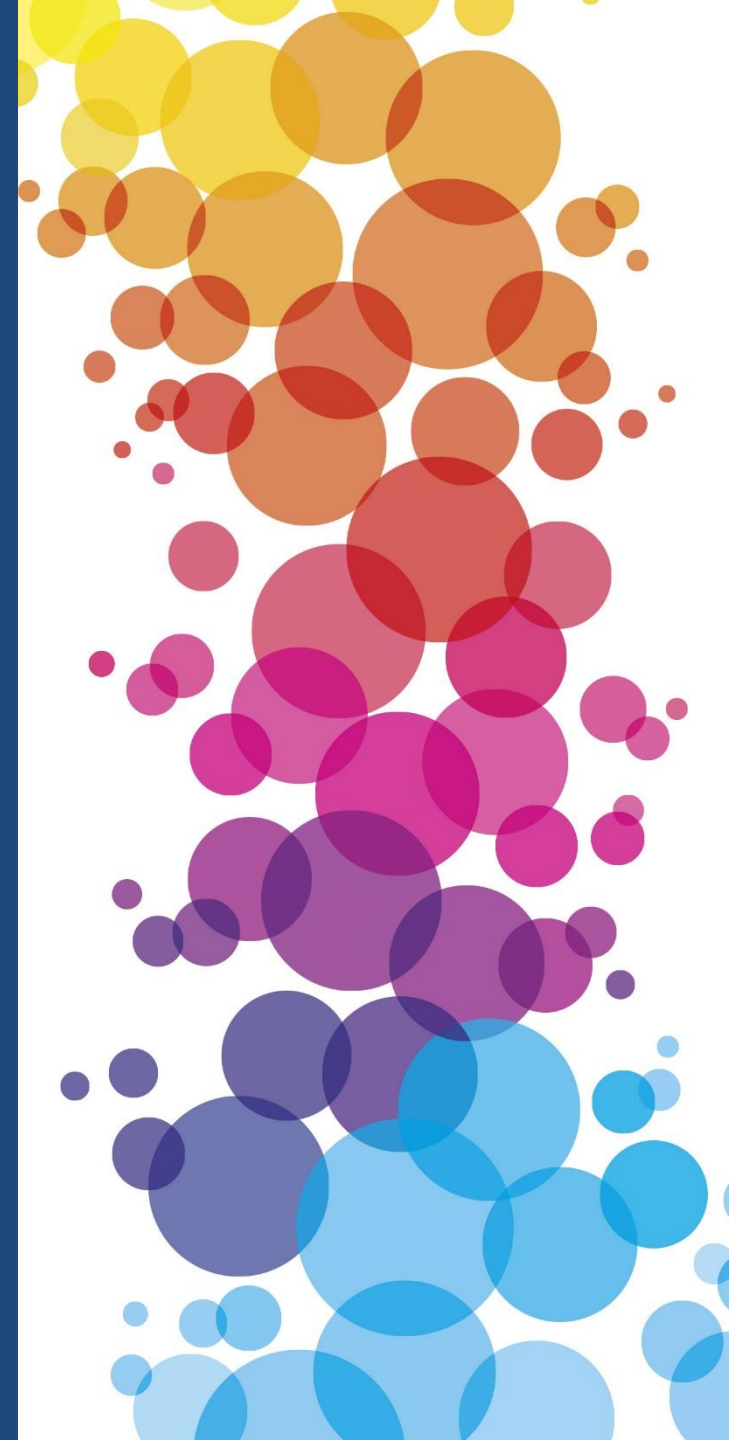


Julio, Bigas  
*Portugal*

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## *Coding from 8 to 18*

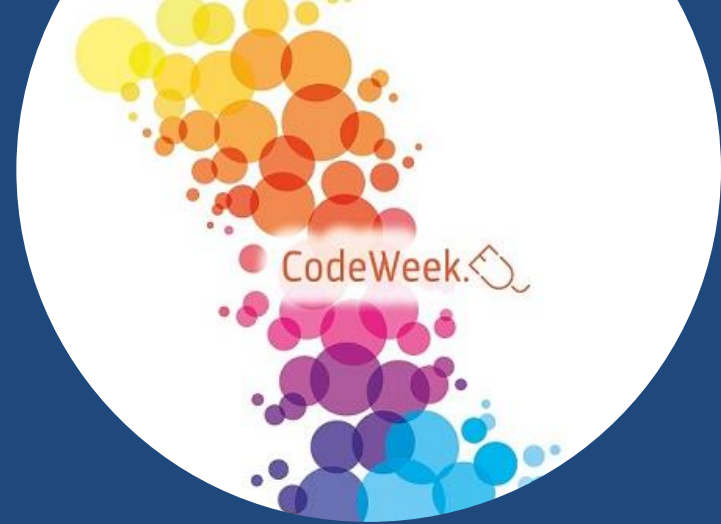
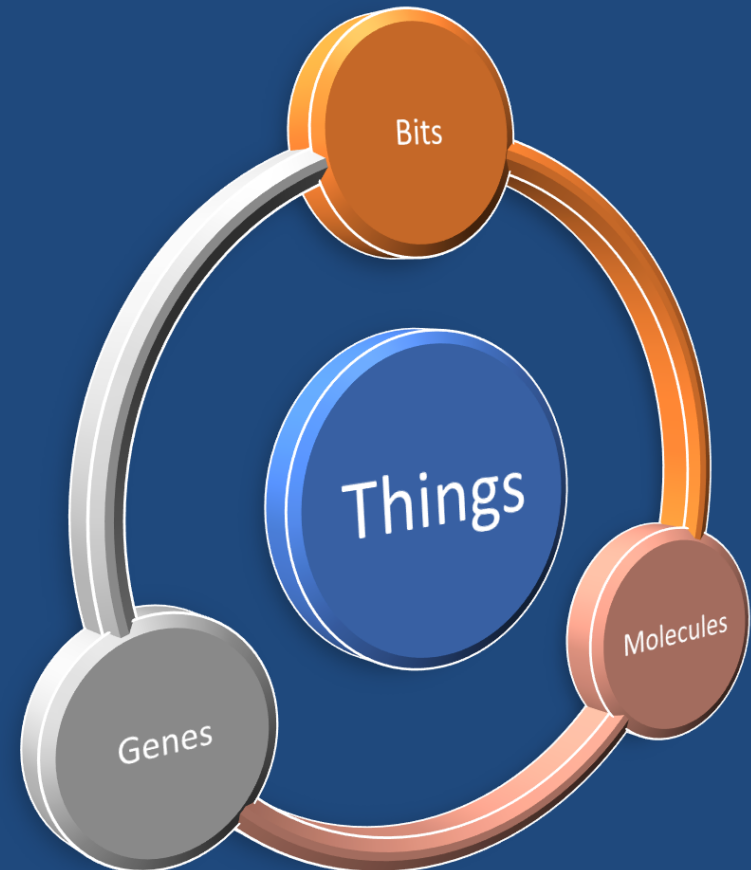
- Agrupamento de Escolas D.Maria II
- Age of students: 8 to 18
- Subjects taught: Projects, Coding, Fair's
- Title of presentation: *Coding from 8 to 18*





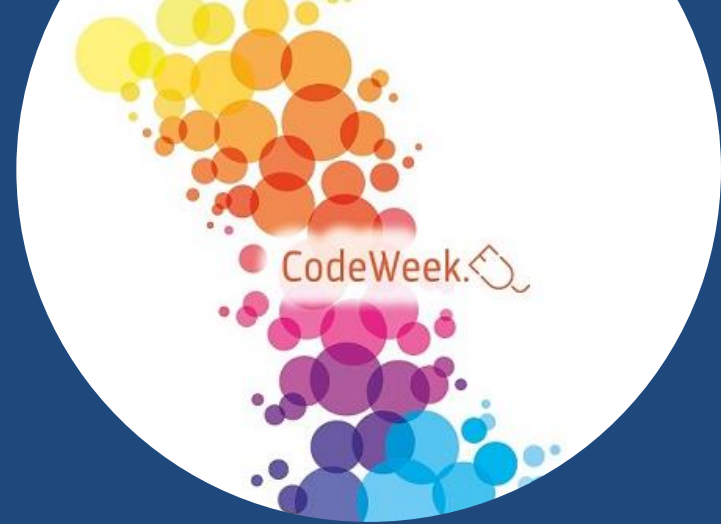
# Project kits

- 6-7 – Clementoni
- 8-10 – Micro:bit
- 11-12 – Micro:bit
- 13-15 – Raspberry Pi
- 16-18 - Arduíno

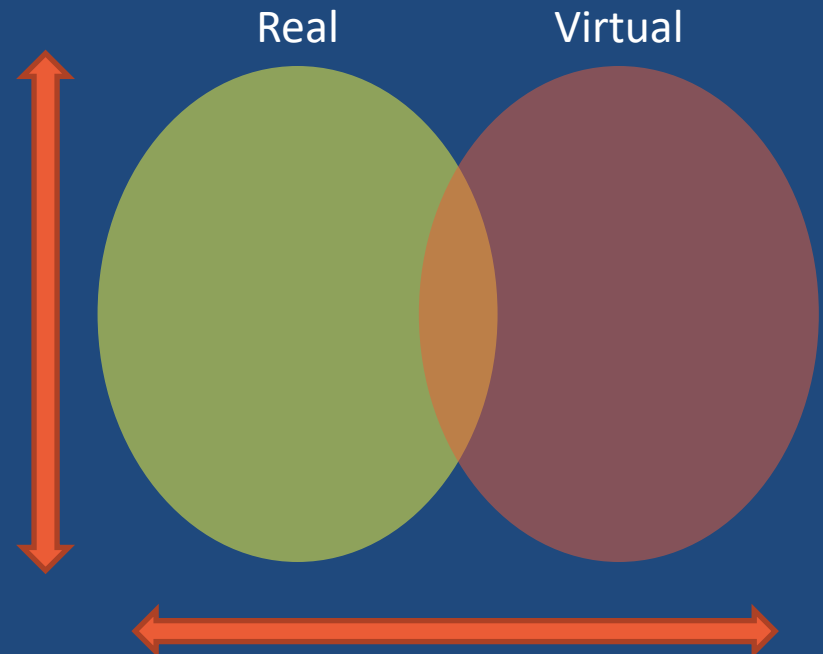




# Real versus Virtual

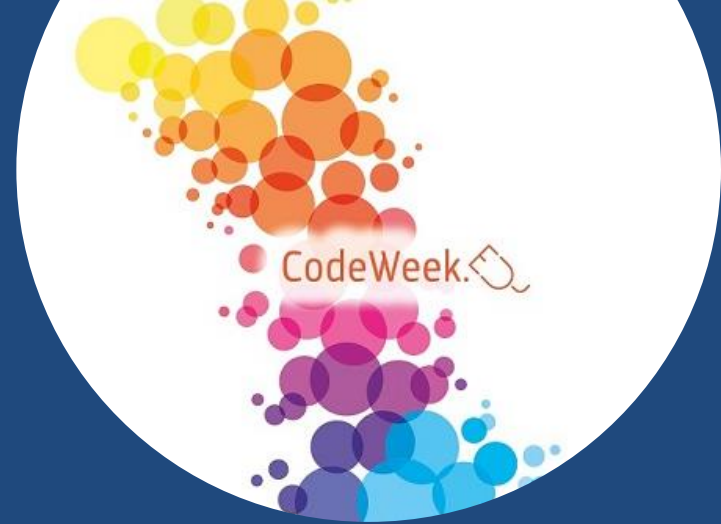


- Understand scale
- Big and Small things
- Connections between Real World and Virtual
- VR and AR



# Missing piece

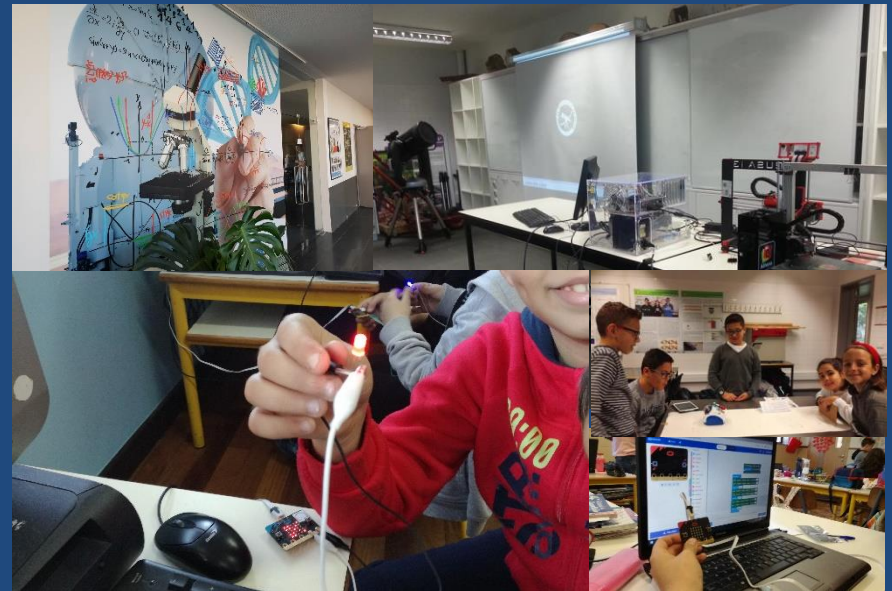
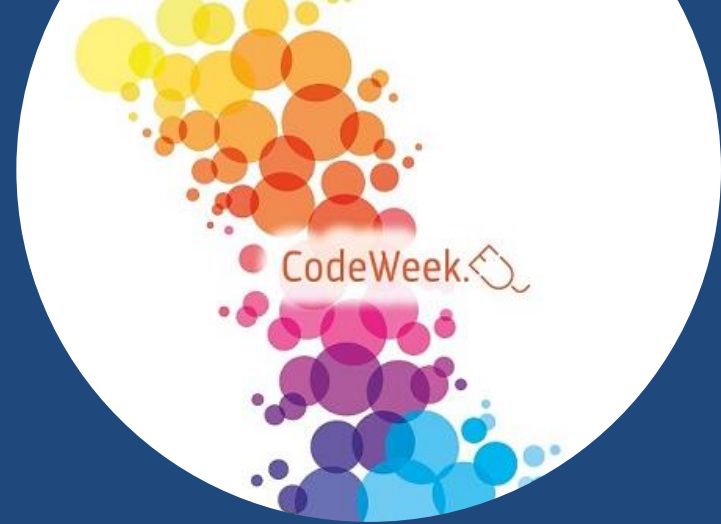
- Doesn't fit
- Waiting the right one
- Universal
- Game changer



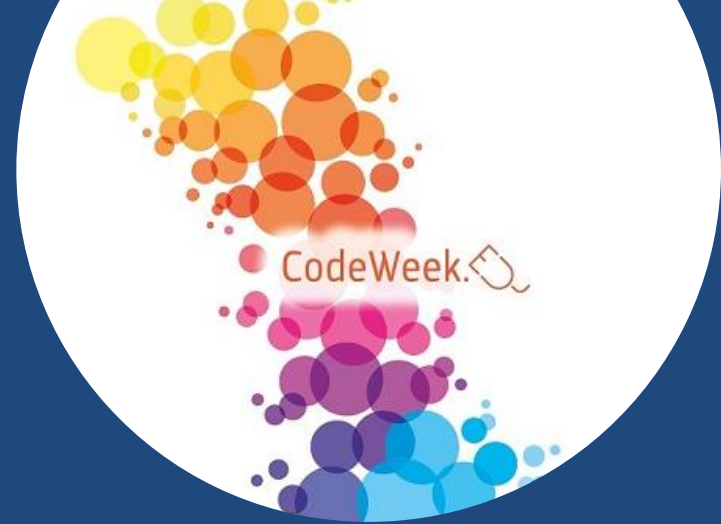


## School (social)

- Curriculum
- Clube's
- Outside classroom



# Projects Festival



- Erasmus+
- Science Fair's
- University and other institutions
- Companies
- Ciência na Escola
- Ciência Viva





Thank you!

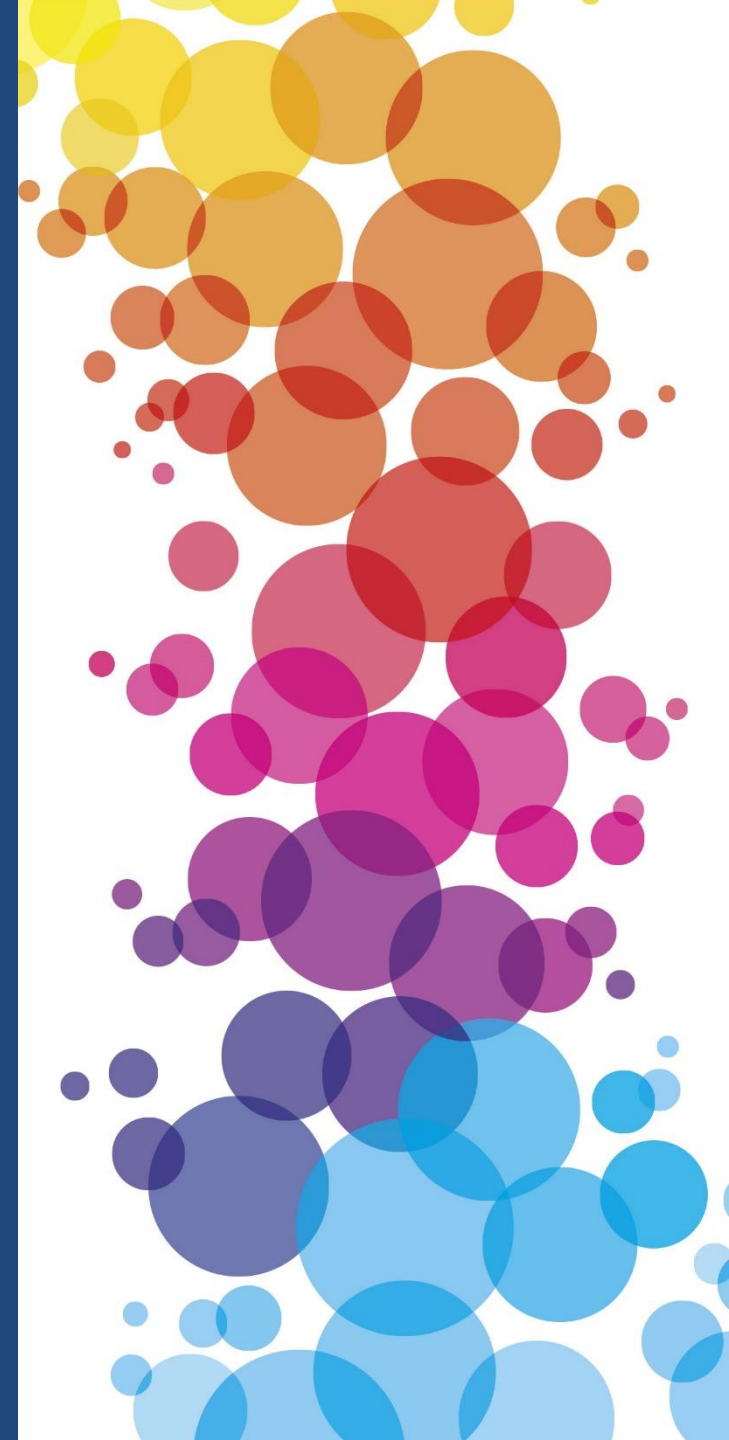




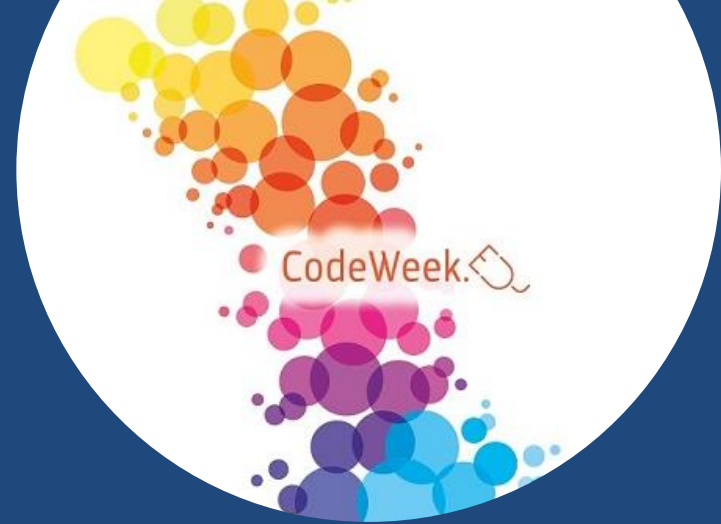
Selcuk, Arslan  
*Turkey*

## ***MORE CODING MORE GIRLS***

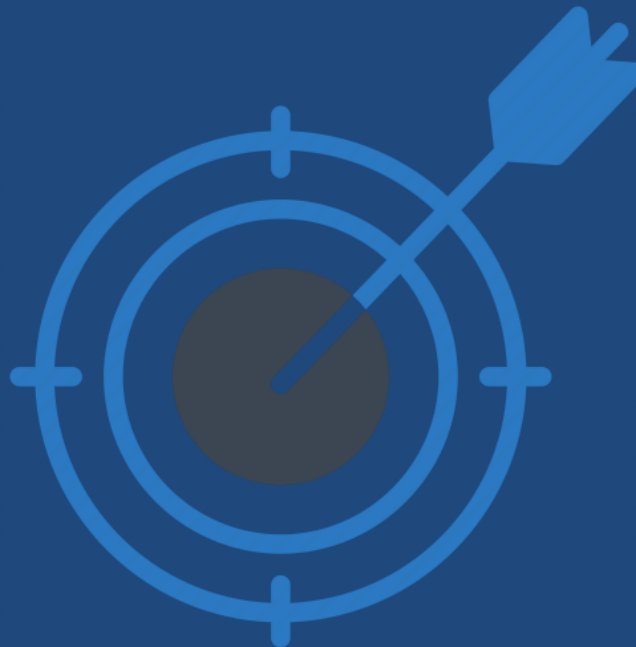
- Where do you teach: Ankara-Turkey
- Age of students: 14-17
- Subjects taught: Computer Science
- Title of presentation: More Coding More Girls



# More Coding More Girls! Why?



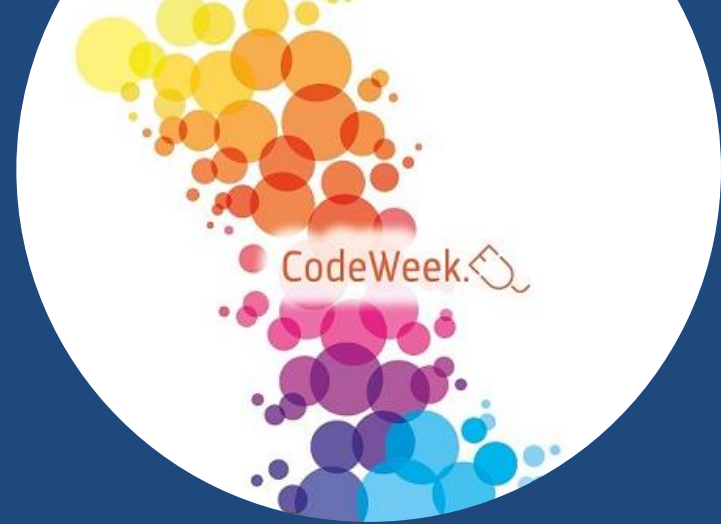
- The rate of women IT specialists working at important technology organizations is between 10% and 24% (The Education & Training, 2015).
- For each 1000 students, just 29 chose IT department (Scientix, 2015).
- According to the 2017 edition of the OECD's Education at a Glance report, 3 of each 4 students who prefer IT are male.
- In OECD countries, the rate of women IT specialists is just 20% while it is 30% in Turkey (Acarer, 2012).
- European Union needs 900.000 women IT specialists until 2020.



# Aim and Target Group

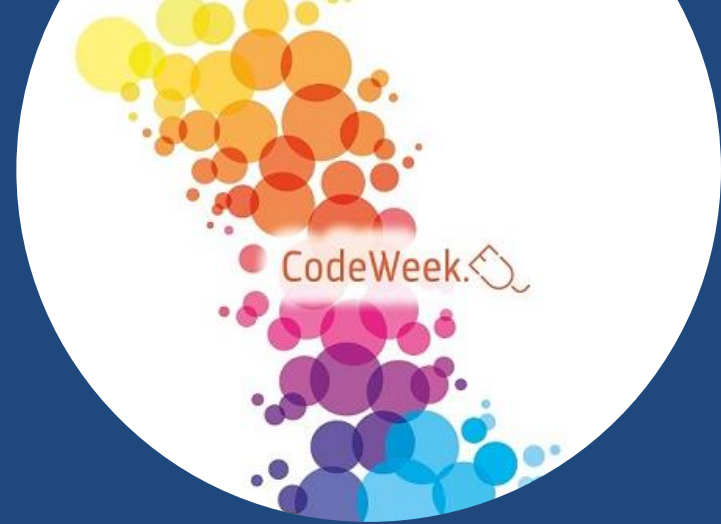
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- The aim of More Coding More Girls project was to develop girls' coding skills and raise coding awareness of these students.
- The target group of this project is composed of 20 female students registered for the computer science department of Atatürk Vocational and Technical High School in Ankara.
- Target groups age range is between 15 and 18.



# School-Industry Collaboration

- We cooperated with different organizations to conduct the projects.
- Ataturk Vocational and Technical High School
- Science on Stage Europe-SAP
- IDE (Microsoft Global Partner)

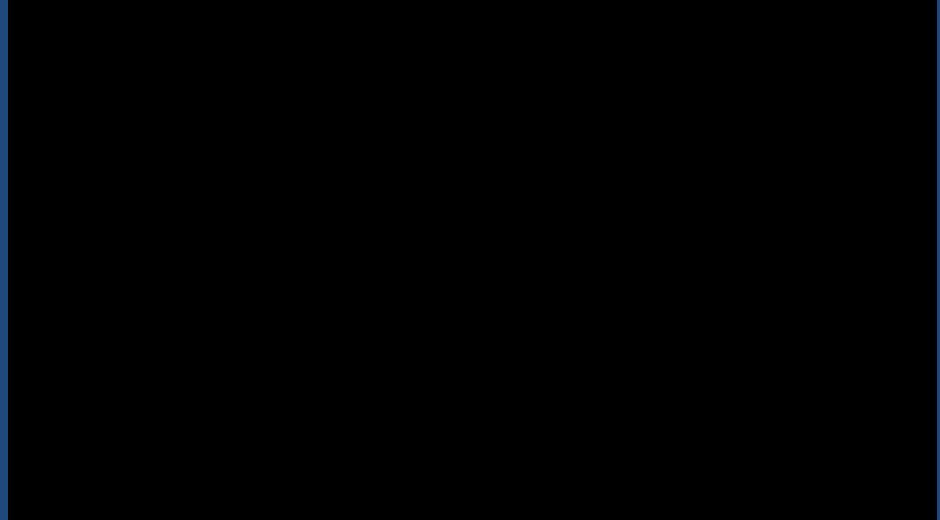
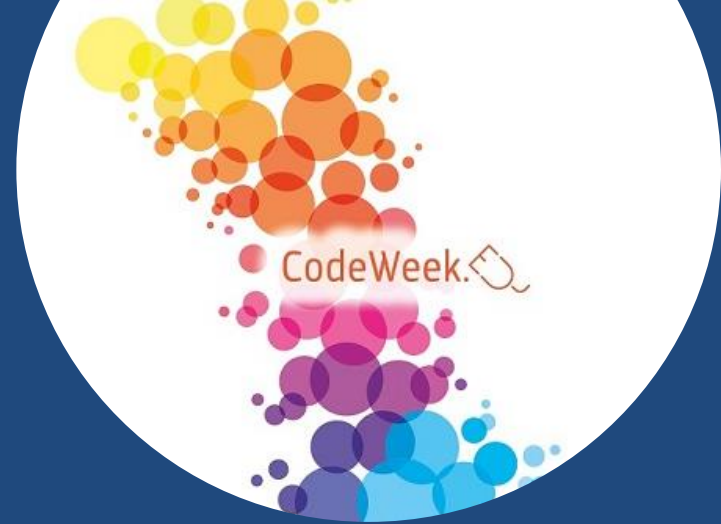




# Exhibition

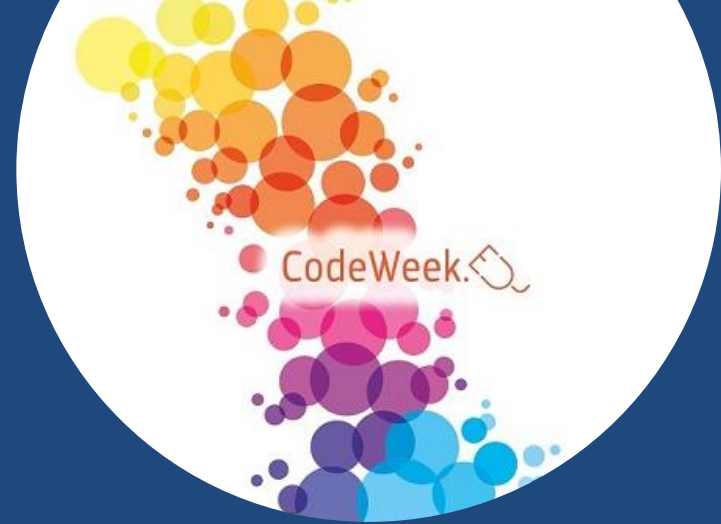
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- We acquired some micro:bits by using Science on Stage's grant.
- I trained students on micro:bit for 3 days.
- While they conducted their projects, I and my colleagues prepared the exhibition area



# Conclusion

- Students' coding awareness and skills raised impressively
- Their presentation skills were improved
- The number of students who selected IT department increased
- Their academic achievements dramatically improved
- They gained confidence and kept on coding





Thank you!

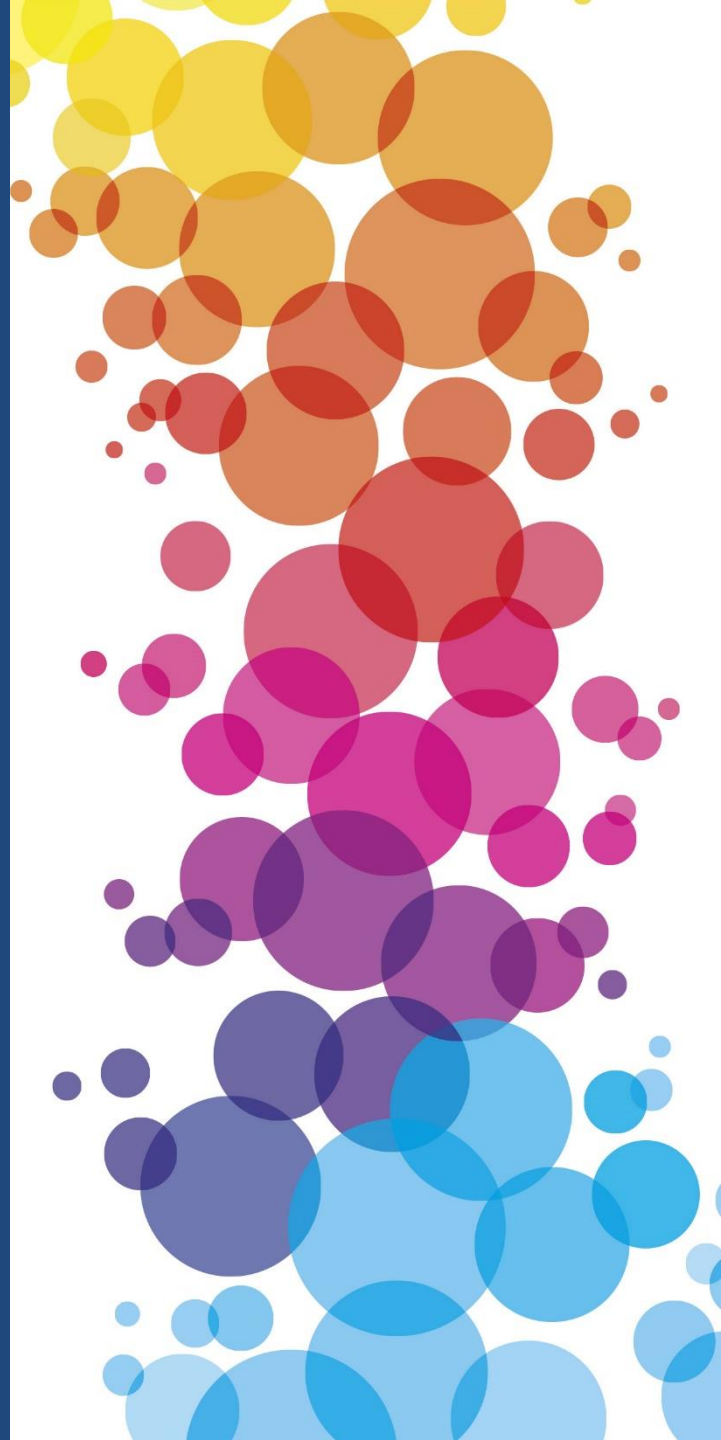


Francisco Javier  
Masero Suárez  
*Spain*

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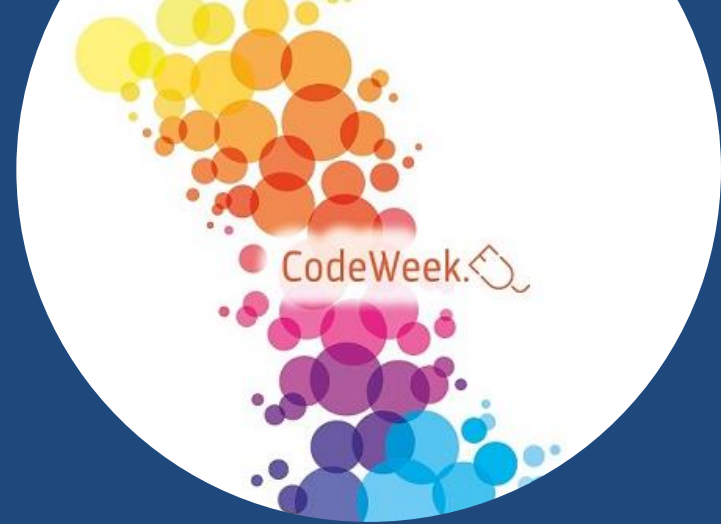
## ***GOLDEN AGE PROJECT***

- CPR ZAFRA
- Students: 12- 18 ; Teachers: 22 - 99
- Subjects: ICT
- A group of activities to show the possibilities of integrating technology in educational projects





# GOLDEN AGE PROJECT

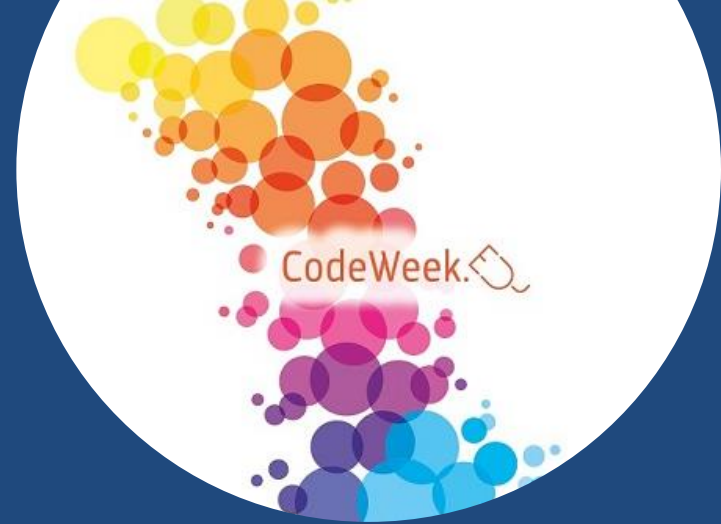


- Project developed to learn History through the use of technology.
- Focused on the development of Key Competences, especially in relation to:
  - Digital competence (manipulation of technological resources).
  - Learning to learn (developing new ways of working and carrying out tasks)
  - Social and civic competence (involving new ways of relating to our classmates and of working as a team).
- Based on the usefulness of the different spaces of the Future Classroom Lab project.

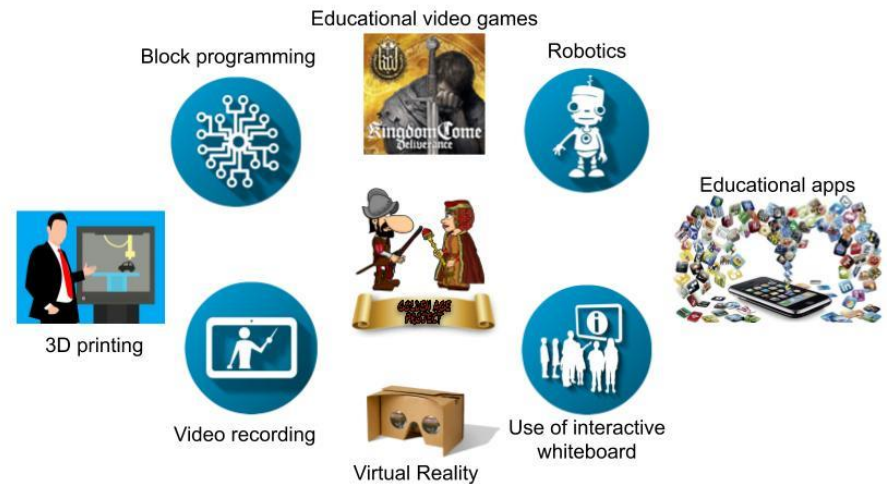


# Activities

- Educational video games
- Robotics
- Educational apps
- Use of the interactive digital whiteboard
- Virtual reality
- Video recording
- 3D printing
- Block programming

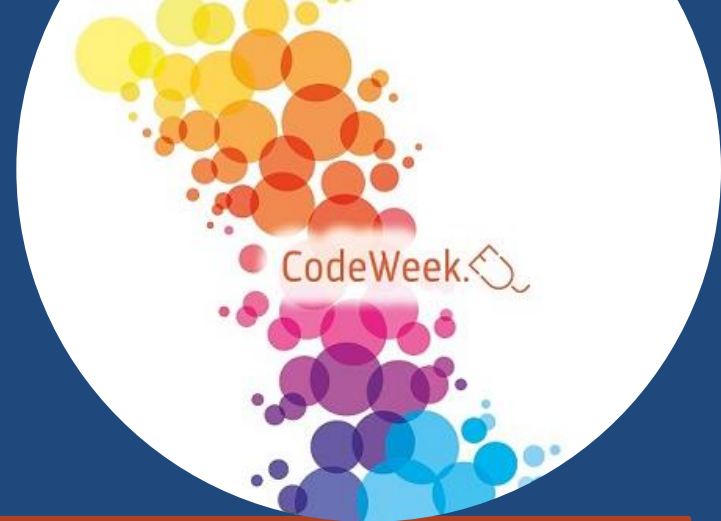


## EDUCATIONAL TECHNOLOGIES IN THE GOLDEN AGE PROJECT



# Programming, coding & fun

- Investigating with Microbit
- Discovering with video games
- Developing a Stop Motion





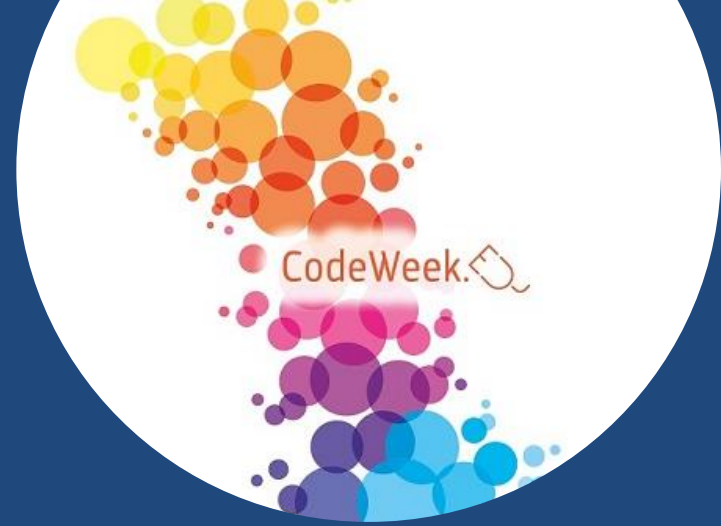
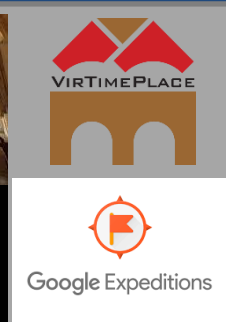
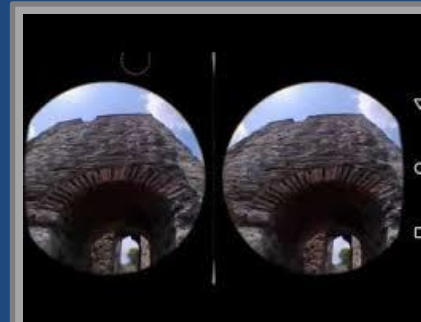
# Programming, coding & fun

- Interact with robots
- Present with chroma
- Simulating with virtual reality
- Creating with new materials






ISABEL JUAN MARTA RUBÉN ÁNGEL  
ELENA SAMARA PABLO ELADIO PILAR

ISABEL JUAN MARTA RUBÉN ÁNGEL  
ELENA SAMARA PABLO ELADIO PILAR



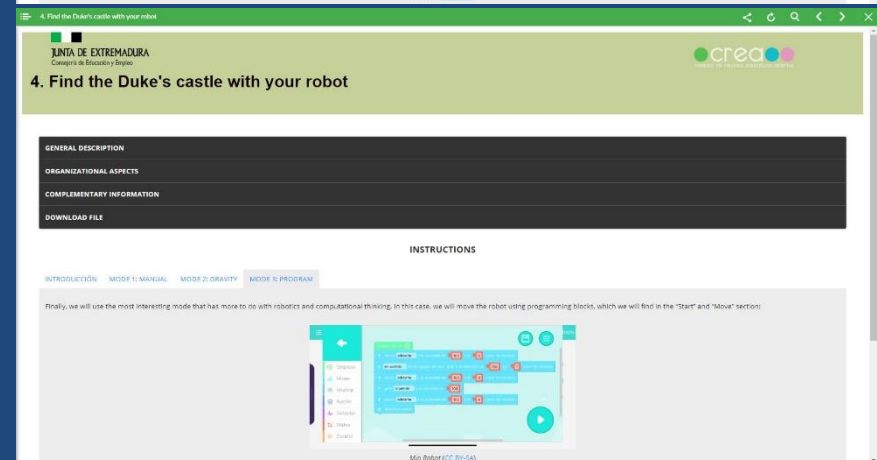
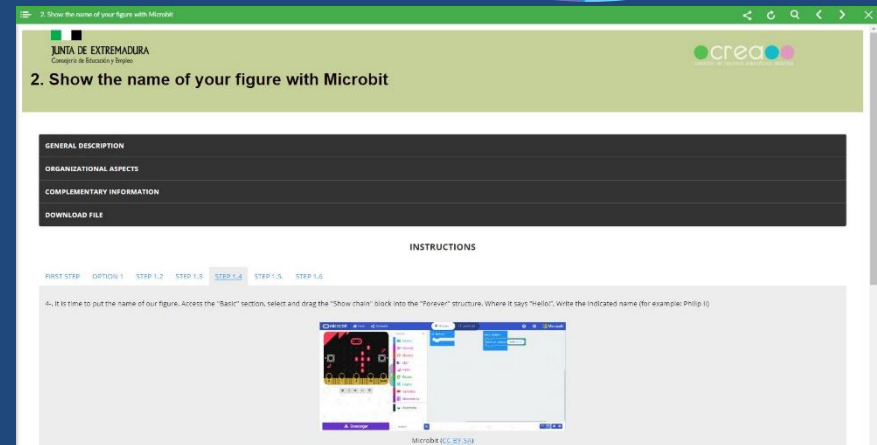
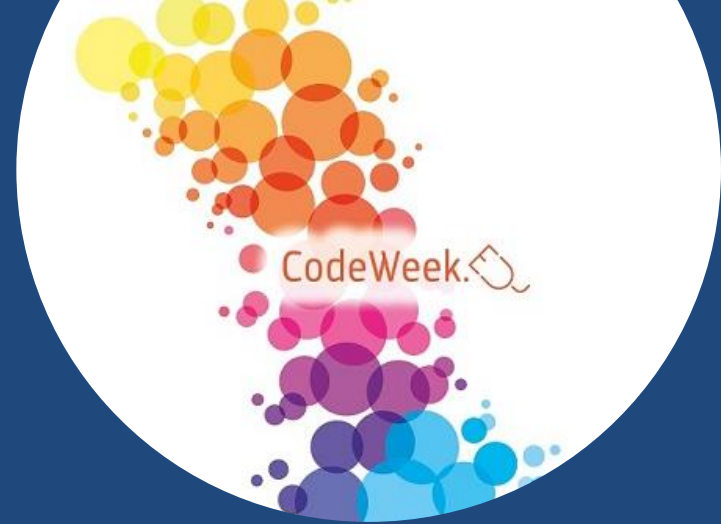
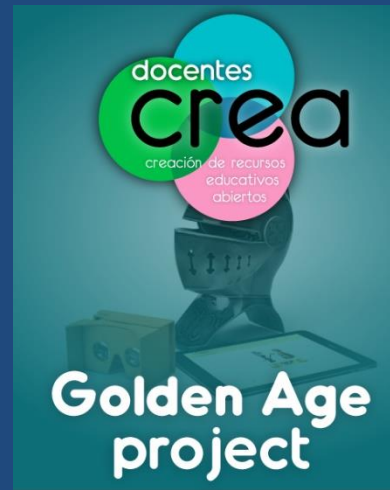


# Webpage

- Presentation video
- You can access the project at:
  - eScholarium 
  - Crea Project 
  - Source File 
- Language: English
- Performed with eXelearning
- Activities:



- General description
- Organizational aspects
- Complementary information
- Download file





Thank you!

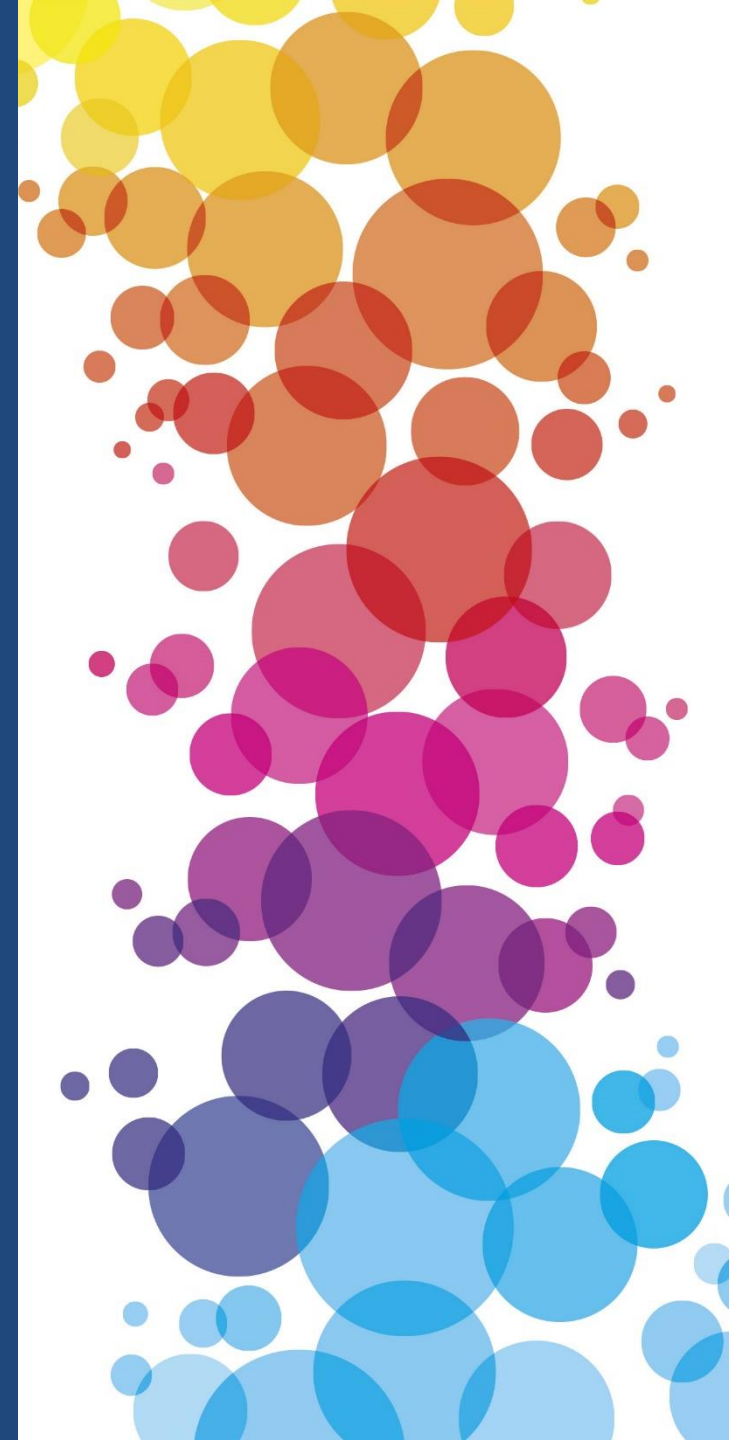


Stefania, Altieri  
*Italy*

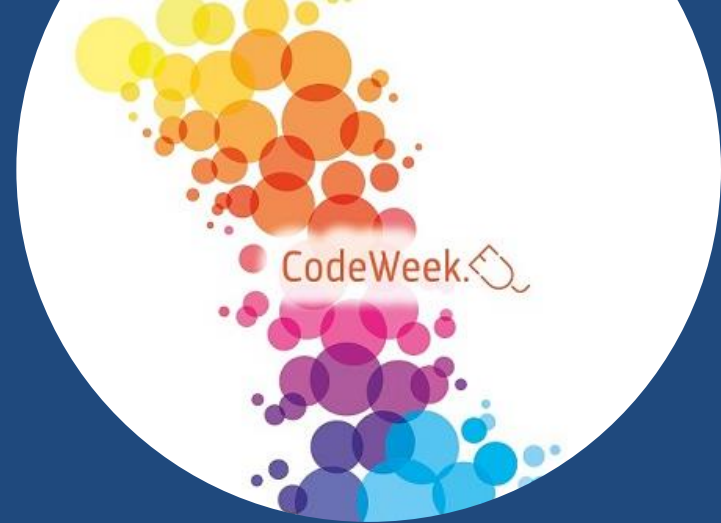
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## ***DISTANCE LEARNING WITH CODING***

- Primary school
- Age of students: 5-10
- Subjects taught ICT
- Title of presentation: GUESS WHO



# GUESS WHO



## GUESS WHO

Solve the coding quizziez and guess the mysterious character

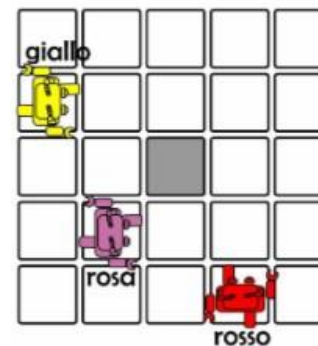


F= go forward R= turn right L= turn left

### Question 1

Following the instructions, which Robot reaches the gray square?  
FFRF

- A** The pink Robot
- B** The yellow Robot
- C** The red Robot



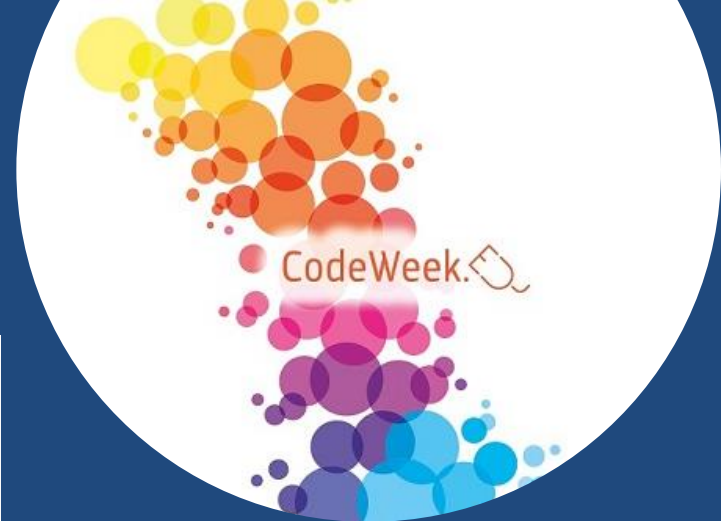

<https://view.genial.ly/5ecceedf02ce30db69f0cfa/learning-experience-challenges-guess-who>



# GUESS WHO

Following these instructions on Scratch Platform which geometrical figure you get?

- A A square
- B A triangle
- C A rhombus



## GUESS WHO

You've finished!



COMPLIMENTS!

**Ada Lovelace** was the first programmer in history ... when computers still didn't exist!

Start again

Play CodyFeet

### Question 9

Which is the hidden word following the Cody Feet footprints ?

- A Nido
- B Codino
- C Coding



### Question 11

In this duel what are the winning cards to play for the green Robot (to go to the purple Robot)?

- A FFFL
- B FFLF
- C FLFF





**My contact:**  
**[stefania.altieri@virgilio.it](mailto:stefania.altieri@virgilio.it)**

**Thank you!**



Questions for  
teachmeet  
speakers?

# Deadline to complete course quiz: 15 June 2020 at 23:59pm



Course > Module 1: Transforming Education with Coding and Computational Thinking > 1.6 Quiz > Assess your knowledge

< Previous



## Assess your knowledge

[Bookmark this page](#)

In general, you complete a **module** by completing its units, watching the videos, sharing your ideas and experiences in the Padlets and passing the quiz at the end of the module. To complete this **course**, you must finish the module of the course and the final quiz.

Please note the **passing grade of this quiz is 80/100** so you will only get the certificate if you get 8/10 correct answers. You will have **three attempts** to pass the quiz.

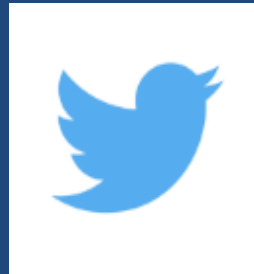
**Please review your answers a few times before submitting them.** Write the answers down in a paper, and only when you are sure that they are correct, do complete the quiz below.

You will receive a digital certificate from the European Schoolnet Academy **if you successfully complete the course before the final deadline (15 June 2020 at 23:59pm).** Certificates are awarded following the course deadline, but if you have completed the quiz you can already request a certificate from the "Progress" page before that time.

Please visit the [Certification section](#) to read more about the course requirements.

## Stay connected

- Codeweek.eu
- @CodeWeekEU  
#CodeWeek
- CodeEU
- Facebook group  
for teachers







Thank you!