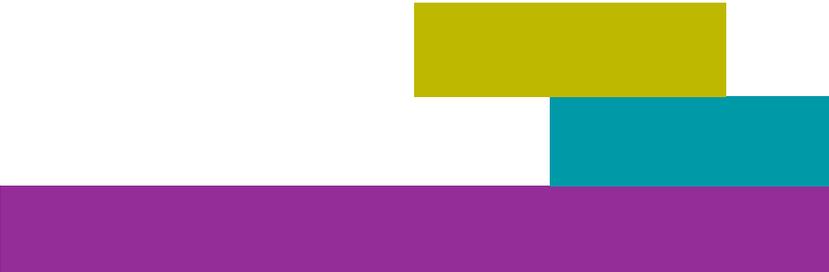




Guide

LEARNING ABOUT ADA LOVELACE

#girlsgonna_





LEARNING ABOUT ADA LOVELACE

Ada was born in London in 1835. She had an unusual childhood for an aristocratic girl of the time, studying literature and music, but also astronomy and mathematics. This prepared her to make great contributions in these fields. Ada helped to lay the foundations for future computer programming by developing a new language with great potential for humankind.

In the programming activity we will learn about the significant events in the life of one of the most important people in the history of technology.



Before we begin

What we are going to do

- Learn about and experience object-based programming.
- Learn about the Scratch programming environment and the function of each block used in this activity.
- Build a story using technological tools.
- Explore the interaction of play, imagination and technology.
- Raise awareness of the role of women in technology professions.

We will need

- Internet connection
- Access to Scratch <https://scratch.mit.edu/>
- Scratch program template <https://scratch.mit.edu/projects/667179692/>
- Paper
- Coloured pencils
- A ruler

The competencies we will work on

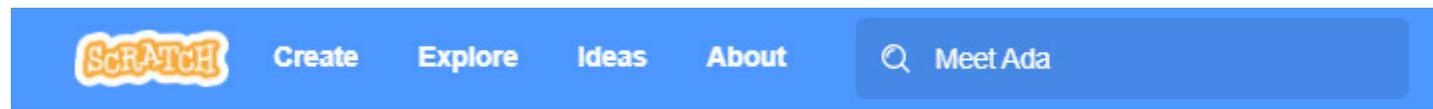
- Mathematics, science and technology skills. Introduction to problem solving, so we can apply it to everyday situations.
- Digital competency. Enable experimentation with digital media, facilitating understanding of technology, logical and computational thinking.
- Critical thinking. Propose situations that enable us to question, pose problems, select information and draw conclusions. Encourage research and project development, problem solving and critical decision making, using digital applications and resources.
- Social and civic competencies. Develop individual and team-work habits, and attitudes of self-confidence, initiative, curiosity and creativity.

Development of the activity

Ada Lovelace is known as the first female programmer in history, but... can you explain how she did it? Program a Scratch game that will allow you to learn about the events of one of the most important people in the history of technology.

1. Let's get started with Scratch

1.1 Go to the Scratch website and use the search engine to locate the Getting to Know Ada CloqqTv project. You can also follow this link <https://scratch.mit.edu/projects/667179692/>



1.2 When you have found it click on the project box.

1.3. Click on see inside to open the project.

The screenshot shows a project page on the CLOGG platform. At the top left is the CLOGG logo. The title 'Meet Ada' is displayed in a dashed box, with a 'See inside' button to its right. Below the title, there are two small icons (a green flag and a red circle) and a full-screen icon. The main content area is divided into three sections: a vertical image strip on the left, a 2x2 grid of numbered buttons (1-6) in the center, and text boxes on the right. The image strip contains a photo of a typewriter, a green flag icon, and a portrait of Ada Lovelace. The grid buttons are numbered 1 through 6, with button 3 containing a green flag icon. The 'Instructions' box contains the text: 'Tell people how to use your project (such as which keys to press)'. The 'Notes and Credits' box contains the text: 'How did you make this project? Did you use ideas, scripts or artwork from other people? Thank them here.' At the bottom, there are engagement icons (heart, star, refresh, eye) with counts (0, 0, 0, 1), a copyright notice '© Mar 28, 2022', and two buttons: 'Add to Studio' and 'Copy Link'.

CLOGG Meet Ada [See inside](#)

Instructions
Tell people how to use your project (such as which keys to press).

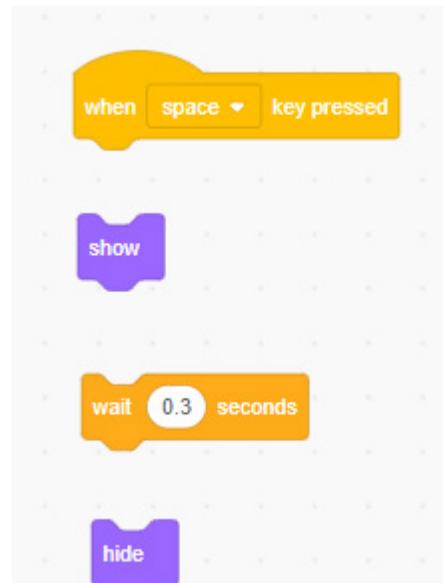
Notes and Credits
How did you make this project? Did you use ideas, scripts or artwork from other people? Thank them here.

0 0 0 1 © Mar 28, 2022 [+ Add to Studio](#) [Copy Link](#)

2. Virtual punch card!

Ada was the first person to think of using the punched card system to transmit information to an analytical machine (at that time they were not yet known as computers).

We will do something similar with the object that simulates a punch card. We will program it, so it is displayed for a short period and check the images that tell us something about her life.



3. It won't move!

Have you ever noticed that in Scratch we can freely drag objects around the viewer when we are in the editor, but not when we put it in full-screen mode?

Fortunately, we can program our objects to be draggable if we want them to be. It's easy! Join the set the drag mode block with the draggable option checked to each object from 1 to 6 by clicking on the drag mode block.

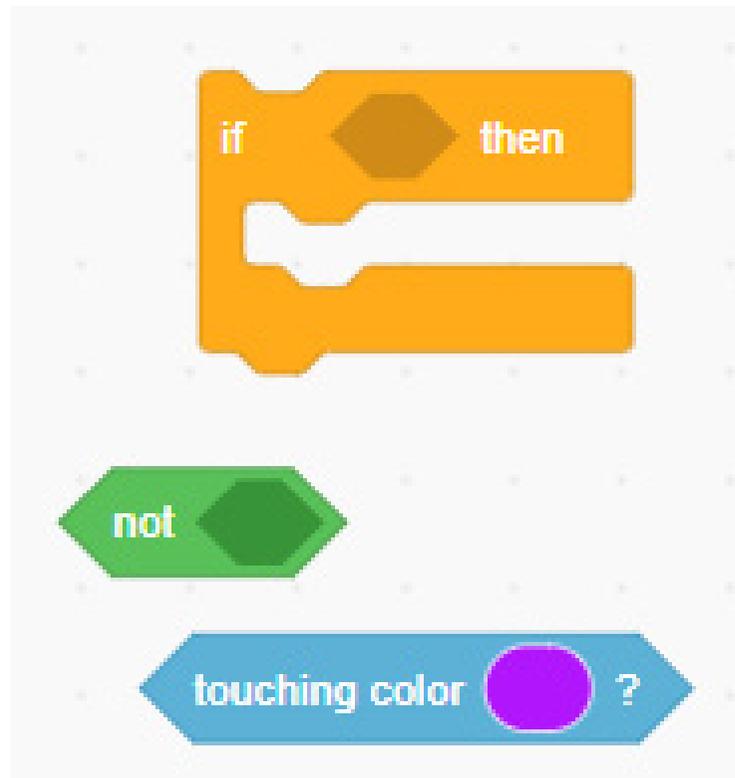


4. The correct order

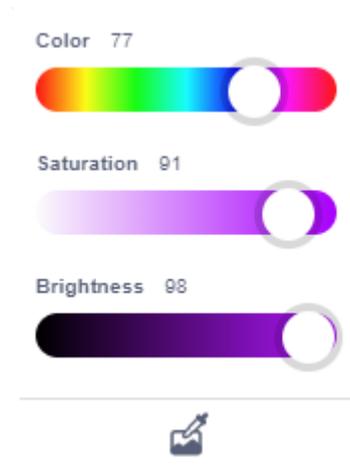
Finally, we will program our objects so that when we space key is pressed, the punch card will check whether the images are in the right place.



If you look closely at the program, you will see that each circle on the punch card is a different colour. The touching colour block uses the colours so we can match them to see whether we have got it right. Each image has a colour assigned to it; look at each object's name to see the correct place for each piece of Ada's story. Start with object 1 and the yellow colour and continue in order one by one until the program is complete.



You don't know exactly what shade of colour the card is? There is an extremely useful tool: the eyedropper. Select this tool and use the eyedropper in the menu to mark the exact colour you need in the program.



If the illustration is not positioned correctly, it should be returned to the original position so you can again try to place it in the right position. For this we will use a block we already know well: go to x: _ y:_



5. Play and create!

You've got it! Now it's time to test your friends and family so they too can learn about Ada's fascinating life using the reader you have created. Press space when you want to check your solution.

And remember, the important thing is not to get everything right the first time, but to understand how the events came about that made Ada such an important and influential figure in the world of technology.



Activities

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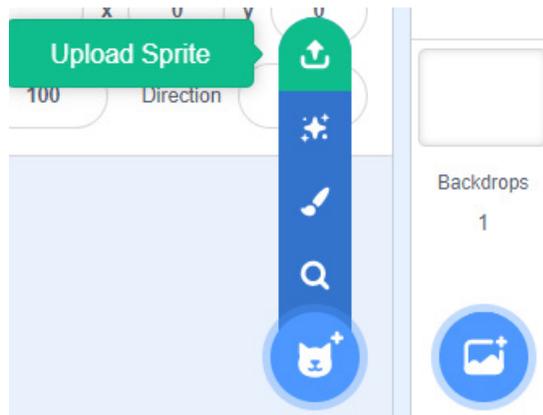
1. Extends programming

Here are some challenges. They will make you think, use your imagination and research skills, but once you have overcome them, they will take your project to another level.

Challenge 1. [More moments in history](#)

Ada's life is full of great memories. Could you add other moments from her story? On the internet you can find many interesting stories about her life and add them to your programming.

To add external images from the Scratch library you must first save it on your computer; to add an image to your project click on upload object in the tool menu of a new object.





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