PLTW Virtual Learning

6th Grade Intro to Tech

May 19, 2020
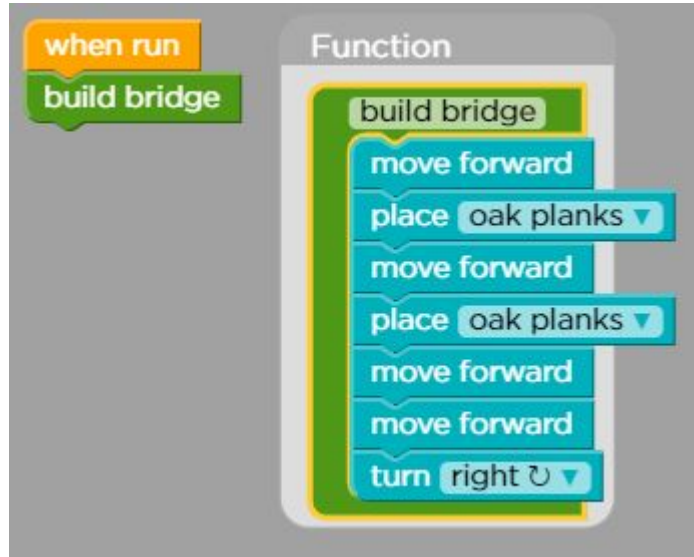
Objective/Learning Target:
Students will develop knowledge of the fundamentals of the coding process through a blocky code language (or a text-based language if they choose a more advanced challenge).

Warm-Ups:

Explain what you think is going on in the screenshot below:

What is this new "build bridge" block? What is this side code?

Lesson Introduction/Background Information:

Regardless of your previous experience (or lack of) with coding, you are going to be spending the next two weeks working through structured coding lessons and learning some fundamental concepts of writing code that apply whether you are doing blocky (drag and drop) coding or you are doing text-based coding. Coding can be used from everything to making games, designing websites, creating apps, and programming robots (which you will be doing next year if you take Automation and Robotics).

Practice (Signing-In):

- Go to code.org
- This is not required, but if you want to save your progress on this FREE site, click the turquoise "Sign In" button in the top right corner.
- Click the red "Continue with Google" button on the right side.
- Click your school email (or any Google account) to continue.
- Watch this video to see these steps in action to get logged in (which is optional!)

Practice:

- Navigate through the course catalog to the Express Course, or follow this link: https://studio.code.org/s/express-2019
- Today you are going be introduced to functions, a way to shorten your code by creating a new chunk of code that just has a name, in lessons 16-18.
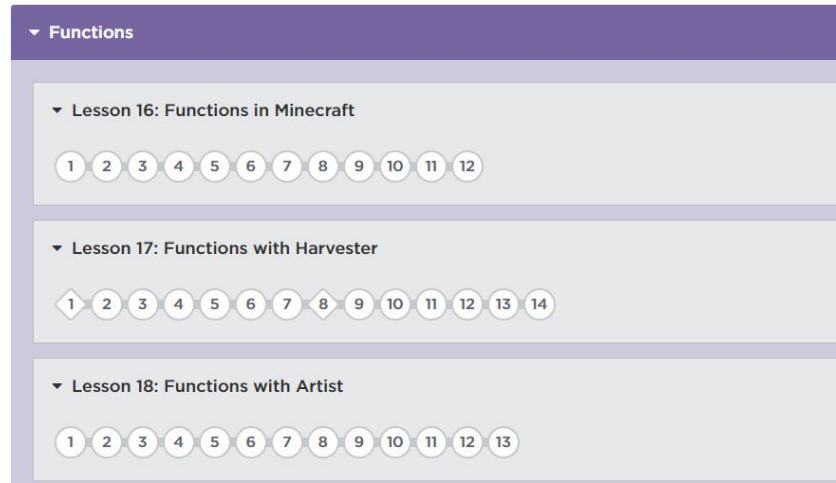
Practice:

● Functionals are a way to make a new line of code, like teaching the computer how to "build a bridge", with the function being to the side that states every step without you having to repeat it each time. Explore this concept with today's lessons, featuring Minecraft, farming, and the Artist.

Self-Assessment:

Each lesson will check your work as you go, so you get immediate feedback!

Did you use more blocks than recommended on a level? Go back and see if you can complete it while staying under the block maximum.

Extend Your Learning/Continued Practice:

Tried this and think it is too easy for you?

In this section, I'll be recommending some other coding sites that will be a bit more challenging than code.org because they require text-based coding.

Today's recommendation:

Khan Academy