

Empowering Student Creativity Through the CodeHS Sandbox

Kimberly Poole, a Career and Technology Education (CTE) teacher in Loudoun County School District, tackled the challenge of distance learning by tasking students with fun Sandbox challenges; an idea derived from students collaborating in virtual breakout rooms.

Kimberly began her journey in education as an English teacher at Simpson Middle School in 1995. Her story is similar to that of many of our CodeHS teachers—computer science was not what she had originally signed up to teach. However, it has been an exciting change, and she has thrived in her newfound role.

Keeping students engaged can be a daily struggle for teachers, especially when teaching in a virtual environment. Nonetheless, Kimberly took on the challenge with ease. At the start of distance learning, Ms. Poole set a specific learning pace with her students, while those who wanted to move ahead were encouraged to do so. With students at all different points of the CodeHS Intro Python course, Kimberly created Google Meet Breakout Rooms based on their individual progression.

“The success stories for students at all levels was incredible. Many enjoyed the opportunity to socialize and collaborate with peers as they tackled the challenge exercises.”

As a supplement to CodeHS curriculum, Kimberly introduced students to the [Sandbox](#) to spark their creativity and allow them to build open-ended projects. It was no surprise that her students excelled when given the opportunity to showcase their individual personalities! Kimberly explained,

“The Sandbox is our free space and challenge zone! It’s the students’ favorite.

This is where they took the basic commands learned in Units 1 & 2 and went to town, adding in new commands from the DOCS tab and making a collection of Sandbox Challenges. There were a few students who preferred the more structured format of meeting the unit exercises, but most were eager to create programs that allowed for personal creativity.”



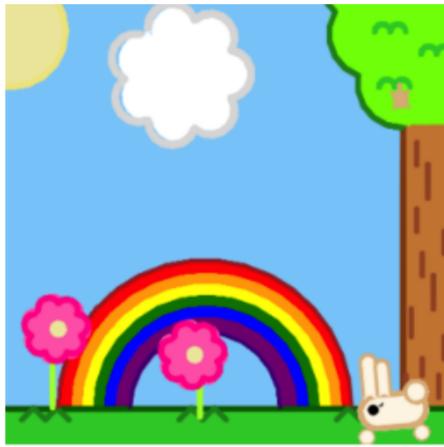
Ms. Kimberly Poole, Loudoun County MS CTE Teacher

Surprisingly, the idea to move to the open-ended Sandbox originated from the students themselves!

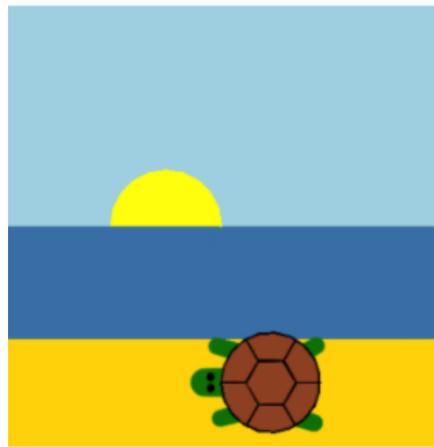
“My first semester students started our Sandbox Challenges in a Google Meet Breakout Room. A group of boys completed their final Unit 2 exercise and asked if they could start a 'Snowman Challenge' in the Sandbox. I mentioned the Snowman Challenge to my other classes and it took off. Students were racing through their unit exercises in order to join the Sandbox fun! It was amazing to see, especially because we were still 100% distance.”



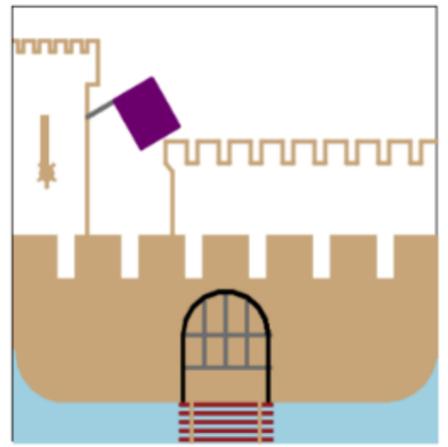
Snowman created by Michael



Nature created by Ashleigh



Tracy at the Beach created by Noah



Sandcastle created by Caleb

With the county's shift to hybrid learning and Python excitement growing full-speed, Kimberly took advantage of the new class format. “During the second semester...rather than 44 minutes of class time and 44 minutes of Learning Lab, our classes were a full 88 minutes with a small Brain Break built in to allow distance students time away from their screens. The extended class time allowed each student to tackle three Sandbox Challenges: Snowman Challenge, Nature Challenge, and Design Challenge.”

Sandbox

#snowmanchallenge

CodeHS - Python Coding

Your challenge is to:
Write a Python program that will draw a SNOWMAN!

Use the commands we learned in CodeHS Units 1 & 2 to get started. You may include a few new commands from the DOCS tab if you would like to add color, change the pen size, or discover new shapes!

Go play in the Sandbox!

CodeHS (log in through LCPS Go)
 Click **Sandbox** (top left corner)
 Click **+ Create Program**
 Choose **Python (turtle)**
 Click **Create Program!**

circle()	penup()	pensize()
forward()	pendown()	color(" ")
backward()	speed()	bgcolor(" ")
left()	for i in range():	
right()	setposition(,)	

#snowmanchallenge

“The DOCS tab is the answer to everything! Students were able to quickly scan the docs tab for commands they had forgotten or misspelled. It was also a fabulous springboard to try new commands and get creative!”

The CodeHS resources ensured students felt confident as they completed their creative masterpieces. “The videos included in each lesson were concise and helpful. They supported and reinforced our mini-lessons and students found it easy to navigate back to them when needed.”

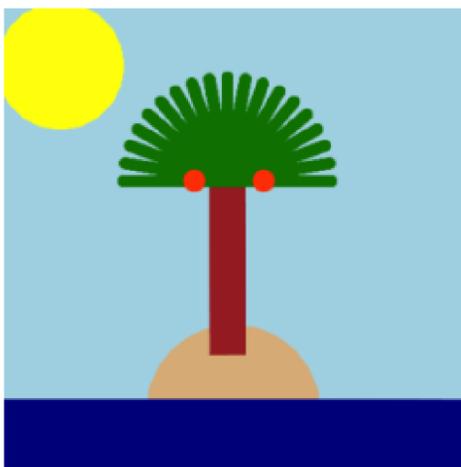
Kimberly’s class is a testament to the fact that students enjoy taking ownership of their learning when given the freedom to explore!



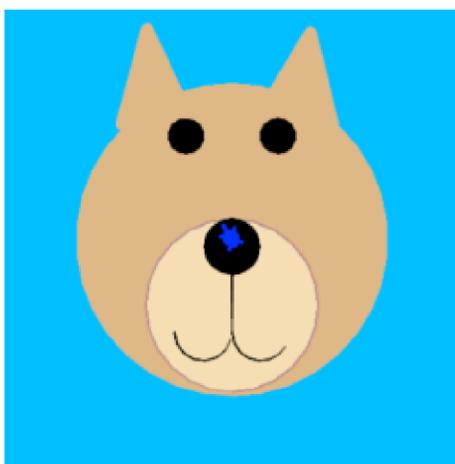
Sandbox
#naturechallenge
CodeHS - Python Coding

Your second challenge is to:
Write a Python program that will draw NATURE!

Use the commands we learned in CodeHS Units 1 & 2 to get started
You may add a few new commands from the DOCS tab if you would like to add color, change the pen size, or discover new shapes!



Nature created by Bauer



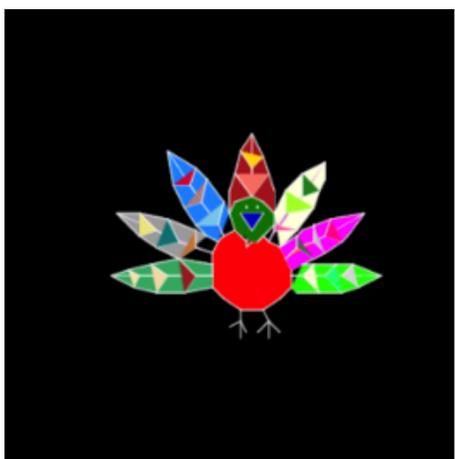
Nature (Dog) created by Lincoln



Snowman created by Arden



Snowman created by Ashleigh



Turkey created by Arden



Sandcastle created by Dominick