



Lesson Plan | Make Your Own Paint Editor

WHAT IS GP?

GP is a free, general-purpose blocks programming language (similar to MIT's Scratch) that is powerful yet easy to learn. This lesson plan is designed to provide educators with the resources and information they need to teach the GP's Make Your Own Paint Editor [Hour of Code](#) Tutorial.

WHO IS GP FOR?

Grades 6+ | This tutorial is designed for beginners.

GP is an excellent vehicle for learning and teaching computer science and there is something for beginners and experts alike. GP is a natural next step for those who have used Scratch. It can be used to teach computer science in grades 6-12 or at the college level. GP is also intended for anyone who wants to make their own app but is not fluent with the complex languages and tools designed for professional software developers.

LEARNING OBJECTIVES

Participants will:

- create a paint editor to draw with the mouse
- share their work with classmates
- remix the tutorial to add interesting elements to the project

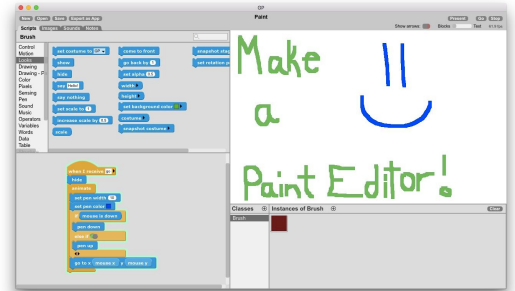
MATERIALS & RESOURCES

- One minute [video overview](#) of GP
- Introduction to GP and [User Interface Guide](#)
- Make Your Own Paint Editor [Video Introduction](#)
- Make Your Own Paint Editor [2-Page Tutorial](#)
- [Student Resource](#) available on the GP Website
- [Certificates](#) for students from Hour of Code
- Completed paint editor project is available in the GP download
Choose Open > Project Starters > Paint.gpp to see the completed code

**Please note that all videos are also available on the [GP website](#).*

TECHNICAL RECOMMENDATIONS

- GP runs in the browser on Windows, Mac, Linux, and Chromebooks. Here is the browser URL: gpblocks.org/run/gp.html
- *NOTE: For ease of setup for the hour of code tutorial, we recommend running GP in your web browser. Please note that GP is slower in the browser than in its native environment. If you wish to download GP, [please visit our website](#). The GP download is a ZIP-ed folder containing executables for all supported platforms (Windows, Macintosh, and Linux).*





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Procedure

INTRODUCE THE HOUR OF CODE & GP (5-8 mins)

- For resources on introducing the Hour of Code, visit <https://hourofcode.com/us>
- Explain: you will create your own paint editor using GP, a blocks-based programming language. Show the [GP Overview Video](#) to introduce the activity.
- Ask students: what did you notice?
 - Responses may include:
 - You can change the way pictures look
 - You can draw, make music, and create art
 - You use blocks to make things go
- Explain: GP is a blocks-based programming language. You drag and drop blocks to make scripts.
- Direct students to gpblocks.org/run/gp.html and provide printed or digital copies of this [pdf](#).

ACTIVITY (20-40 mins)

- Students will work through the instructions in the tutorial to make a simple paint editor.
- Encourage students to work in pairs and share their understandings and discoveries if they are new to Computer Science.
- After students complete the instructions in the tutorial, challenge them to try the suggested remixes or add other features to the paint editor, such as a way to change pen color or thickness.
- Students can explore other art projects and more by using the additional resources available on the [GP Resources](#) page.

REFLECTION (5-10 mins)

- Students can take pictures of their paintings using the *snapshot stage* block. Those pictures can be downloaded (export menu command in “Images” tab) and emailed to be shared with the group.
- Ask students to share a red, yellow, and green for the activity:
 - Green: what went well?
 - Yellow: what are you curious/confused/neutral about?
 - Red: what could be improved?
- [Green/Red/Yellow](#) worksheet

OTHER IDEAS FOR REFLECTION

- Gallery walk: students move around to look at their peers work
- Rose/Thorn or Plus/Delta: ask students to reflect individually, in partners, or as a group as to a highlight and a frustration of the tutorial
- [Exit Ticket](#) from the Hour of Code team

BEYOND ONE HOUR

See additional resources including more project tutorials and videos at gpblocks.org

We want to hear from you and your students:
Please email us at gpteam@gpblocks.org to share your Hour of Code experience!