

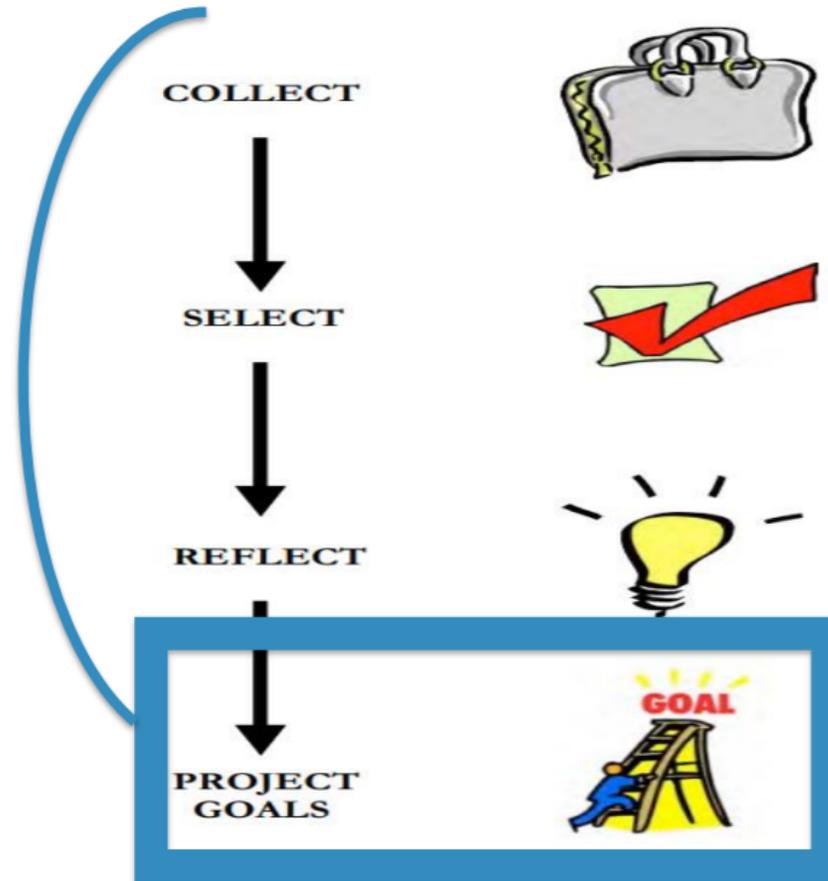
# STEAM Days of Summer 2020

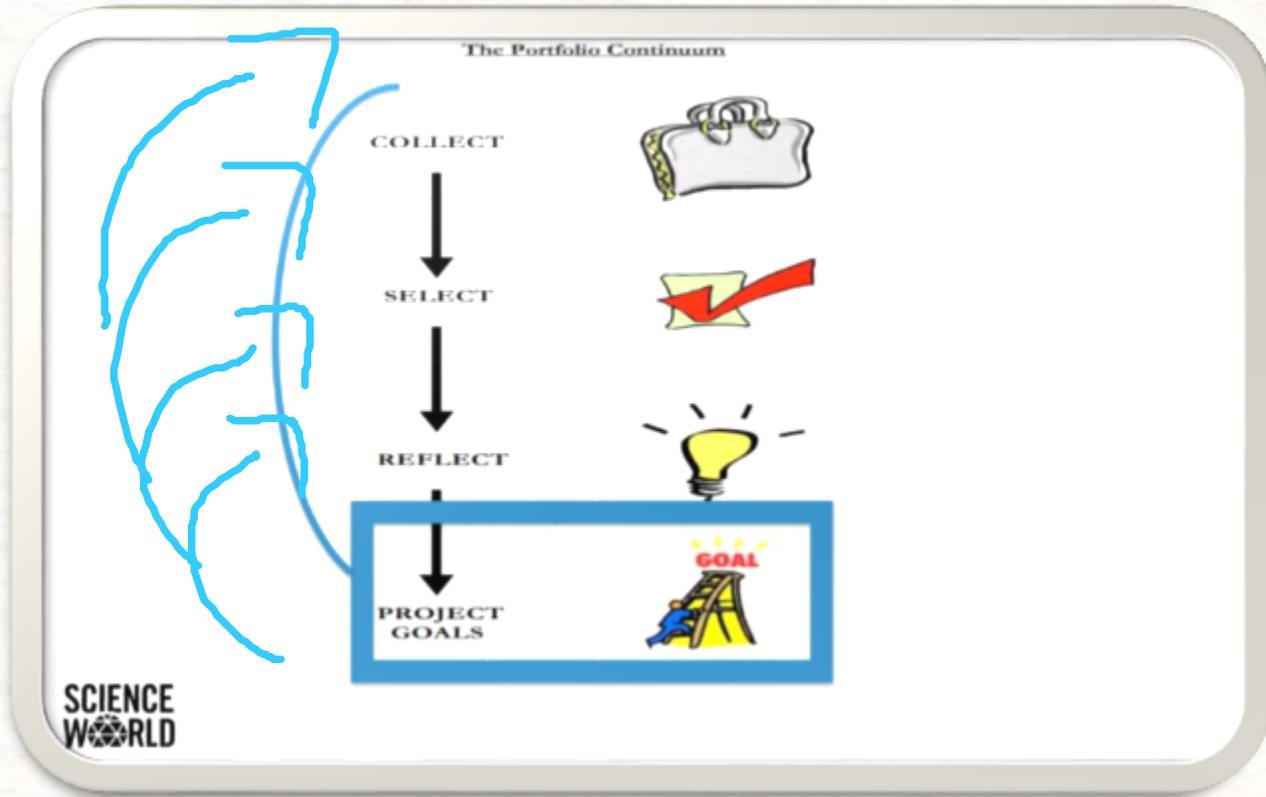
Marina Mehai

## Day 1

- My goal this week is to take things slow, listen and be open to new ideas and learning in the context of coding, computational thinking and scientific and digital literacies. I signed up because there's always something new to learn and we learn so much from collaborating with others.
- I think today went relatively okay with respect to this goal. It's tricky because I'm attending remotely, but my colleague and friend Cherie Nagra is sharing notes and info from the day with me.
- It was also great to connect with Claire in the breakout room and share what we're hoping to do with portfolios with our students. We both talked about how we'd like to include more reflective pieces in our portfolios. I know that I could use support with that. Sometimes it can be tricky to create good questions.

The Portfolio Continuum



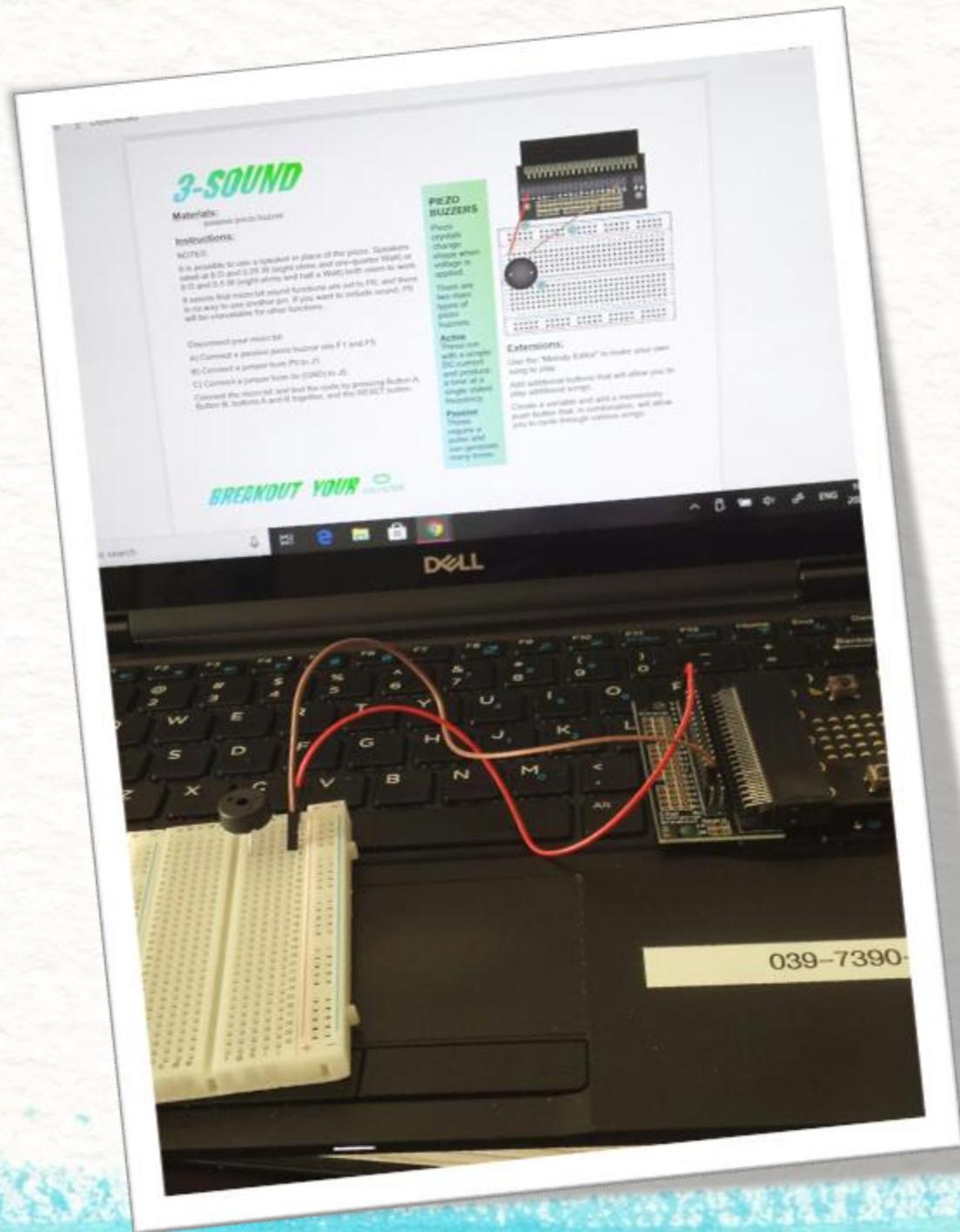


- This continuum, which is one way of considering the portfolio process, stood out to me. I usually share project goals at the beginning, but I think it's just as important to consider the goals throughout the process as well as the end.
- When I do conferencing with my students, they take time to share evidence of their learning through artifacts as well as how each piece connects to a learning goal. This is where the learning they have done really shines.

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## Day 2

- I ended up missing most of the first session because of a glitch (link wasn't set-up), so I didn't have a chance to learn more about microbits from the presenter.
- I read through the notes that were shared and figured I would start on my own to get things set up. I used my prior knowledge and what I already know about breadboards to connect the Kitronik breakout board to my microbit.
- I started with the Sound activity and got it to work. Yay! Glad I had success with that. Next steps would be trying the Melody editor and maybe some of the other activities that were shared.
- When I finally got connected to the session, I learned I was doing to wrong session. Needless to say, I became very frustrated and needed to take a break. I decided to leave the session, work on my own and come back after lunch. It was a good choice for my overall well-being.



While I've done some breadboarding with my Gr. 9s as part of the circuits and electricity unit, I'm thinking about how I can now integrate these additional pieces of tech into what I'm already doing.

I know that a lot of my students would be keen on exploring breadboards and the microbit extensions. I see the possibility of a lot of cross-curricular connections with their ADST courses. I'd also love for them to document their learning on their blogs. Lots of the learning lives in the process. Excited for the possibilities!

# Day 3

Computational Thinking  
in BC's new curriculum

- computational thinking  
has been around forever

→ 1980 & 2006 are  
key times too <sup>creating &  
problem solving</sup>

- thought processes involved in  
formulating problems &  
their solutions so that solutions  
are in a form that can be  
effectively carried out by an  
information-processing agent

Wing, J (2011)

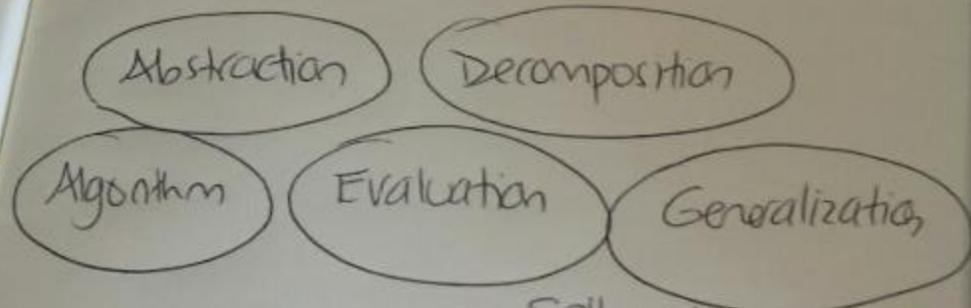
→ best solution

- laptop } digital  
- computer } device  
- GPS }  
- humans }

- this is just a def'n  
of computational thinking

→ DESIGNING COMPUTATION  
TASKS  
→ EXPLAINING & INTERPRETING  
THE WORLD

5 Abilities/elements of CT:



Selby, Woodford  
(2014)

- in my practice

- science labs - process & steps involved
- decomposition - scaffolding new idea / lesson & breaking things down into key parts - project, lab activity, etc.
- evaluation - reviewing what you might change after a lesson activity

- Today, I had a chance to see where computational thinking (CT) elements live in my pedagogy and teaching practice.
- I also had a chance to take a closer look at where these elements live in other subject areas. This piece will be important not only in the teaching I do, but also in the support role I provide as a Digital Learning teacher.
- I can now see where coding and CT live in the Math 9 curriculum, which means that I can better support colleagues who don't necessarily see the connections. Also, I can now better facilitate conversations around planning CT activities and support my colleagues with these pieces in this upcoming school year.

## Day 4

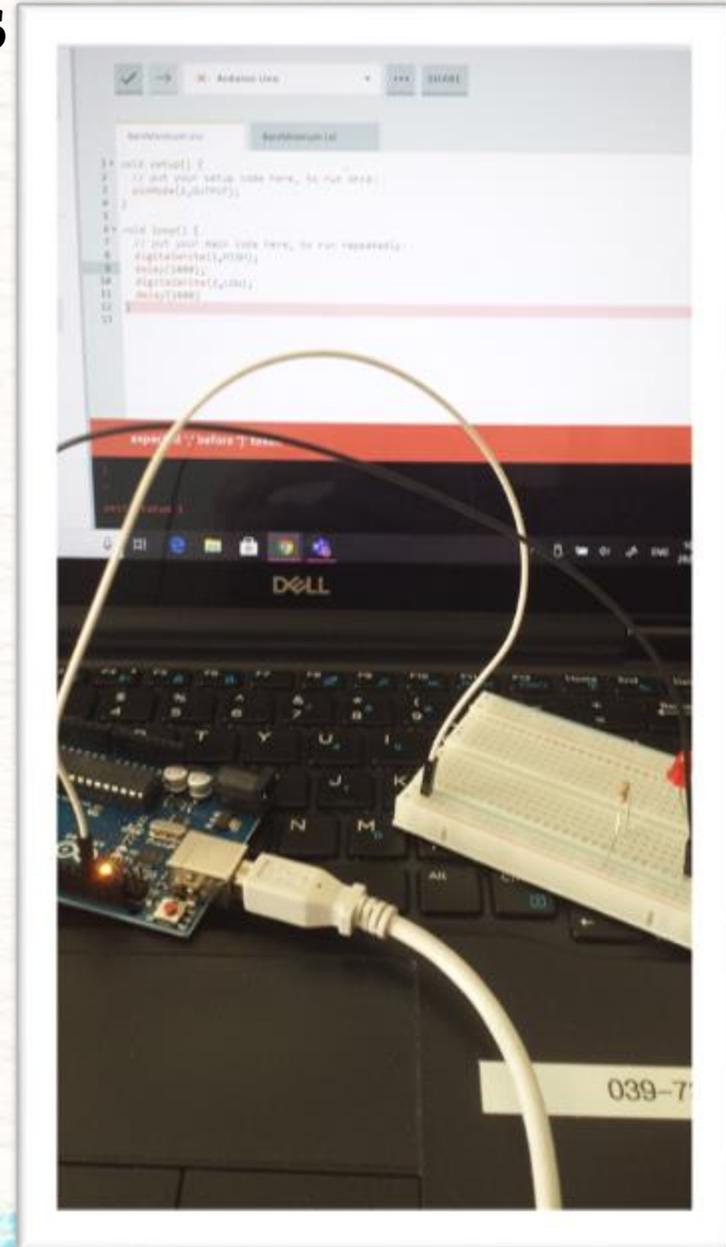
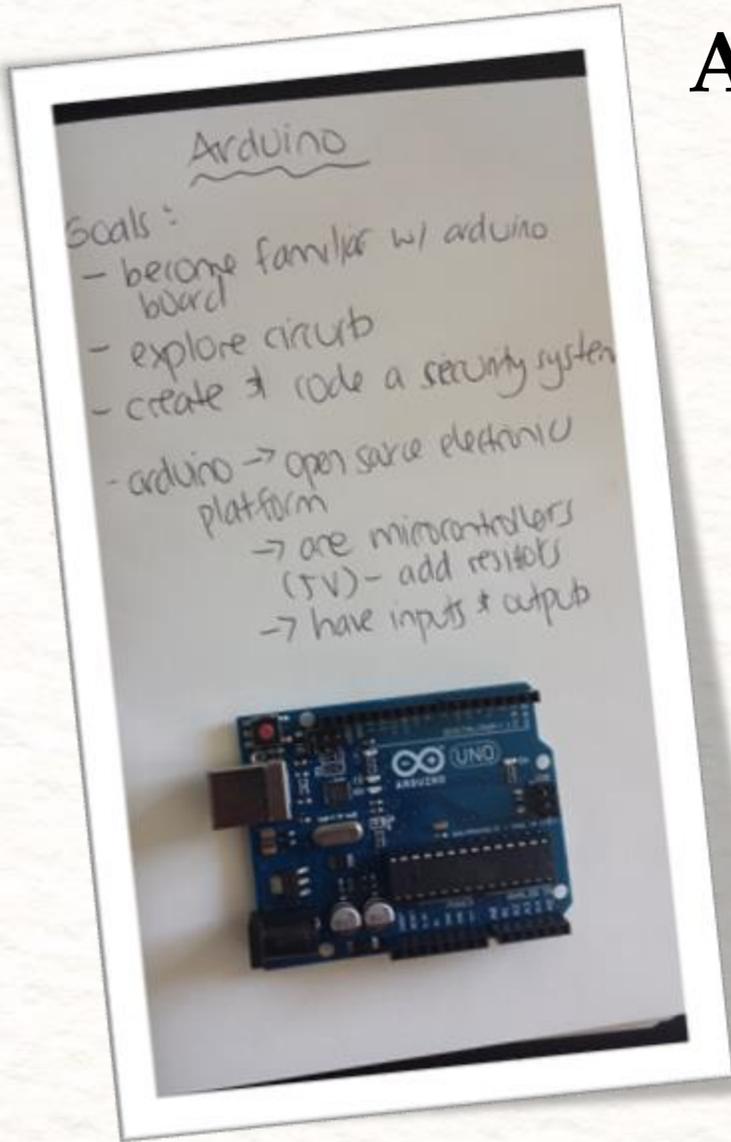
- Creating a portfolio has made it easier for me to see my learning in progress and for me to go back to things and make connections over time.
- Today, we spent time learning about arduinos and how to connect them to breadboards and do coding. Most of this is new to me so, I started by taking lots of notes to get myself comfortable. I know I will be revisiting my notes when I come back to arduinos in the future.
- I think the portfolio making process will help my students see the connections in what they're learning. It's also a concrete way to 'see' learning in progress and to make connections with new learning. I see lots of connections to the core and curricular competencies and it's a way to make them visible to students. Student can more easily name and notice these pieces in their learning if they document their learning process.

# Arduinos – Work in progress

For me, this process was difficult, as I had technical difficulties and it was very difficult to work in isolation remotely. Learning around others is so important and this experience really made that more salient for me. I did get a chance to take notes and practice coding and breadboarding. Something positive.

I think the portfolio provided me with a place to note the experience and I'll be able to reflect back on the process at a later time.

I think this is something my students would benefit from too. Learning isn't always clean and easy; there are challenges and we're stretched sometimes. I think the portfolio is great place to note the successes and stretches involved in learning. I know I would benefit from hearing my students' learning stories.



## Intro to AI

Google quickdraw - good example of how AI works  
- fun too!

collects data → algorithm compares what we have to other data

- uses senses
- needs lots of data as reference to make decision

AI refers to collected images & a database of them

- need high quality data, need to ↑ confidence of output

video: AI - Training data & bias  
data needs to be unbiased  
need data from lots of sources

teachable machine, withgoogle.com/V1/  
- very cool way to go through the process

uses AI to identify images

## - Uses of AI

- automatic diagnosis
- needs lots of data as part of its teaching, but can't write anything new

lots of connections to students' daily lives →

- youtube, snapchat, Netflix, Insta
- build algorithm based on your choices

## AI influence in your life

Clicks  
Brands → Learning Algorithm → what you click on next  
• like +  
• comment

- connections to DL
- \* be mindful
- \* ends up influencing your life
- \* students need to take ownership of their consumption

- 
- The AI session was eye opening. I teach Digital Learning and it left me with new ways to approach the topic of safe media consumption.
  - I see a lot of connections to the curricular competencies in my course as well as the core competencies, particular critical thinking. I now have more ways to approach and teach these topics and to help my students become more critical in their consumption of media. Great info for adults and students to know alike!