

GCIB Sprint: a guide for Educators



Project by
**officina
futuro
fondazione
W-Group**

The female population is often underrepresented in STEM fields, partly due to the misconception that these disciplines require innate 'gifts' they may not possess. As a result, girls tend to approach these fields with hesitation or in limited numbers, despite their growing relevance and appeal in the job market.

**IN ITALY, ONLY 16% OF GIRLS CHOOSE
SCIENTIFIC OR TECHNOLOGICAL SCHOOLS**



To address this issue, Officina Futuro Fondazione W-Group ETS developed and launched **Girls Code It Better (GCIB)** project, aiming to encourage girls to explore STEM education and career paths.

Girls Code It Better is a 40-hour digital creativity and entrepreneurship club where 20 girls, guided by two coaches, work on solving a real-world problem or challenge. Using various technologies, they design and create an original solution to the challenge.

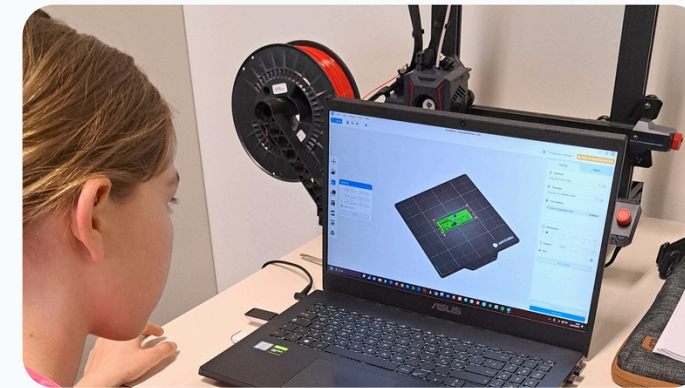


Technological Areas

The technologies used typically fall into one or more of the following technological areas.



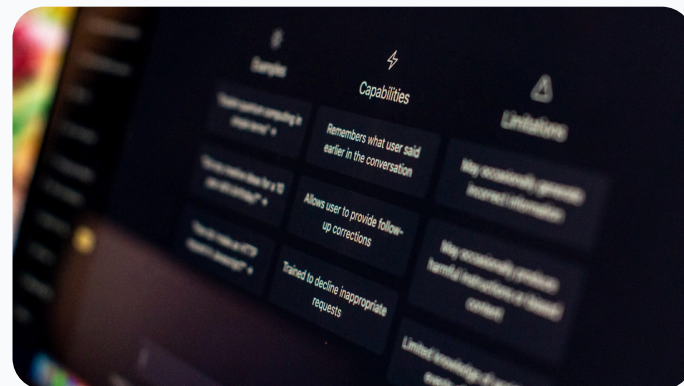
Programming
App & Gaming



3D Modeling
& Printing



Virtual Reality
& Augmented Reality



Artificial
Intelligence



Videomaking
& Graphics



Electronics
& Automation



Web Design
& Web Development



What is Girls Code It Better Sprint?

Girls Code It Better Sprint is a “taste” of Girls Code It Better club.

In a single meeting of 3 or 4 hours, in fact, the participating girls are offered the opportunity to get involved with a small challenge and to discover the creative potential of technology through the creation of an original and personalized digital product.

Girls Code It Better Sprints **can be organized both online and in person.**

The pillars of GCIB Sprint

Online and in person



DURATION

Duration of 3 or 4 hours to give a not too complex but captivating taste of the experience



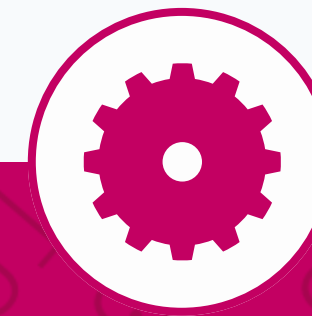
COACHES

2 coaches to ensure support to all participating girls; at least one of the 2 coaches must have specific experience with the relevant creative technological area



PARTECIPANT

20 participating girls aged 11-14 *



CHALLENGE

A real challenge kicks off the work and requires the girls to design and build an original solution, not just execute and copy commands



TECHNOLOGY

Technology and technological tools are used as a creative means and not as an end (it is not "a coding course" but a "digital creativity club")

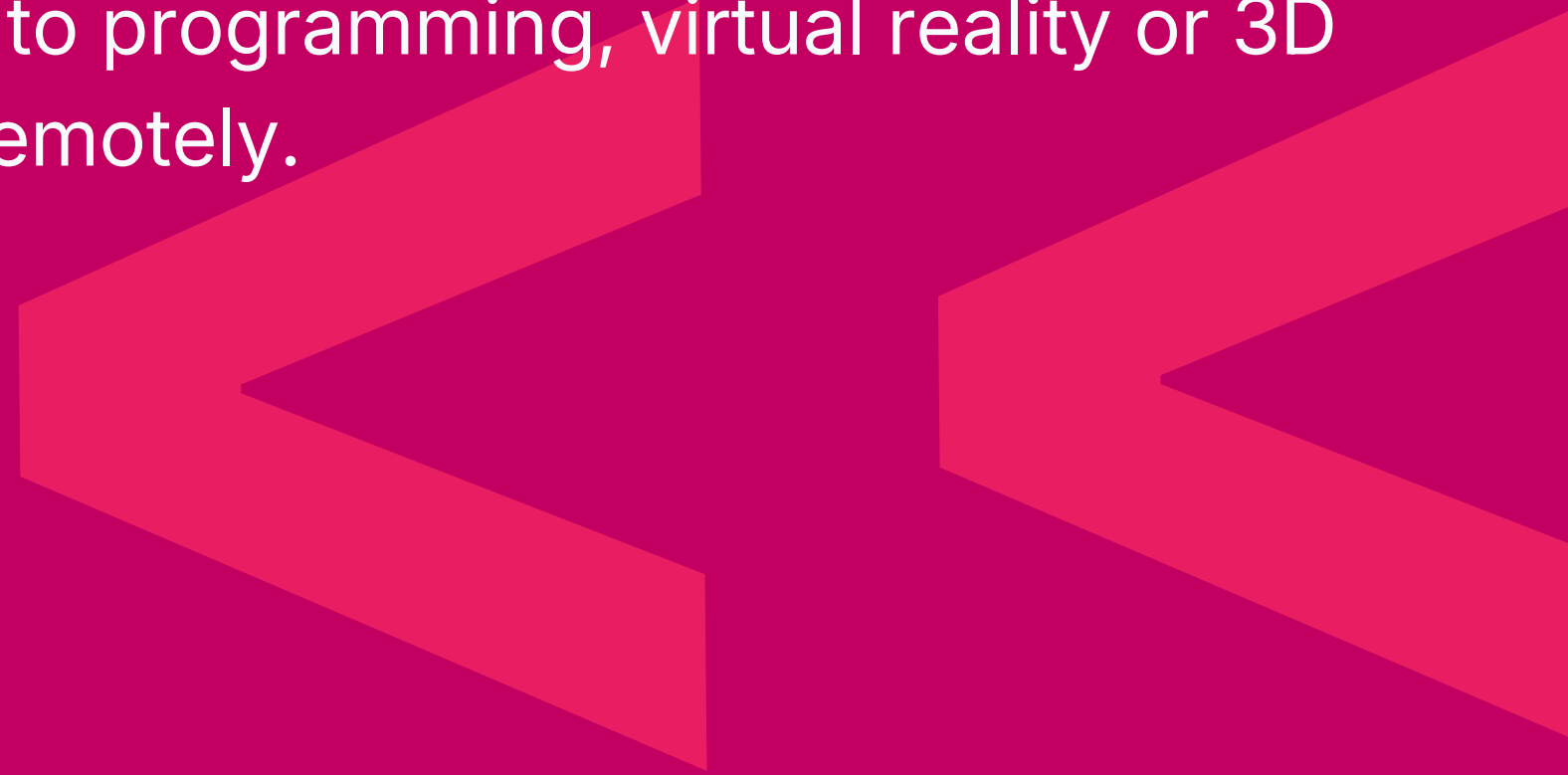
* It is possible to extend the initiative to girls aged 14-19 but this age group requires more complex planning. Participants may already have advanced skills, making it necessary to develop more complex activities and involve additional resources to ensure an adequate level of challenge and learning.



Create your Girls Code It Better Sprint

1 Technological area

Choose the technological area and the tool you want to propose to the girls.
For online clubs we recommend giving priority to programming, virtual reality or 3D modeling because they are easier to manage remotely.





2

Coaches

Identify 2 coaches who will be able to guide the girls during the GCIB Sprint. At least one of the two coaches must have strong skills in the chosen technological area. The second coach must have skills in the educational field with the age group of the participating girls.



3

Challenge

With the help of the coaches, choose a small, concrete challenge that is captivating and engaging for the girls. Some examples that will help you better understand what we mean by challenge:

- *Create an interactive quiz to help those who don't know Italy to discover it*
- *Create a product that allows you to tidy up your desk or workstation*
- *Create a gallery/museum dedicated to a well-known historical figure*

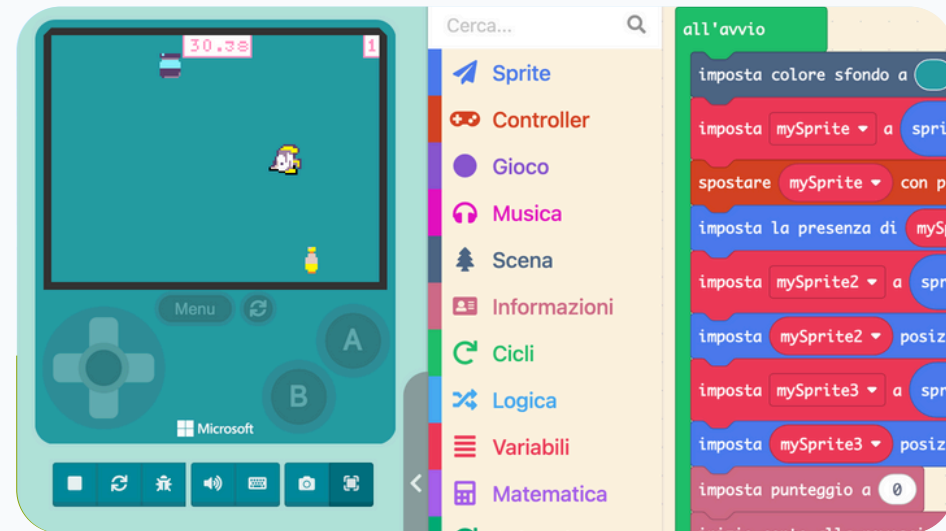
Some examples

| Challenge | Product | Tool |
|--|--|---------------------------------|
| Creating a Point and Click Video Game to Protect the Environment | Simple video game programmed with garbage that "flies" and must be caught | Makecode Arcade |
| Create a programmed story that tells the life story of a prominent woman in science and technology | A story in scenes (theatrical style) that tells the story of the chosen woman | Scratch or Makecode Arcade |
| Create an interactive quiz to help those who don't know Italy to discover it | Interactive quiz with questions about Italy (a narration part can be added as previous example) | Scratch or Scratch for CS First |
| Create an escape room that allows you to discover the goals of the 2030 Agenda for Sustainability | Simple escape room with scoring and hot spots that offer stimulating questions | Delightex Edu or Minecraft |
| Create a gallery/museum dedicated to a well-known historical figure | Virtual museum with a staged narrative of a character's life (if the level of expertise and time allow, it can also be connected to 3D modeling) | Minecraft or Delightex Edu |

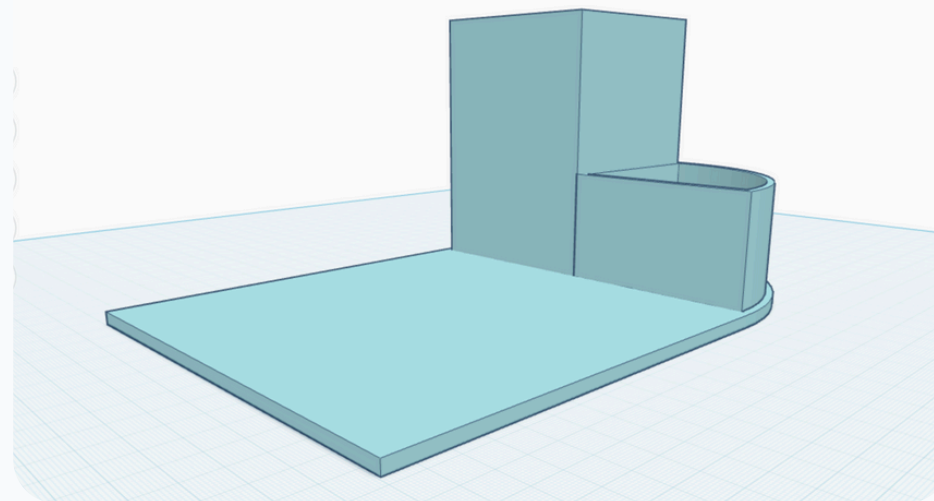


| Challenge | Product | Tool |
|--|--|----------------------------|
| Create a virtual tour to discover a specific place in Italy | Simple 360 virtual tour with one of the iconic places | Minecraft or Delightex Edu |
| Creating a Point and Click Video Game to Protect the Environment | Simple video game programmed with garbage that “flies” and must be caught | Makecode Arcade |
| Create a programmed story that tells the life story of a prominent woman in science and technology | A story in scenes (theatrical style) that tells the story of the chosen woman | Scratch or Makecode Arcade |
| Create a product that allows you to tidy up your desk or workstation | Pencil holder and eraser holder snap together on a base | Tinkercad or SketchUp |
| Create a product that represents an important character for science and technology | 3D avatar of a historical character with a model representing one or more of the character's discoveries | Tinkercad or SketchUp |
| Create a product that allows you to discover an Italian monument | Small diorama with stylized historical monument and setting | Tinkercad or SketchUp |

Some examples of GCIB Sprint projects



Videogame
MakeCode Arcade



Organizer
Tinkercad



Women in STEM
DeLighex EDU

Conducting a Girls Code It Better Sprint

- **Welcome.** Coaches welcome girls in the physical space or in the online space, helping girls who may have difficulty accessing or finding the location.
- **Presentation.** Coaches introduce themselves by showing who they are and their experience. They can use some slides they have prepared or show their work.
- **Involvement.** They ask the girls some introductory questions to allow them to introduce themselves and break the ice. At this stage it is also possible to have the girls already working with the devices by proposing simple activities such as creating a small digital avatar. This will also allow them to connect the devices to the network
- **Launching the challenge.** The coaches explain to the girls what the challenge is on and that they will have to create a product-solution to the launched challenge

- **Example.** Coaches can suggest that participants “play” with the example model they have prepared to help the girls understand what they can create and have a basis for achievement.
- **Access.** Coaches provide the girls with instructions on how to access the chosen technological tool. At this stage, coaches also give a brief overview of the tool to help the girls navigate the creative environment
- **Base.** Coaches guide the girls in creating the base of the product starting from the example model. This phase is important because it allows the girls to discover the basic controls and start creating a product.
- **Personalization.** Starting from the base created, the girls personalize their product by adding original details, modifying some features of the product and adding their own ideas.
- **Sharing.** Each girl will be able to show the other participants their original product using the classroom screen or screen sharing in the case of online clubs. The other participants will be able to give feedback

Would you like to create a GCIB Sprint?

Here you find a form to contact us if you would like to create a GCIB Sprint with us. Our support is required to verify the stages and methods of development:

https://bit.ly/Create_GCIB_Sprint

Girls Code It Better Sprint is a registered trademark.



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