Microsoft

TEALS Gallery Walk

A collection of ideas for use in your Computer Science classroom
Fall 2020

As you tour the gallery, take time for personal reflection and group discussion

- One thing that you notice
- One thing that you wonder about
- One suggestion for change or improvement

Choose one idea to try in your classroom

Viewing the gallery

Your tour guide will be the person in the room with the next birthday

- The tour guide will lead the discussion, keep track of time, and share their screen with the Gallery Walk Slide Deck
- All participants take notes in their Gallery Walk Notes Document

Please download two documents now

- Gallery Walk viewing slide deck: aka.ms/PNWGalleryWalk
- Gallery Walk notes document: aka.ms/PNWGalleryWalkNotes

Gallery Item title matches post title in the TEALS Forum

- forums.tealsk12.org

While in Breakout …

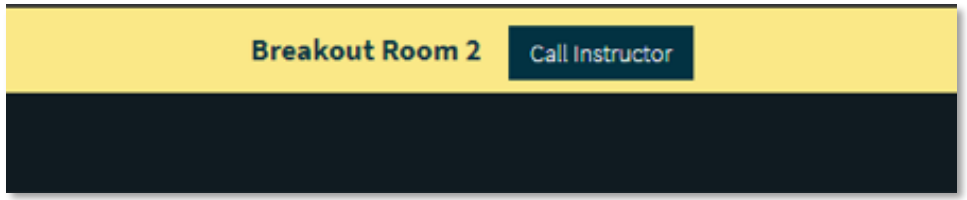
We will return to the main room at

The person with the next birthday will be the tour guide in your room.
You will automatically be returned to the Main Room at the end of the Breakout Session.

You can load and play files, use the whiteboard, and share screens.

Watch the yellow message bar at the top of the screen for important announcements

Have questions in your Breakout Room?
Click ‘Call Instructor’!



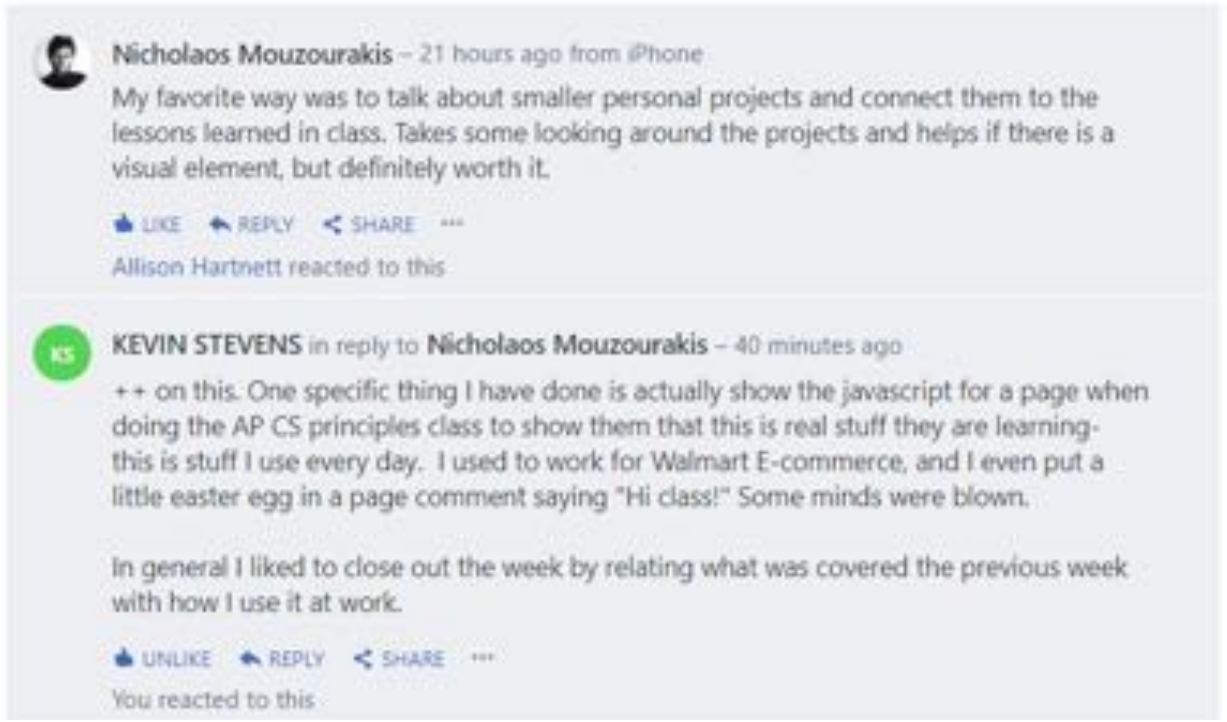
Student Engagement Gallery

Student Engagement Yammer – Alumni Program Volunteer

AP Computer Science A

Nicholaos Mouzourakis
Whitfield School
St. Louis, MO

Kevin Stevens
Dr. Ronald E. McNair Academic High School
Jersey City, NJ



Do you have any projects you are personally working on or have worked on that could relate to what students are learning in class?

Student Engagement - Student Random Name picker

Introduction to CS

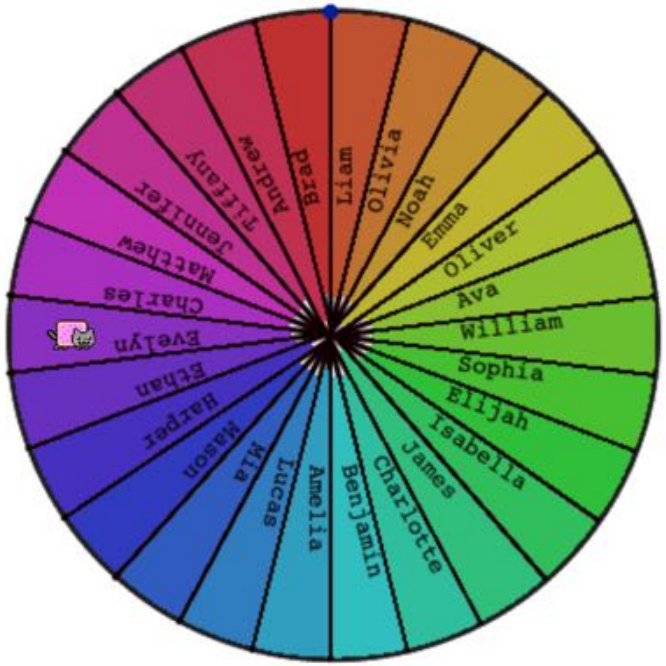
Malow Jr. High School
Shelby Township, MI

Andy Kang

Pros:

Just a more visually pleasing way to cold-call a student. I still try to warn the students ahead of time that I'll be asking random people questions.

Illustrates a fun way Snap can be used. It helped me as a teacher to learn a lot of Snap's features including JavaScript injection. I did share with students' who were finished early with labs, but not sure if anyone looked at it or if it perked anyone's interest (I think a couple student's have JavaScript experience, so I was trying to entice them with the JavaScript component).



Cons:

It's still cold-calling. I feel a more interactive teaching technique is probably better, like working on a small example together as a class or in smaller break out rooms. Or possibly having some team-based interaction would be great like Kahoot - which I haven't utilized in class yet.

Student Engagement-
Interactive lab for teaching Java String methods

AP CS A

Ephrata High School
Ephrata, WA

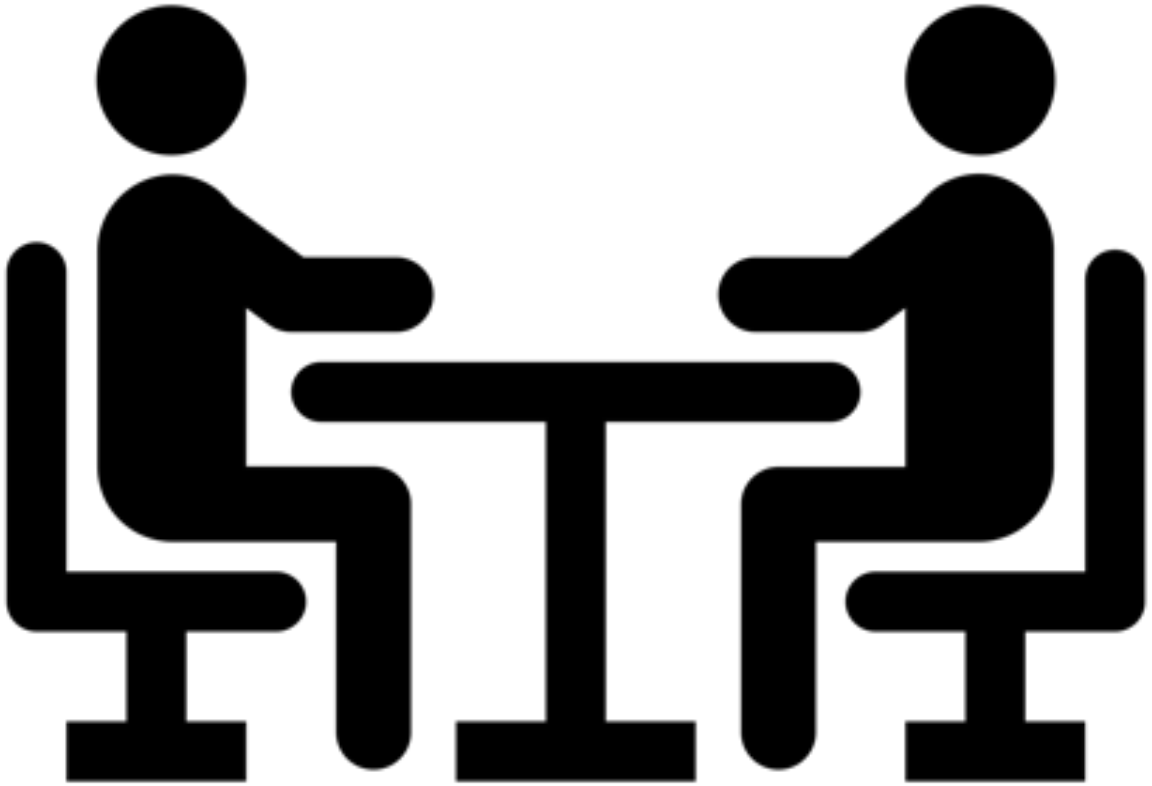
Caroline Danzi

In groups of 2:

- 1 student fills in answers on the lab sheet
- 1 student presents their screen to show the code
- Together: make a prediction for each test case, run the test, and record what was printed

Test Case	Predicted Output	Actual Output
`"hello".toUpperCase()`		
`"HOORAY".toUpperCase()`		
`"pOtAtO".toUpperCase()`		

Building Relationships Gallery



Building Relationships About Me

Intro to Computer Science

Channelview High School
Channelview, TX

Ephraim Patterson

This is an assignment given to students to introduce themselves to the class and volunteers.

About me (10M)

Using Snap or PPT or Google Slides, put together a presentation about yourself.

You'll need to spend 5 minutes talking about

- Your Name
- Interests/Hobbies
- Favorite Classes, TV Shows/Movies, Foods
- Places you've Traveled
- Why are you taking this class?
- A Topic you're interest in
- What makes you unique?

Presentations Start Wednesday!

Culture Days Gallery

Culture Days – List of Articles to start Culture Days discussions

AP Computer Science A

Ingraham High School
Seattle, Washington

LAWRENCE TANIMOTO

Over the past year+, I have been collecting articles for a Computing and Society assignment I give to students to discuss some way that computing is affecting society. Seeding the article selection with this list has improved the selection process in my class. If you have a similar assignment or articles you'd like to share, here's a link.

Ingraham High School 2019-20 School Year

Computing and Society Articles

(Updated Sep 2020)

Jobs and the Workplace

Article	Month
AI technology will soon replace error-prone humans all over the world	Jul 2020
Law must be adapted for the fourth industrial revolution	Dec 2019
How organizations can make the most of machine learning	May 2019
AI on cruise ships	May 2019
How Silicon Valley turned your burrito into a capitalist nightmare	Apr 2019
Women at Microsoft say it's a toxic place to work	Apr 2019
How the Internet Led to Greater Wage Inequality	Mar 2019
How Artificial Intelligence And Machine Learning Are Revolutionizing Logistics, Supply Chain And Transportation	Aug 2018
Python has brought computer programming to a vast new audience	Jul 2018
Rise of the Robochef	Jul 2018
Law firms climb aboard the AI wagon	Jul 2018
What women at Microsoft face and why many leave	Apr 2018
Tech workers feel alienated by Silicon Valley 'Echo Chamber'	Feb 2018
Working for the algorithm	Dec 2017
Will Robots Take Our Children's Jobs	Dec 2017
Some predict computers will produce a jobless future. Here's how they're wrong	Feb 2014
Tech: Where the women and minorities aren't	Aug 2014
Women, Minorities, and Persons with Disabilities in Science and Engineering	2013
The Value of People Remains Despite Growth of Machine Translation Market	Apr 2015
Queen pardons computing giant Alan Turning 59 years after his suicide	Dec 2013
Women in Technology	(Dec 2013)
The Best Jobs in 2016	Apr 2016
Are Computers Bad for Architecture	Apr 2015
When Bill Gates and Mark Zuckerberg sound the same dire warning about jobs, it's time to listen.	May 2017
The next big blue collar job is coding	Feb 2017
Google wants to change what TV computer scientists look like	Sep 2017

https://tinyurl.com/IngrahamCSandSocietyArticles

Culture Days - Career Day Presentation

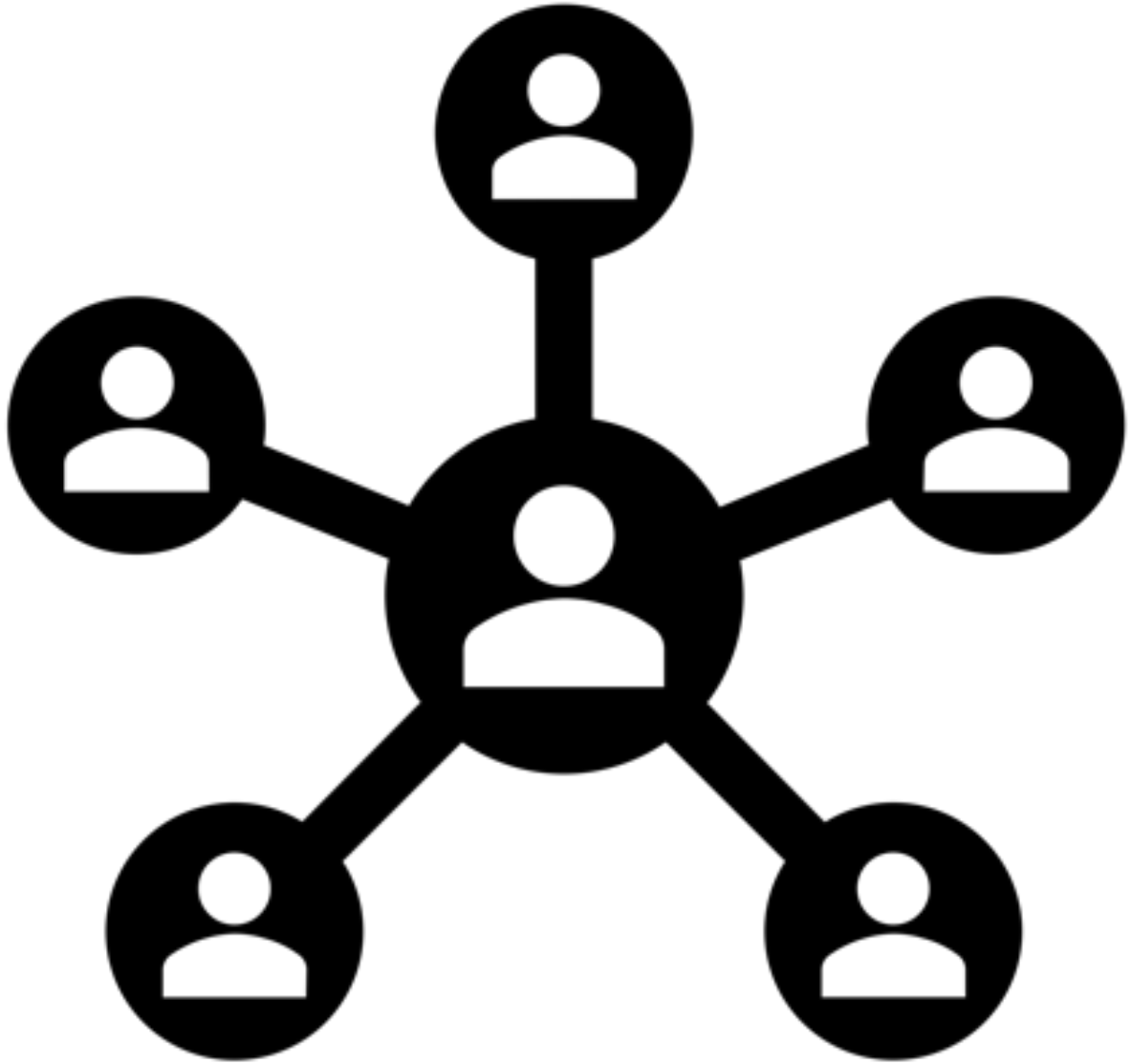
Intro to CS

Hillsboro High School
Hillsboro, North Dakota

AJ Guthrie

Career Day Presentation

Differentiation Gallery



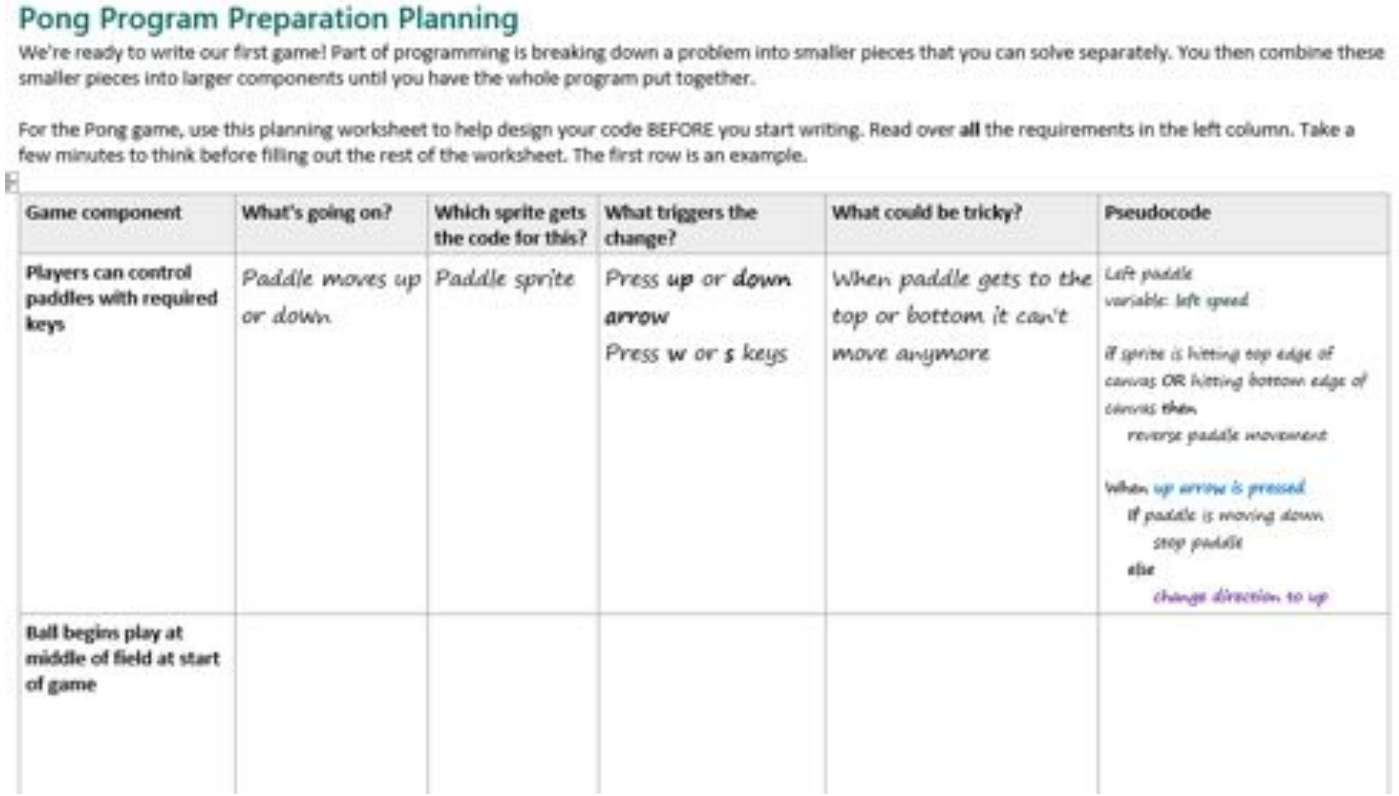
Differentiation
Project 2 Differentiation for struggling students

Intro to Computer Science

Cascade High School
LEAVENWORTH, WA

Maria Mendiburo
Microsoft

"Differentiation guidelines from Lesson 2.7 to create modified projects for my struggling students. Splitting up the project into two distinct halves with shorter, more focused instructions seemed to help their morale as well as their productivity throughout the lab."



Pong Program Preparation Planning

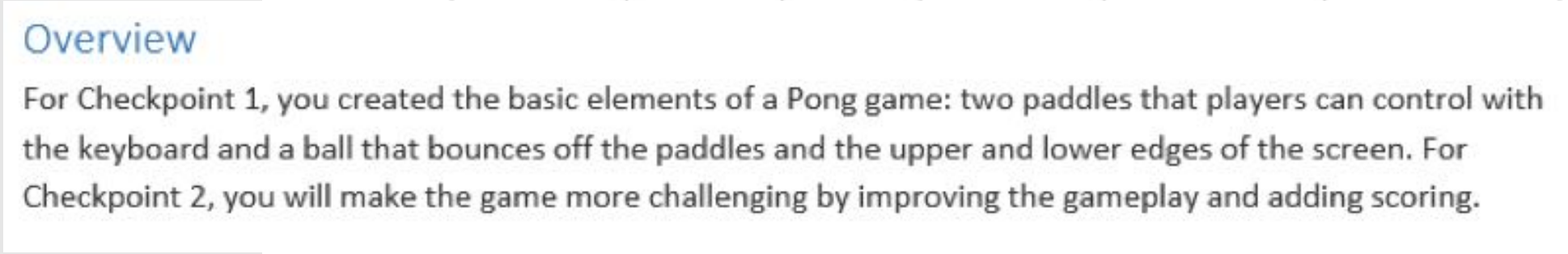
We're ready to write our first game! Part of programming is breaking down a problem into smaller pieces that you can solve separately. You then combine these smaller pieces into larger components until you have the whole program put together.

For the Pong game, use this planning worksheet to help design your code BEFORE you start writing. Read over **all** the requirements in the left column. Take a few minutes to think before filling out the rest of the worksheet. The first row is an example.

Game component	What's going on?	Which sprite gets the code for this?	What triggers the change?	What could be tricky?	Pseudocode

Players can control paddles with required keys	Paddle moves up or down	Paddle sprite	Press **up** or **down** **arrow**
			Press **w** or **s** keys
				When paddle gets to the top or bottom it can't move anymore	Left paddle
					variable: left speed
					
					if sprite is hitting top edge of canvas OR hitting bottom edge of canvas **then**
					reverse paddle movement
					
					When up arrow is pressed
					if paddle is moving down
					stop paddle
					else
					change direction to up

Ball begins play at middle of field at start of game					



Overview

For Checkpoint 1, you created the basic elements of a Pong game: two paddles that players can control with the keyboard and a ball that bounces off the paddles and the upper and lower edges of the screen. For Checkpoint 2, you will make the game more challenging by improving the gameplay and adding scoring.

Differentiation
Worksheet to help practice stepping through Snap! code

Intro to Computer Science

Bluestone High School
Skipwith, VA

David Burgess

"I wanted to create a worksheet that enforced this concept and helped the students maintain state away from the computer. This lesson is intended to get the students writing down variables changes, tracking code execution line by line, and reviewing concepts like variables, conditionals, loops, costumes, and motion."

For Example:

TEALS Forum Gallery

Your Favorite Idea

TEALS Forum

Explore the TEALS Forum and share your favorite idea with your discussion group