

Innovation Website

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Duration: 120 minutes

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 7-8, 9-12	Social Studies, Language Arts, Career Education, Science + Technology	Across Canada	HTML & CSS, Glitch

Overview

Students will learn about innovation in Canada, and create a website about their chosen recipient of the Governor General Innovation Award.

Prep Work

- Watch the “Content 101: Glitch” video: <http://bit.ly/content101-videos>
- Review the **example project** (click “Remix your own” to see inside): glitch.com/~innovation-website-example
- Print the **Solution Sheet** for the main activity: bit.ly/innovation-website-glitch
- You will need computers and access to the internet for this lesson.
- Learners will need emails to save their projects.

Key Coding Concepts

- ✓ Sequence

Terminology

Innovation

Innovation is the creation or improvement of a product or process to make an impact.

Webpage

A web page is a document or hypertext file connected to the World Wide Web that displays information using programming languages.

Hyperlink

A hyperlink or “link” is a link from a hypertext file to another

Lesson

Created in partnership with



**Fondation
Rideau Hall
Foundation**

Introduction

Ask: What does “innovation” mean? (A: Innovation is the creation or improvement of a product or process to make an impact)

Ask: What makes an idea “innovative?” (A: Something that is new, original, and creative)

Ask: What is the Governor General Innovation Award? (A: An award that celebrates innovation in Canada)

Ask: Do you know of anyone who has received this award? (See past recipients: innovation.gg.ca/year)

Watch this video about innovation in Canada: <https://youtu.be/3J7hDsna0rc>

Research:

Choose a Governor General’s award recipient from: <https://innovation.gg.ca>. Use the provided information, plus any additional research to answer the following questions (in a word document):

- Name of Canadian innovator
- Their invention or idea (in your own words)
- What problem were they trying to solve?
- How was their idea developed?
- What challenges did they face?
- How is their invention innovative?

location or file on the World Web Web. Links are what make the Web great because they connect pages together so that we can find them.

HTML

HTML (hypertext markup language) is a language used for tagging or “marking up” text files to achieve font, color, graphics, videos, and links on webpages.

CSS

CSS (cascading style sheets) is the visual language used for presentation or styling of a document written in a markup language. CSS files are what make the web colourful, patterned, responsive, and cool

Tag

A tag is a piece of code that specifies how the document or piece of the document should be formatted. Tags have angled brackets, for example <h1> is the top most heading on a webpage.

Curricular Connections

Research, Reading for meaning, Understanding Form and Style, Developing and organizing content, Form and style in writing, Understanding media texts, Creating media texts, Continuity and change, tools and technologies, innovation, Digital citizenship

*Don't forget to record where your findings are taken from, so you can properly reference your sources later.

We're going to make a website about our chosen award recipient!

Code Along

- Review the basic elements of a webpage using the "HTML Basics" slides: <http://bit.ly/html-basics-slides>
- Show students the code for the **example project**: <https://glitch.com/~innovation-website-example> - Open ahead of time by clicking "Remix your own" (below the preview) - Don't let them see the actual website yet!
- Ask: Based off of what we know about HTML tags, what do you think this website will look like?
- Either sketch the site up front based off of their feedback or have learners work in pairs to sketch out the website
- Click on "Show Live" (top, left) to see if you were able to guess how the website would be displayed.

Activity

Have learners go to <https://glitch.com> and sign in with email. They will need to go to their inbox and click on the confirmation button to begin.

Have learners open the **Starter Project** (<https://innovation-website-starter.glitch.me>) and select "Remix on Glitch".

Use the **Solution Sheet** to guide learners through the following steps:

- Remix the starter project
- Change the title of the site
- Change the heading
- Add some information
- Embed a video
- Add an image
- Change the styles

Example: BC Grade 7 Career Education (see Learning Outcomes)

References

Governor General's Innovation Award

<https://innovation.gg.ca>

E41 Resource for Grades K-12

<https://canadianinnovation.space.ca/resources/grades-7-to-12/>

Before learners share their website, have them add a section about themselves, reflecting on their role as a future innovator in Canada.

- What does innovation mean to you?
- What problems do you see in Canada that need help solving?
- How could you use your skills, strengths, or abilities to help solve these problems?

Have learners share the link to their published project with you (see solution sheet for steps).

Assessment

Learning Outcomes

- I can practice Innovative thinking by using original, creative solutions, or taking an existing idea and making it better
- I can use Innovative thinking and risk taking to help broaden career options
- I can help drive innovation in Canada by exploring and sharing my ideas
- I can use my skills, strengths, and abilities to help solve problems for others
- I can use websites to share information with others

Assessment Ideas

Have learners use `<!--Comments-->` to explain their code

Provide time for learners to present their websites to the class.

Guide learners through editing and revising their work using the CUPS strategy (Capitalization, Usage, Punctuation, Spelling) - before submitting their final version.

Extensions

Introduce HTML through play! Before this lesson, plan time for learners to play **eraseallkittens.com** ("Play Demo"). You may want to create a (free) account for your class which all students can use to sign in, or have them sign up using their individual emails.

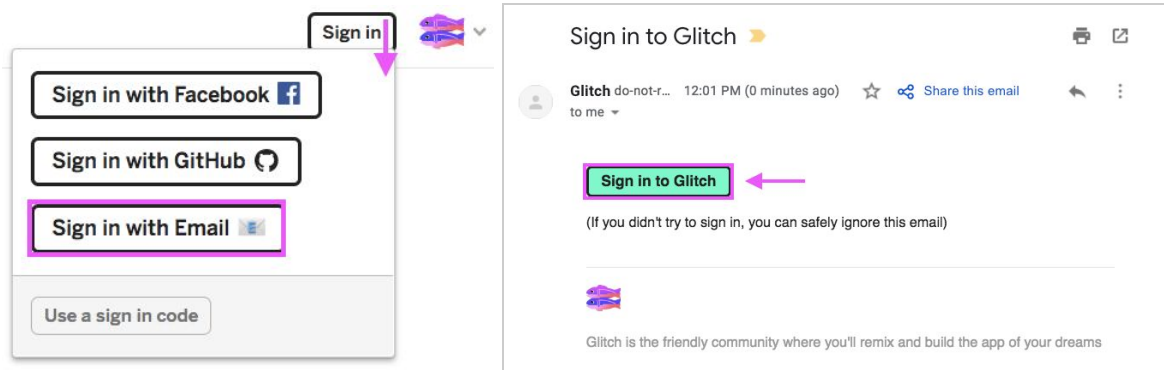
Add a more extensive research element. Have learners spend more time learning about their innovator or invention, organized by subtopics. Create a multi-page website by adding new html pages inside of the Thimble project, then linking the pages together using `<a>` tags.

Build this into a unit on innovation using lesson plans from the [E41 Resource for Grades K-12](#)

Innovation Website

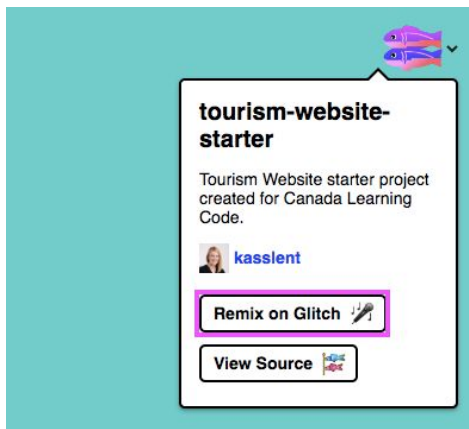
STEP 1: Sign in

1. Have learners go to <https://glitch.com> and sign in with email.
2. They will need to go to their inbox and click on the confirmation button to begin.

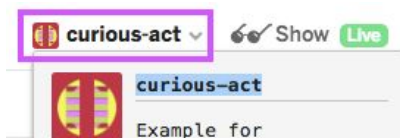


STEP 2: Remix the Starter Project

1. Open the starter project: innovation-website-starter.glitch.me
2. Select "Remix on Glitch"

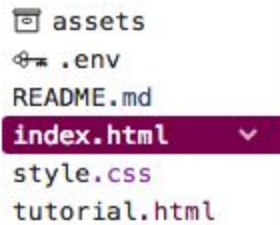


3. Change the project name (top left)



STEP 3: Change the title of the site

1. Open the Index.html to get started. This is our home page.



2. Find the **<title>** element on line 6
3. Change the title from "Innovation Website" to include your chosen topic
4. Preview your website by clicking on "Show Live" (top)



5. You'll notice that this doesn't change anything on the website (visually). That's because this is a 'behind-the-scenes' name that is used when users search for our site or bookmark/save it in their browser.

```
6 <title>Innovation Website</title>
```

STEP 4: Change the heading

1. The title that we actually see on the page is called a Heading. Find the **<h1>** tag on line 10.
2. Replace the text with your chosen innovator or invention

```
10 <h1>Name of Innovator</h1>
```

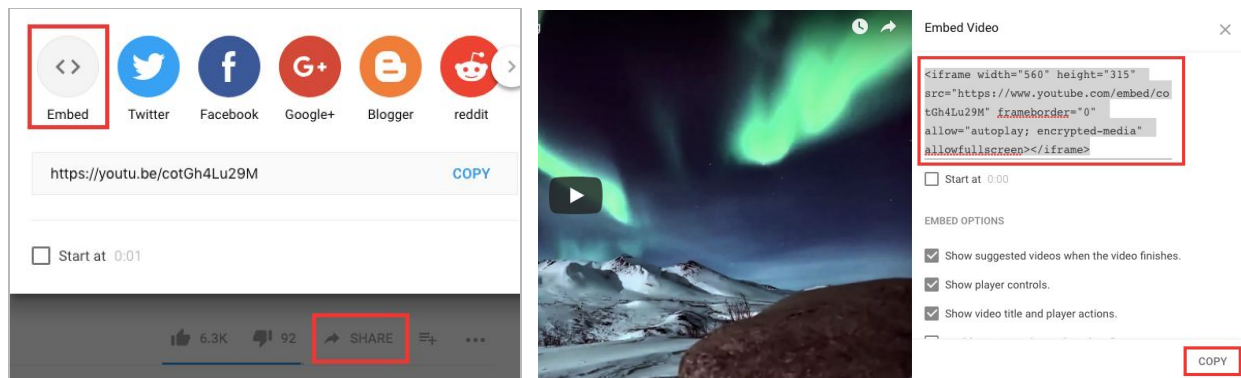
STEP 5: Add some information

1. Find the paragraph **<p>** on line 15
2. Update them with information about your innovator or invention
3. Add more paragraphs using the **<p>** **</p>** tags

```
15 <p>Information about their invention ... </p>
```

STEP 6: Embed a video

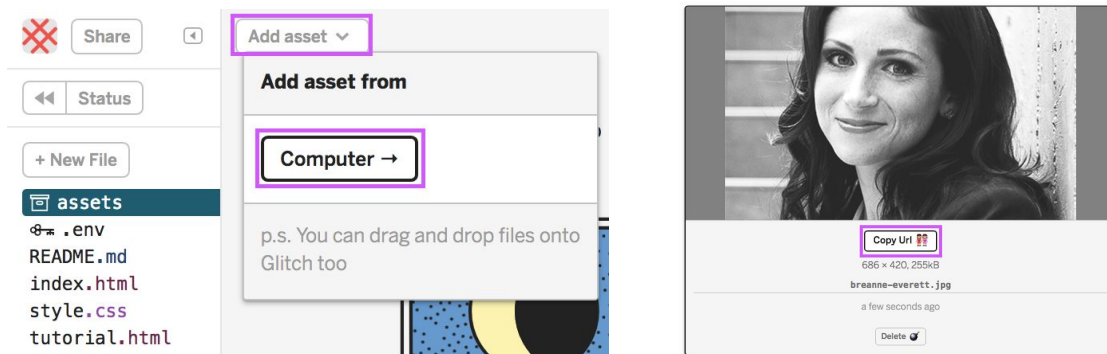
1. First, we need to find a video. Use a featured video from the Governor General website (<https://innovation.gg.ca/en/>) or head to [youtube.com](https://www.youtube.com) to search for a video that relates to your topic.
2. Once you've found the video you want to embed in your site. Click the share button (it looks like a little arrow with share beside it) and choose embed.
3. Copy the embed code.
4. Go back to your project. Delete the other `<iframe>` code on line 11 to get rid of the example video.
5. Paste the code you just copied into line 11



```
11 <iframe width="560" height="315" src="https://www.youtube
```

STEP 7: Add an image

1. Go to Google Images and search for an image relating to your topic. Try to find a creative commons image by selecting Tools > Usage rights > Labeled for reuse.
2. Save the image to your computer (right click + Save image as)
3. In Glitch, go to the "assets" tab and upload the file from your computer
4. Click on the image, then "copy url" so we can add it to our webpage



5. Back in the "index.html" create a new image tag (see below

```
16 
```

6. Add an **alt** attribute describing the image to make your website accessible to people using screen readers or similar technologies

```
16 <img alt="Image of Breanne Everett" />
```

More info on images here: w3schools.com/tags/tag_img.asp

STEP 8: Change the styles

1. The CSS file is where the styles for the website are kept. Open the **style.css** tab to see the existing styles. What do you see?

```
assets
.env
README.md
index.html
style.css
tutorial.html
```

2. Try to change the background colour on line 3. What words or numbers work?

```
1 body {
2   font-family: "Open Sans", sans-serif;
3   background-color: blue;
4 }
5 h1 {
6   color: #ffffff;
7   font-size: 48px;
8 }
9
10 /*This is a comment. For more style ideas, check out: css.cool */
```

3. Let's add some more styles! Have learners go to css.cool to see some more options
4. Show learners how to click on a style on css.cool (which automatically copies the code for us!) then paste the code into style.css using CTRL+V
5. Add style to a NEW element by typing the tag name, then pasting the styles inside of curly brackets (just like the examples already in there)



Finished? Share your website!

1. Remind learners to rename their project (top left) with their first names. Have them check with a partner to make sure they both renamed their projects.
2. The link to their website is the same as the preview link ("show live")
3. Have them copy the URL and share it with you online (Twitter, Google Classroom, etc.).

