Unplugged: Choose Your Own Adventure

Students explore the various types of algorithms by designing and developing their own interactive Choose Your Own Adventure stories, which they will share with each other or with students from another class, such as their "buddy class." Through this project, students experience all stages of the making process, from understanding context to making and sharing.

Project Overview

The Choose Your Own Adventure project is a chance for students to design and create for an audience. Their audience may be each other or perhaps their "buddy class" in the school. Before the start of the project, select the audience that would be most appropriate for your class.

This project is also an opportunity to integrate learning from other subjects. A Choose Your Own Adventure story is ultimately an interactive, nonlinear story. Students can use this medium to demonstrate their knowledge and understanding from other learning areas. In addition to choosing an audience, select either an open-ended or specific theme for your students to anchor their stories.

The resulting project may be completed with or without technology. If students have access to computers, laptops, or tablets as well as Internet, we recommend that students implement their stories using Twine from the previous activity. Alternatively, projects may also be unplugged and take on more traditional forms, such as a book, or even a live performance in which the audience can participate. Determine what resources are available for your students and the possible forms that their projects could take.

Finally, consider the assessment criteria for this project. Feel free to review and customize the assessment criteria provided at the end of the project.

The estimated time for this project from start to finish is 6 hours, and involves every stage of the making process. The table below outlines the overall project.

Project Stage	Estimated Time (hr.)
Understanding Context, Defining, and Ideating	1
Ideating, Prototyping, and Testing	1
Making	3
Sharing	1
Total Estimated Time (hr.)	6

Stage 1: Understanding Context, Defining, and Ideating

In this first stage, students are introduced to the Choose Your Own Adventure project, and begin to brainstorm ideas for their stories.

Stage Overview
Estimated Time: 1h

Materials for the teacher:

- Choose Your Own Adventure storybook (Optional)

Materials for each student:

- Computer, Laptop, or Tablet (Optional)
- Internet Access (Optional)

Preparation:

- Choose the audience for your students' stories.
- Choose either a specific or open-ended theme for your students' stories.
- Choose the possible forms your students' stories could take.
- Determine any additional project criteria.
- If students will be using computers, laptops, or mobile devices, ensure that they are available for the activity.

Warm-up: What is Choose Your Own Adventure? (10 minutes)

Introduce the concept of Choose Your Own Adventure to your class. Explain that traditionally, Choose Your Own Adventure is a storybook in which the reader can make choices that determine the main character's actions and the plot's outcome, but essentially, it's an algorithm that has multiple paths. Optionally, share an example of a Choose Your Own Adventure storybook with the class.

Facilitate a class discussion or ask students to discuss in small groups using the following prompts:

- What are some of your favourite Choose Your Own Adventure experiences? Your experiences could come from books or different types of games.
- In each of your experiences, what choices could you make, and how did your choices affect the outcome?

Process: Understanding Context, Defining, and Ideating (40 minutes)

Introduce the project to your class and describe the audience, theme, resources available, and possible forms that their projects could take. Review the assessment criteria for the project.

Reflections: Creative Thinking (10 minutes)

Facilitate a class discussion, or alternatively, ask students to reflect individually or in small groups about the creative thinking process using the following prompts:

- How do you come up with new ideas?
- When do you come up with your best ideas?
- When you get stuck, how do you get unstuck?

Stage 2: Ideating, Prototyping, and Testing

In this stage, students must choose an idea that's appropriate for the intended audience, theme, and available resources, produce a quick prototype of their project, and gather feedback.

Stage Overview
Estimated Time: 1h

Materials for the teacher:

- Example of a tree diagram for a Choose Your Own Adventure story (Optional)

Materials for each student:

- Project Planning Student Sheet
- Project Feedback Student Sheet
- Pencil

Preparation:

- Print out 1 Project Planning Student Sheet per student
- Print out 1 Project Feedback Student Sheet per student.

Warm-up: What is a prototype? (10 minutes)

Explain to students that at this stage, they need to choose an idea to prototype and test. Describe a prototype as a simplified version of a project. To prototype an idea means to find a way to present the idea so that other people can give feedback. For a Choose Your Own Adventure story, a prototype can be as simple as a tree diagram that illustrates the different paths in the story.

Demonstrate how to quickly sketch a tree diagram for a Choose Your Own Adventure story. Optionally, show an existing example of a tree diagram for a story.

Process: Ideating, Prototyping, and Testing (40 minutes)

Ensure that each student has a pencil, the Project Planning Student Sheet, and the Project Feedback Student Sheet.

Review the Project Planning Student Sheet with the class. Stress that they need to choose an idea to prototype, and describe the idea and any special features of the idea on the

sheet. They also need to sketch a tree diagram of the story, so that someone can clearly see the possible paths in the story.

Next, review the Project Feedback Student Sheet. Explain that once they've sketched a tree diagram of their stories, they need to collect feedback from at least 3 different people. The person giving feedback must write down the following:

- Name
- One thing that works really well that the person should keep
- One thing that works well but could be done differently
- One thing that could be improved

Allow enough time for students to complete both student sheets.

Reflections: Giving and Receiving Feedback (10 minutes)

Facilitate a class discussion, or alternatively, ask students to reflect individually or in small groups about giving and receiving feedback using the following prompts:

- What are some examples of constructive feedback?
- Did you receive feedback that you might incorporate into your project? Why or why not?

Project Planning Student Sheet

Answer the questions below to start planning your project. You may describe your ideas in writing, draw sketches, or refer to other materials.

What is the main idea for your Choose Your Own Adventure story?

Who are the main characters in your story and what do they look like?

What are some unique or key features of your story?

Sketch a tree diagram for your story.

Project Feedback Student Sheet

Name	What is one thing that works really well that the person should keep?	What is one thing that works well that could be done differently?	What is one thing that could be improved?

Stage 3: Making

In this stage, students implement their ideas using available resources.

Stage Overview
Estimated Time: 3h

Materials for each student:	Preparation:
• Equipment and materials required to complete the project (depending on the chosen form)	• Ensure that students have access to all necessary equipment and materials.

At this stage, students are developing their projects using either online tools or traditional materials. Ensure that students have all the required equipment and supplies during this phase. We recommend giving students at least 2 to 3 sessions to complete their projects.

Stage 4: Sharing

In this final stage, students present their projects to the intended audience, reflect on their own design and development process, as well as receive feedback from the audience.

Stage Overview
Estimated Time: 1h

Materials for the teacher:	Preparation:
• Computer, Laptop or Tablet (Optional) • Projector and Screen (Optional) • Internet Access (Optional) • Speakers (Optional) **Materials for each student:** • Completed Choose Your Own Adventure Project • Self-Assessment Student Sheet (Optional) • Pencil (Optional)	• If the intended audience is outside of the classroom, arrange for the students and their audience members to meet. • If projects are stored on devices, set up the equipment, including the computer, laptop, or tablet, projector, and screen. • If students require their computers, laptops, or mobile devices, ensure that they are available. • Print out 1 Self-Assessment Student Sheet per student. (Optional)

Warm-up: Preparing for Presentations (10 minutes)

Review what each person will present about his or her project. For example, each student may present the following:

- Describe the main idea, characters, and key features of the story
- Demonstrate one path that the story can take
- Share one challenging aspect of making the project
- Explain why he or she chose this idea
- Describe what he or she could do differently next time

Process: Sharing and Reflecting (50 minutes)

Students present their projects to their intended audience and reflect on their design process. After each presentation, allow the audience to provide some constructive feedback. Once all the presentations are completed, congratulate students on a job well done!

Assessment

Criteria	Approaching	Meeting	Exceeding
Student recorded ideas and key features from his or her brainstorming.			
Student chose an idea to pursue that was appropriate for the intended audience, theme, and availability of resources.			
Student generated a prototype that could be tested and used to gather feedback.			
Student gave and gathered constructive feedback to and from peers, and was receptive to feedback.			
Student used appropriate tools and materials to construct his or her story.			
Student presented his or her project to the intended audience.			
Student reflected on his or her making process, and considered opportunities for improvement.			

Extensions

Try other visual or text-based programming tools

In addition to Twine, students learning Scratch can build their Choose Your Own Adventure stories by switching between various backdrops. Students learning Python or JavaScript can also implement their Choose Your Own Adventure story as a text-based game.

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Self-Assessment Student Sheet

Give an example or provide evidence of how you demonstrated or accomplished each of the following statements during this activity. Examples and evidence can include sketches, written descriptions, and references to photos or videos.

Statement	Example or Evidence
At the beginning of the project, I shared my favourite Choose Your Own Adventure experiences and/or listened to other students share their experiences.	
At the end of the project, I thought about my design process: how I chose my idea, the challenges I overcame, and what I could do differently next time.	
When brainstorming ideas for my story, I came up with ideas that were interesting to me and/or my audience.	
When coming up with ideas for my story, I thought about when I come up with my best ideas and what I could do if I got stuck.	
I chose my idea based on my interests and the criteria that we discussed in class.	
I thoughtfully reviewed another student's project plan, and gave constructive feedback.	
I reviewed my feedback from other students, considered each suggestion, and adapted my project based on ideas that I agreed with.	
I was happy to complete and/or share my project with other students.	