#KarelCon2021

TEACHING USING CODEHS'S NEW COURSE BUILDING TOOLS

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A little about me, the classes and grades I teach and class structure

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The working approach I took to teaching computer science

03. **STUDENT WORK**
A display of student work produced this school year

04. **NEXT SCHOOL YEAR PLANNING**
Things to consider when planning for next year

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PORTIA MORRELL

Exposed to Computer Science in 7th grade and studied it in college

Started in the Computer Science Education world in 2011 as a Coding Instructor at a Tech Summer Camp

Specializes in curriculum development

Currently teaching 8-10th grade at a French bilingual school

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CURRENTLY TEACHING

8th Grade
Scratch / Social Media / HTML & CSS

9th Grade
P5JS / Javascript & DOM

10th Grade
Python / Ethics / Data Science

Held in two 55 minute class blocks every week + half
Bilingual students where english is the second language

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THE APPROACH

Design Principles from Association for Middle Level Education (AMLE) workshop

Presented by Dr. Bryan R. Drost

Title: Designing Online Instruction for the Middle Grades: What Makes for Effective Learning

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THE APPROACH

5E Model of Instruction

*from workshop

More details

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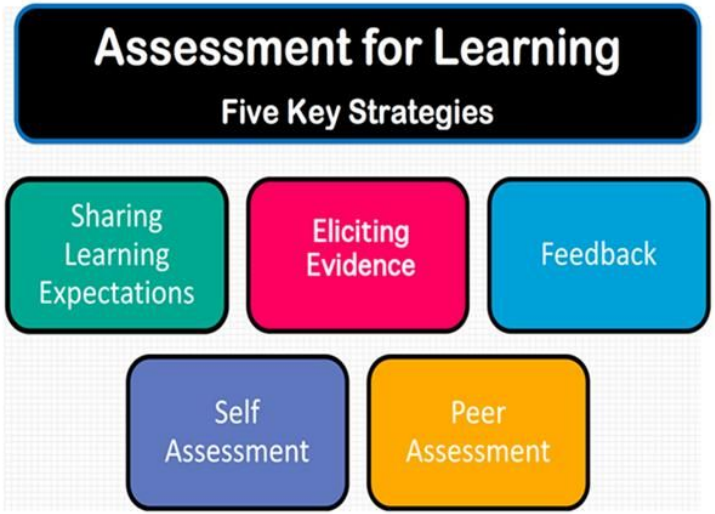
THE APPROACH

Wiliam (2011) identifies five pillars to successful formative assessment



*from workshop

More details

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THE APPROACH

My first attempt in online design using google classroom. This sample was designed for my 8th graders learning Scratch. All resources are available in English and French so students can choose.

Scratch Platform Game

1) Setting Up the Game / Configurer le jeu	Edited Nov 20, 2020
2) Adding Gravity / Ajout de gravité	Posted Nov 20, 2020
3) Add a Winning Sprite / Ajouter un sprite g...	Posted Nov 20, 2020
4) Add THREE extras / Ajouter TROIS extensi...	Posted Nov 20, 2020
5) Turn in Final Game / Rendre le jeu final	Due Dec 4, 2020

Scratch Maze/Labyrinth

1) Setting Up the Game / Configurer le jeu	Posted Nov 11, 2020
2) Adding You Win / Ajouter vous gagnez	Posted Nov 11, 2020
3) Choose Two Extras to Add to the Game / ...	Edited Nov 19, 2020
4) Turn in Final Game / Rendre le jeu final	Due Nov 20, 2020

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CODEHS COURSE BUILDING SAMPLES

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COURSE BUILDING STRUCTURE

Module Name / Unit Name

- Lesson Name
  a. Assignment
  b. Assignment
- Lesson Name

Assignment Types Currently Available

- **Coding Exercise:** Prompt your students to create an open ended sandbox-style coding project
- **Quiz:** Create a multiple choice quiz for your students to take
- **Practice Problem:** Create an autograded practice coding problem
- **Video:** Embed a video for your students to watch
- **Article:** Embed an article or webpage for your students to view
- **Notes:** Create lecture notes for your students to read
- **Free Response:** Create a free response prompt for your students to respond to
- **Embed:** Embed an activity from another website

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9th Grade
Semester 1

P5 JS

Hide Lessons

1.1 GETTING STARTED WITH P5

1.2 LINES & POINTS

1.3 COLORS

1.4 CUSTOM SHAPES, ARCS & EMOJI CHALLE...

1.5 P5JS VARIABLES, MOUSEX & MOUSEY

1.6 KEYBOARD INPUT

1.7 FUNCTIONS

1.8 VIDEOS FOR HELP / VIDÉOS D'AIDE

FINAL PROJECT

ADD NEW LESSON

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9th Grade
Semester 1

1.1 GETTING STARTED WITH P5

- Video **The Canvas & Basic Shapes** [Edit]
- Notes **Example Code** [Edit]
- Exercise **Make a Robot / Faire un robot** [Edit]
- Add New Assignment

1.2 LINES & POINTS

- Article **Points & Lines Google Slides** [Edit]
- Exercise **Make a Thunderbolt** [Edit]
- Exercise **Optional: Make a star** [Edit]
- Add New Assignment

1.3 COLORS

- Article **Colors Presentation** [Edit]
- Exercise **Make a Landscape** [Edit]
- Add New Assignment

1.4 CUSTOM SHAPES, ARCS & EMOJI CHALLE...

- Embed **Custom Shapes & Arcs Google Slides** [Edit]

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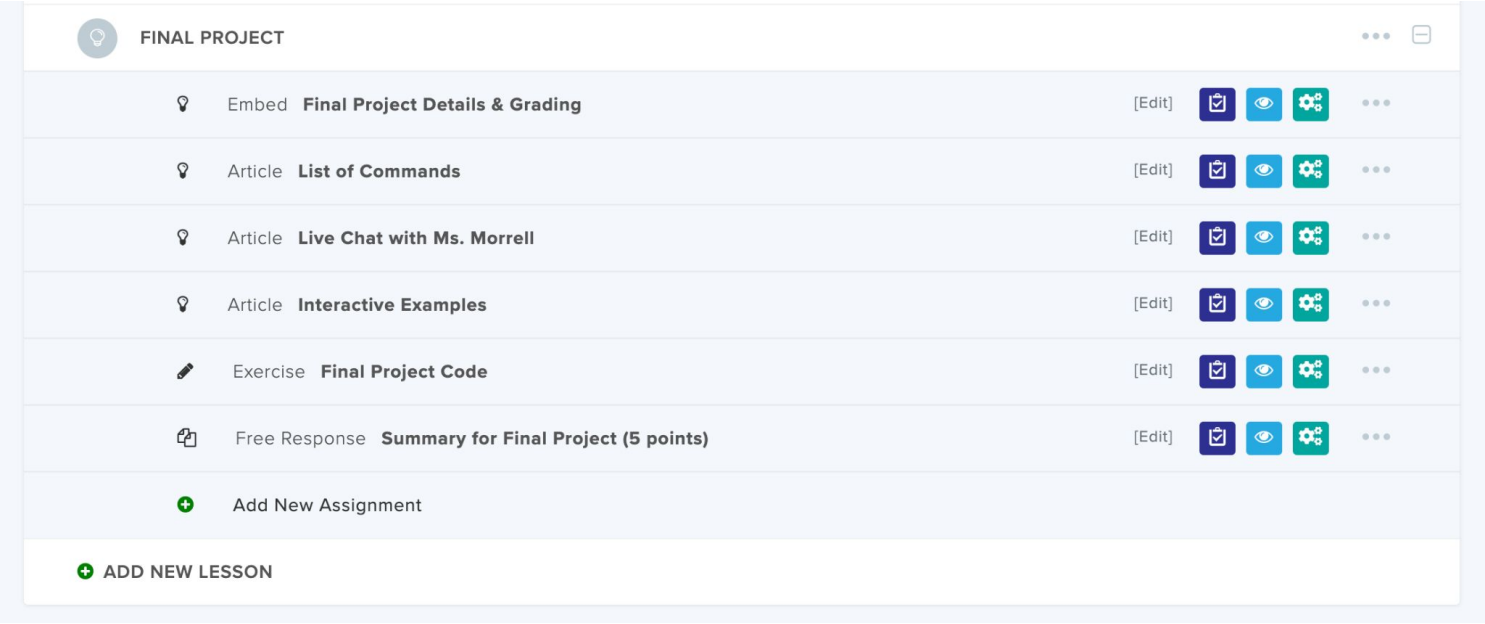
9th Grade
Semester 1



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9th Grade
Semester 2

JS

JAVASCRIPT & DOM

Hide Lessons

- 2.1 GETTING STARTED WITH JAVASCRIPT
- 2.2 INTRO TO DOM
- 2.3 INTRO TO DOM & CSS
- 2.4 DOM & BUTTONS
- 2.5 INPUT
- 2.6 FINAL PROJECT - QUIZ GAME

ADD NEW LESSON

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9th Grade
Semester 2

2.1 GETTING STARTED WITH JAVASCRIPT

Embed	**The Script Tag Presentation**	[Edit]
Notes	**Example Code: Alert() & Prompt**	[Edit]
Exercise	****Graded** Alert() with a Greeting/ Alert() avec un message d'accueil**	[Edit]
Exercise	****Graded** Meet Time for Dinner / Rendez-vous pour le dîner**	[Edit]

Add New Assignment

2.2 INTRO TO DOM

Embed	**Intro to DOM Presentation**	[Edit]
Notes	**Example Code: document.getElementById()**	[Edit]
Exercise	**Graded Exercise: Let's Get to Know You**	[Edit]

Add New Assignment

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9th Grade
Semester 2

2.4 DOM & BUTTONS

- Embed **DOM & Buttons Presentation** [Edit]
- Notes **DOM & Buttons Example** [Edit]
- Exercise **Graded Exercise: Buttons for CSS** [Edit]
- Add New Assignment

2.5 INPUT

- Embed **Input Presentation** [Edit]
- Embed **Example Code: Input Boxes** [Edit]
- Exercise **Graded Exercise: Make a Mad Libs Story** [Edit]
- Add New Assignment

2.6 FINAL PROJECT - QUIZ GAME

- Notes **Example Code: Quiz with buttons and input boxes** [Edit]
- Exercise **The Quiz Game -- Le jeu de quiz (Due March 30th **New Date**)** [Edit]
- Add New Assignment

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8th Grade
Semester 2

MAKING WEBSITES / CRÉER DES SITES WEB

Hide Lessons

- 01 INTRO TO HTML
- 02 FORMATTING TEXT / FORMATAGE DU TEXTE
- 03 LINKS / LIENS
- 04 IMAGES
- 05 LISTS
- 06 INTRO TO CSS

ADD NEW LESSON

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8th Grade
Semester 2

03 LINKS / LIENS

- Article **Links / Liens Presentation** [Edit]
- Embed **Example Code: Links / Liens** [Edit]
- Exercise **Graded Exercise: My Favorite Links / Mes liens favoris** [Edit]
- Add New Assignment

04 IMAGES

- Article **HTML Images Presentation** [Edit]
- Embed **Example Code: HTML Images** [Edit]
- Exercise **Graded Exercise: My Personal Library -- Ma bibliothèque personnelle** [Edit]
- Add New Assignment

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STUDENT SAMPLES

A LITTLE HOPE

View Here

COWS & UFOS

View Here

RECIPE PAGE

View Here

CS QUIZ

View Here

PYTHON QUIZ

View Here

GENERAL QUIZ

View Here

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NEXT SCHOOL YEAR PLANNING

STANDARDS/GOAL ALIGNMENT

Figure out the standard and goals you want the students to be able to accomplish

MASTERY GRADING

Consider a new way to grade student work, more info here

PLAN AT LEAST ONE UNIT AHEAD

Though time consuming, planning at least one whole unit ahead of time allows you and the students to see the end of the tunnel, objectives and goals

SIMPLIFY YOUR NUMBER OF LEARNING TOOLS

There are many educational learning tools out there but if your lms cannot integrate with the tool, students often have to log into different accounts which sometimes causes confusion

QUESTIONS

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THANKS!

Any questions?

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