## **Career & Technical Education** CTE WEEKLY BULLETIN VOL. IV – FEBRUARY 2021

## LOGO FOUNDATION

## "Turtle as Mathematician"

A virtual hands-on workshop led by Cynthia Solomon, Michael Tempel, Brian Silverman, and Artemis Papert

ATTN: Instructors who are teaching Computer Science, Technology, and all other K-12 Educators interested in Computer Science and Coding. We do hope to see you there!!

Once upon a time Turtle Geometry was virtually unknown in K12 education. Now FORWARD and RIGHT, the basic commands in Turtle Geometry, are incorporated into countless coding apps, games, and robotics programs. But many educators are not familiar with the educational and mathematical roots of Turtle Geometry.

We will briefly look at the origins of Turtle Geometry and how it was seen as an excellent entry path into MathLand for young learners. The leaders of this workshop have been immersed in Turtle Geometry for a very long time. They will share their ideas and experiences along with a collection of engaging activities to explore yourself and with your students.

#### Using TurtleArt and Scratch, we will delve into:

• Polygons, Spirals, and other Geometric Patterns – complex and beautiful patterns emerge from the commands of Turtle Geometry

• Probability – Starting with a coin toss, we see how order emerges from randomness, and how this phenomenon applies to many aspects of the real world. We'll also look at some surprises that result from random events that are repeated many times.

When: Saturday, March 20, 2021 from 9:00am to 11:00am CST Where: Everywhere *via* Zoom Cost: \$15 per person \*Free for those who participated in the 2020 Virtual Logo Summer Institute

### **Click Here to Register**

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# LOGO FOUNDATION

### "Programming the Finch 2 Robot" A virtual hands-on workshop led by Tom Lauwers

ATTN: Instructors who are teaching Computer Science, Technology, and all other K-12 Educators interested in Computer Science and Coding. We do hope to see you there!!

When: Saturday, April 10, 2021 from 9:00am to 11:00am CST Where: Everywhere *via* Zoom Cost: \$15 per person Free for people who participated in the 2020 Virtual Logo Summer Institute

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The Finch Robot 2.0 is a new robot designed to support Computer Science education from kindergarten through college. Like the original Finch, Finch 2.0 can be programmed using a choice of languages from FinchBlox for young children, through Snap!, MakeCode, Python, and Java for older students and more experienced programmers. The Finch connects to your laptop or tablet via Bluetooth. The Finch motors provide accurate movement. Outputs include multi-color LEDs and sound. There are sensors for light, distance and line tracking as well as a compass and an accelerometer. There's a centrally mounted pen for so that the Finch can draw as it moves.