



TechReady

# Technology and Me

## Course Progression



*This document isn't a substitution for lesson planning, please work through the course on the platform ahead of time to prepare for teaching.*

### Course Overview

As new explorers of technology, students will make connections to technology by participating in entry-level Guided Projects that allow them to share their own personal experiences and interests. Students will learn introductory skills in HTML and CSS while exploring basic concepts in JavaScript. Students will create their own personal web page, and a blog, make their own quiz game and develop other similar digital artifacts. These projects will teach the basics of web design along with critical digital skills like design thinking, prototyping, and digital citizenship.



### Course Learning Objectives

The BSD TechReady: Technology and Me Course aims for students to:

- Apply different uses of technology to multiple real-world scenarios
- Build digital artifacts using HTML, CSS, and JavaScript
- Expand their knowledge and understanding of the real-world application of technology tools across different industries
- Exercise the fundamental principles and processes of computational thinking, design thinking, and user experience design
- Communicate effectively with digital media
- Practice collaborative skills as an informed digital citizen
- Explore themes in online privacy
- Investigate best practices in online safety

- Understand copyright laws and public domain
- Practice self/peer-evaluation

## Course Structure

Technology and Me is designed to be led by an instructor in a virtual, hybrid or offline learning environment, with the possibility of allowing students to complete Guided Projects self-paced or asynchronously. All lessons center around the completion of a Guided Project that, once finished, provides students with their own digital artifact customized to their individual creative vision and ideas. After completing the Guided Projects, students will have the choice of two different Capstone projects.

Following our 3-step approach to curriculum **Explore, Learn & Create**, learning unfolds by *exploring* new concepts, *learning* tools, and methods needed to produce a digital artifact and then *creating* the artifact in a Guided Project.



**Explore:** Students will be introduced to methods and design protocols that real web designers use and will explore how to interact and engage safely in online environments through activities that develop digital citizenship.



**Learn:** Teachers will lead students through 7 Guided Projects that teach the necessary skills in HTML, CSS, and JavaScript to design custom web pages that will start to cultivate computational thinking. Students will also learn how to plan out project ideas as a design process.



**Create:** Students will create 7 unique projects throughout the course. At the end of the course, students will be asked to customize a project of their choice as a capstone to the course. Each of the projects will be customizable and can be shared using a public URL or QR code.

## Assessment

Each Guided Project will be accompanied by a 3-5 question multiple-choice quiz that tests students' understanding of coding concepts and syntax. Student progress and results will be shared in the Classroom on BSD Online.

## Capstone Project

At the end of the course, students will have the opportunity to participate in a capstone project where they will be provided with self-directed time to customize one of the projects from a previous lesson. Students can choose from 2 options for a capstone project. Teachers will be provided with a Teacher Guide and rubric to help lead students through the

completion of the capstone project.

## Course Level Standards Alignment

	Recipe Card	Personal Webpage	Digital Citizenship Guide	Online Profile	TechRea Blog	JavaScript Chatbot	TechRead Trivia Game
<b>ISTE</b>	2c, 3c, 6b, 6d	2c, 3c, 6b, 6d	2c, 3c, 6b, 6d	2a, 2b, 2c, 2d, 3c, 6b, 6d	2c, 3c, 6b, 6d	2c, 3c, 6b, 6d	2c, 3c, 6b, 6d
<b>CSTA</b>	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	1A-AP-08, 1B-AP-09, 1B-AP-10, 1A-AP-11, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	1A-AP-08, 1B-AP-09, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16

### ISTE: the International Society for Technology in Education

*“The ISTE Standards provide the competencies for learning, teaching and leading in the digital age, providing a comprehensive roadmap for the effective use of technology in schools worldwide. The standards have been adopted in all 50 U.S. states and many countries throughout the world.”* Click [HERE](#) to find out more about ISTE.

### CSTA - Computer Science Teachers Association

*“These Standards are designed to provide clear guidance around effective and equitable CS instruction in support of rigorous CS education for all K-12 students around the world.”* Click [HERE](#) to find out more about CSTA.

## Course Summary

This guide is intended to help you set the pace for this course. Each project is broken down into 45-min to 1-hour sessions but can be customized to meet your needs.

## Teacher Resources:

[Recipe Card - Slides](#)

[Recipe Card - Planning Document](#)

[Personal Webpage - Slides](#)

[Personal Webpage - Planning Document](#)

[Digital Citizenship Guide - Slides](#)

[Digital Citizenship Guide - Planning Document](#)

[Online Profile - Slides](#)

[Online Profile - Planning Document](#)

[Blog - Slides](#)

[Blog - Planning Document](#)

[JavaScript Chatbot - Planning Document](#)

[Trivia Game - Slides](#)

[Trivia Game - Planning Document](#)

[Technology and Me Capstone - Slides](#)

[Blog - Capstone Guide](#)

[Personal Webpage - Capstone Guide](#)

[BSD Project Rubric](#)

[JavaScript Chatbot - Slides](#)

## Course Vocabulary

All vocabulary definitions are located in the glossary, which contains definitions, syntax, examples and interactive steps.

coding	width	<button>
HTML	height	onclick
CSS	background-color	alert
computational thinking	font-size	prompt
algorithm	id	variable
decompose	private information	string
abstraction	personal information	comparison operator
hex color codes	section	if statement
<div>	class	else if statement
<img>	<span>	conditional statement
<h1> - <h4>	text-align	==
<p>	padding	const
<ul>	margin	let
<li>	border-radius	
<ol>	JS	

### Hour 1:

#### Explore/Learn:

1. Discussion Questions
  - a. What is coding?
    - i. how we “talk” to computers to tell them what to do.
  - b. Does anyone have coding experience?
    - i. Answers will vary

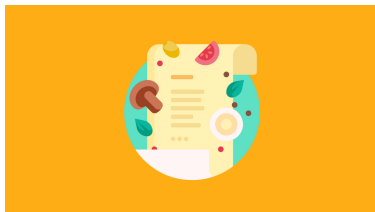
2. Introduce students to coding and the first project using the [Recipe Card - Slides](#)
3. Have students use the [Recipe Card - Planning Document](#) to begin laying out their project.

## Hour 2:

### Create:

1. Review vocabulary
  - a. Coding, HTML, CSS, computational thinking, algorithm, decompose, and abstraction
2. Students will begin working on the Recipe Card Project using their Planning Document as a guide.

## Guided Project - Recipe Card

Difficulty	1	
Learning Hours	4	
Languages(s)	HTML, CSS	
Theme(s)	Web design	
Description	Explore introductory concepts in HTML and CSS to design and build a recipe card from a favorite dish. Along the way learn about planning out web designs and how to prepare all of your digital content for development.	
ISTE	2c, 3c, 6b, 6d	
CSTA	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	

## Hour 3:

### Create:

1. Students will continue working on the Recipe Card Project.
2. Once students complete the project they will be directed to a short assessment.

## Hour 4:

### Extensions & Integration:

1. Extensions
  - a. Students can export this project into sandbox for their own creativity.
2. Subject Integration

- a. Math: Directions on how to solve long division problems.

### Wrap Up:

3. Discussion questions:
  - a. What did we create today?
    - i. Recipe card
  - b. What HTML elements did you use?
    - i. `<h1>`, `<div>`, `<img>`, `<p>`, `<ul>`, `<li>`, `<ol>`
  - c. Did you have to do any CSS? If so, what?
    - i. Width, height, background-color, font-size
  - d. Did you create anything new?
    - i. Answers will vary

### Hour 5:


#### Explore/Learn:

1. Review vocabulary
  - a. `<h1>`, `<div>`, `<img>`, `<p>`, `<ul>`, `<li>`, `<ol>`
2. Discussion Questions
  - a. If I want to change the size of text, where do I go?
    - i. CSS
  - b. When writing a code in CSS, what symbol must I include at the end?
    - i. ;
3. Today's you will learn how to use HTML and CSS to create a Personal Webpage that includes images, links, and descriptions of things that describe who you are and what you like to do. We will also discuss online privacy so we can make good choices about what to share and what not to share.
4. Introduce students to the next coding project using the [Personal Webpage - Slides](#).
5. Have students use the [Personal Webpage - Planning Document](#) to begin laying out their project.

#### Create:

6. Students will work on the guided project called Personal Webpage.

### Guided Project - Personal Webpage

Difficulty	1	
Learning Hours	4	
Languages(s)	HTML, CSS	
Theme(s)	Web design	

<b>Description</b>	Design and build a personal webpage that includes images, links and descriptions of things that describe who you are and what you do. Explore themes in online privacy to make good choices about what to share and what not to share.
<b>ISTE</b>	2c, 3c, 6b, 6d
<b>CSTA</b>	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16

## Hour 6 - 7:

### Create:

1. Students will continue to work on the guided project called Personal Website.
2. Students will complete the guided project called Personal Website.
3. Once students complete the project they will be directed to a short assessment.

## Hour 8:

### Extensions & Integration:

1. Extensions
  - a. Students can export this project into sandbox for their own creativity.
2. Subject Integration
  - a. Social Studies/History/ELA: explorers, inventors, presidents, authors

### Wrap Up:

3. Discussion questions:
  - a. What did we create today?
    - i. A Personal Website
  - b. Which HTML elements did you use?
    - i. <h1> - <h2>, <img>, id, <p>
  - c. Which CSS elements did you use?
    - i. background-color, color, font-size
  - d. Did you create anything new?
    - i. Answers will vary

## Hour 9:

### Explore/Learn:

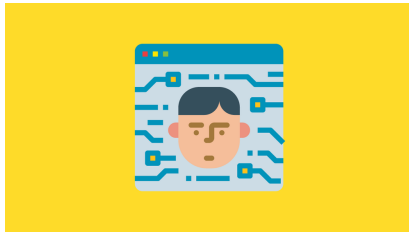
1. Review vocabulary
  - a. <h1> - <h3>, <div>, <p>, width, background-color, color, font-size, id,
2. Discussion Questions
  - a. What are Hex Color Codes?
    - i. Starts with # then 6 letters and numbers, by using a code we can now have **16,777,216** colors to pick from

- Today you will begin a new project called Digital Citizenship Guide. You will investigate best practices in online safety before making a digital citizenship guide with the do's and don't of online safety. Consider rules that keep us safe when interacting online.
- Introduce students to the next coding project using the [Digital Citizenship Guide - Slides](#).
- Have students use the [Digital Citizenship Guide - Planning Document](#) to begin laying out their project.

### Create:

- Students will work on the guided project called Digital Citizenship Guide

### Guided Project - Digital Citizenship Guide

Difficulty	1	
Learning Hours	6	
Languages(s)	HTML, CSS	
Theme(s)	Web design	
Description	Investigate best practices in online safety before making a digital citizenship guide with the do's and don'ts of online safety. Consider rules to make that keep us safe when interacting online	
ISTE	2c, 3c, 6b, 6d	
CSTA	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	

### Hour 10 - 12:

#### Create:

- Students will continue to work on the guided project called Digital Citizenship Guide.

### Hour 13:

#### Create:

- Students will complete the guided project called Digital Citizenship Guide.
- Once students complete the project they will be directed to a short assessment.

### Hour 14:

#### Extensions & Integration:

- Extensions



- a. Students can export this project into sandbox mode to add additional Dos and Don'ts.
2. Subject Integration
  - a. Use this as a guide for expectations in your classroom. Have the students create a list of expectations.

### Wrap Up:

3. Discussion questions:
  - a. What did we create today?
    - i. Digital Citizenship Guide
  - b. Which HTML elements did you use?
    - i. Section, class, <span>
  - c. Which CSS elements did you use?
    - i. Text-align, padding, margin
  - d. Did you create anything new?
    - i. Student answers will vary.

### Hour 15:


#### Explore/Learn:

1. Review vocabulary
  - a. Section, class, <span>, Text-align, padding, and margin
2. Discussion Questions
  - a. Tell me one way that you can protect yourself when online?
    - i. Students' answers will vary
      1. Don't share your password
      2. Don't use/share private information
      3. Be kind
      4. Don't cyberbully/Stand up to cyberbullies
3. Today you will learn about online communities and how to use HTML and CSS to create your online profile.
4. Introduce students to the next coding project using the [Online Profile - Slides](#).
5. Have students use the [Online Profile - Planning Document](#) to begin laying out their project.

#### Create:

6. Students will work on the guided project called Online Profile.

### Guided Project - Online Profile

Difficulty	1		
Learning Hours	6		
Languages(s)	HTML, CSS		
Theme(s)	Web design		
Description	Design an online presence profile for a fictitious online community that shows your role in the online community. Explore how online communities communicate with respect for privacy.		
ISTE	2a, 2b, 2c, 2d, 3c, 6b, 6d		
CSTA	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16		

## Hour 16 - 18:

### Create:

- Students will continue to work on the guided project called Online Profile

## Hour 19:

### Create:

- Students will complete the guided project called Online Profile..
- Once students complete the project they will be directed to a short assessment.

## Hour 20:

### Extensions & Integration:

- Extensions
  - Students can export this project into sandbox mode to add additional images and information.
- Subject Integration
  - ELA: Creative writing assignment: What are your superpowers?
  - ELA: Book reviews

### Wrap Up:

- Discussion questions:
  - What did we create today?
    - Online Profile
  - Which HTML elements did you use?
    - <h1> - <h4>, id, ul, li
  - Which CSS elements did you use?

- i. border-radius, width, height, font-size, margin
- d. Did you create anything new?
  - i. Student answers will vary.

## Hour 21:

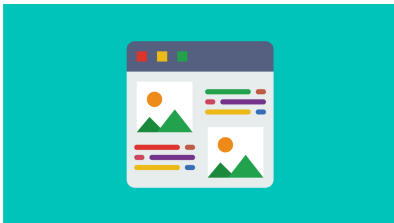
### Explore/Learn:

1. Review vocabulary
  - a. ul, li, border-radius
2. Discussion Questions
  - a. What information did you protect when creating your online profile?
    - i. Didn't use your full name, not the name of the school, not your address
3. Today you will learn about Blogs and how to use HTML and CSS to create your blog.
4. Introduce students to the next coding project using the [Blog - Slides](#).
5. Have students use the [Blog - Planning Document](#) to begin laying out their project.

### Create:

6. Students will work on the guided project called Blog.

### Guided Project - TechReady - Blog

Difficulty	1		
Learning Hours	4		
Languages(s)	HTML, CSS		
Theme(s)	Web design		
Description	Create a multi-post blog on an interesting topic and explore how bloggers share what is important to them. Explore how to use license-free imagery to add unique images to the blog.		
ISTE	2c, 3c, 6b, 6d		
CSTA	1A-AP-08, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16		

## Hour 21-23:

### Create:

1. Students will complete the guided project called Blog.
2. Once students complete the project they will be directed to a short assessment.

## Hour 24:

### Extensions & Integration:

1. Extensions
  - a. Students can export this project into sandbox mode to add additional blog posts..
2. Subject Integration
  - a. Create a themed blog based on your subject area.
    - i. US History - “Today in history”

### Wrap Up:

3. Discussion questions:
  - a. What did we create today?
    - i. Blog
  - b. Which HTML elements did you use? Any new ones?
    - i. <a>, href
  - c. Which CSS elements did you use? Any new ones?
    - i. No new ones, font-family, background-color
  - d. Did you create anything new?
    - i. Student answers will vary.

## Hour 25:

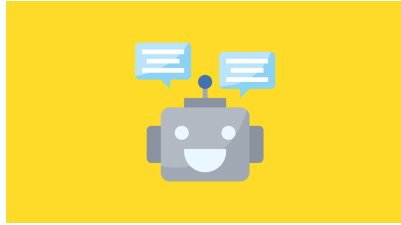
### Explore/Learn:

1. Review vocabulary
  - a. <a>, href
2. Discussion Questions
  - a. What does public domain mean?
    - i. Free to use images/videos
3. Today you will learn a new coding language called JavaScript or JS for short. JavaScript is the brain or the doer. JS allows us to interact. You are going to create a JavaScript Chatbot by using HTML, CSS, and JavaScript.
4. Introduce students to the next coding project using the [JavaScript Chatbot - Slides](#).
5. Have students use the [JavaScript Chatbot - Planning Document](#) to begin laying out their project.

### Create:

6. Students will work on the guided project called JavaScript Chatbot.

## Guided Project - JavaScript Chatbot

Difficulty	2	
Learning Hours	6	
Languages(s)	HTML, JS	
Theme(s)	Programming	
Description	Explore JavaScript fundamentals to make an interactive digital conversation game that can be customized with new responses. To build up skills in JavaScript, learn how to make alerts, prompts, and how logic operators work.	
ISTE	2c, 3c, 6b, 6d	
CSTA	1A-AP-08, 1B-AP-09, 1B-AP-10, 1A-AP-11, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16	

## Hour 26-29:

### Create:

1. Students will complete the guided project called JavaScript Chatbot.
2. Once students complete the project they will be directed to a short assessment.

## Hour 30:

### Extensions & Integration:

1. Extensions
  - a. Students can export this project into sandbox mode to add additional questions or change the current alerts and prompts.
2. Subject Integration
  - a. This project is a nice lead-in to the next project called Trivia Game where students will be able to integrate core subject matter.

### Wrap Up:

3. Discussion questions:
  - a. What did we create today?
    - i. JavaScript Chatbot
  - b. Which HTML elements did you use? Any new ones?
    - i. `<button>`, `onclick`

- c. Which CSS elements did you use? Any new ones?
  - i. Did not use
- d. Which JS elements did you use?
  - i. Alert, prompt, variable, string, conditional statement, comparison operator, if statement, else if statement
- e. Did you create anything new?
  - i. Student answers will vary.

## Hour 31:


### Explore/Learn:

1. Review vocabulary
  - a. Alert, prompt, variable, string, conditional statement, comparison operator, if statement, else if statement
2. Discussion Questions
  - a. What is JS coding language?
    - i. JavaScript, the brain, brings action, clickable, interactive
3. Today you will continue to use what you learned from the last project, JavaScript Chatbot. This time you are going to create a Trivia Game by using HTML, CSS, and JavaScript.
4. Introduce students to the next coding project using the [Trivia Game - Slides](#).
5. Have students use the [Trivia Game - Planning Document](#) to begin laying out their project.

### Create:

6. Students will work on the guided project called Trivia Game.

### Guided Project - TechReady - Trivia Game

Difficulty	2	
Learning Hours	4	
Languages(s)	HTML, JS	
Theme(s)	Game Development, Programming	
Description	Expand on JavaScript fundamentals to make an interactive trivia game that can be customized with new questions. To broaden skills in JavaScript, learn how to use variables and math operators.	

<b>ISTE</b>	2c, 3c, 6b, 6d
<b>CSTA</b>	1A-AP-08, 1B-AP-09, 1B-AP-12, 1B-AP-14, 1B-IC-19, 1B-IC-21, 2-AP-16

## Hour 32-33:

### Create:

1. Students will complete the guided project called Trivia Game..
2. Once students complete the project they will be directed to a short assessment.

## Hour 34:

### Extensions & Integration:

1. Extensions
  - a. Students can export this project into sandbox mode to change or add additional questions.
2. Subject Integration
  - a. Have the students create Trivia questions based on your subject area.
    - i. Math facts
    - ii. States - Countries

### Wrap Up:

3. Discussion questions:
  - a. What did we create today?
    - i. Trivia Game
  - b. Which HTML elements did you use? Any new ones?
    - i. No new ones, <button>, onclick
  - c. Which CSS elements did you use? Any new ones?
    - i. Did not use
  - d. Which JS elements did you use?
    - i. Const, let, alert, prompt, variable, string, conditional statement, comparison operator, if statement, else if statement
  - e. Did you create anything new?
    - i. Student answers will vary.

## Hour 35:

### Explore/Learn:



1. Today you will begin your Capstone Project. A Capstone Project is a final project that allows you the opportunity to demonstrate everything that you have learned in this course. You will have some freedom for your own choice and voice in the project.

2. Introduce students to the Capstone Project choices and how you will gauge their learning ([BSD Project Rubric](#)) using the [Technology and Me Capstone - Slides](#).
  - a. Have students use the [Blog - Capstone Guide](#) for tips on how to get started.
  - b. Have students use the [Personal Webpage - Capstone Guide](#) for tips on how to get started.

**Create:**

3. Students will work on their chosen Capstone Project.

**Guided Project - Capstone - Blog or Personal Webpage**

Difficulty	2	 
Learning Hours	6	
Languages(s)	HTML, CSS	
Theme(s)	Web design	
Description	<p>Elaborate on the Personal Webpage project to include more sections and information to create a full personal web page. Work in Sandbox mode for unlimited creativity.</p> <p>Elaborate on the Blog project to include more posts and information to create a full personal blog on a topic of your choice. Work in Sandbox mode for unlimited creativity.</p>	

**Hour 36-39:**

**Create:**

1. Students will continue to work on their chosen Capstone Project.
  - a. The students can refer to the [BSD Project Rubric](#) for self-evaluation.

**Hour 40:**

**Extensions**

1. Extensions
  - a. Student self-evaluation
  - b. Peer evaluation

**Wrap Up:**

2. Discussion questions:
  - a. What did we create today?



- i. Capstone Project - Blog, Capstone Project - Personal Website
- b. Have the students provide feedback on the project
  - i. Did you have any issues/trouble during the project?
    - 1. If so, what?
  - ii. Did you learn something new doing this project?
  - iii. Would you change anything about this project?