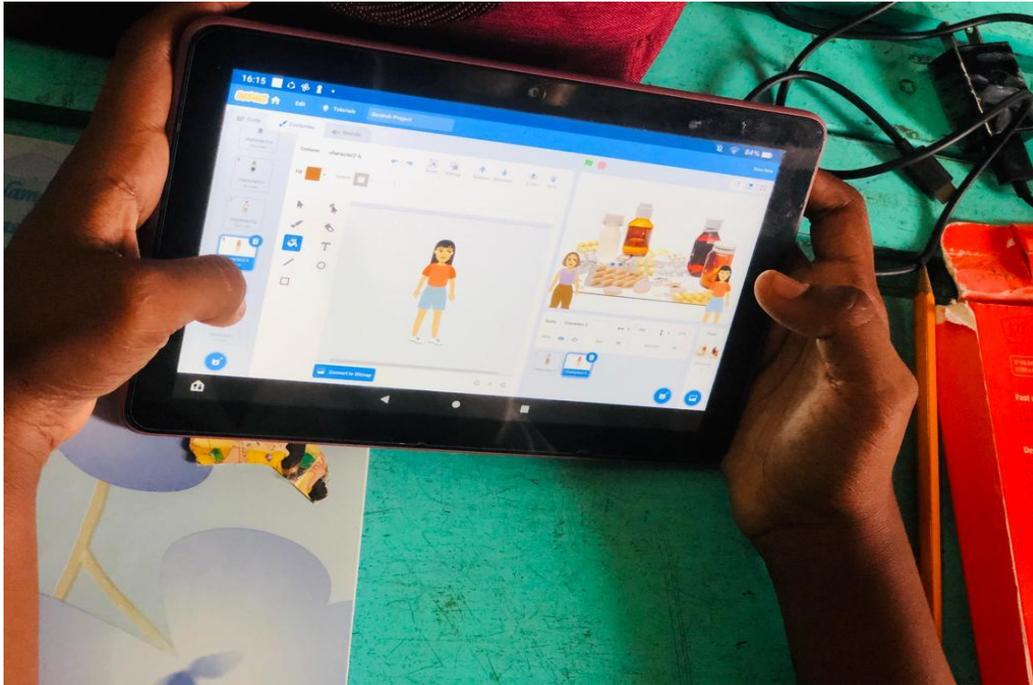


Engineering Design Process For a Scratch Coding Challenge



- Define the challenge: Clearly state the problem that needs to be solved and the objective of the project.

Create a Scratch animation project that reflects your research about the effects of climate change in your country or community.

- Form the team: Assign roles and responsibilities to each team member, taking into account each person's background and expertise.

Teams of 1 - 4 members and a coach. Roles can be researchers, project manager, designer, story teller, storyboard creator, coder

- **Brainstorm:** Hold a team meeting to discuss potential solutions and strategies. Encourage open discussion and creative thinking.
- **Research:** Investigate existing solutions and gather information that may be relevant to the project.
- **Plan:** Develop a detailed plan of action, including milestones, deadlines, and a clear division of tasks.

Review the Engineering Design process

- **Design:** Create a visual representation of the solution, including sketches and storyboard. Plan the use of backgrounds, sprites, and functions to achieve the desired outcome.

Tip: Figure out how many scenes your project will have. Will they each have a different background? How many sprites will be in each scene? Will the sprites be talking, walking, thinking? What form will the sprites take? Note: Anything that moves will be a sprite.

- **Implement:** Begin coding the solution, following the plan and making any necessary adjustments. Ensure that functions are properly defined and used to improve code organization and reusability.
- **Test:** Conduct thorough testing to identify and resolve any bugs or issues. Pay close attention to the functionality of backgrounds, sprites, and functions.
- **Refine:** Make any necessary changes or improvements to the solution, based on feedback and testing results. Ensure that all elements, including backgrounds, sprites, and functions, work as

intended.

- Present: Upload your demo project to youtube. No images of team members. All explanations must be in the video.

Note: College students from overseas will grade these projects. We want the process to be completely fair. So do not show your identity in any way.

- All youtube links will have to be uploaded to guyana.k12youthcode.com. Our staff will show you how to register when you complete your upload to youtube.