Angeles City Science High School

Electronics 10

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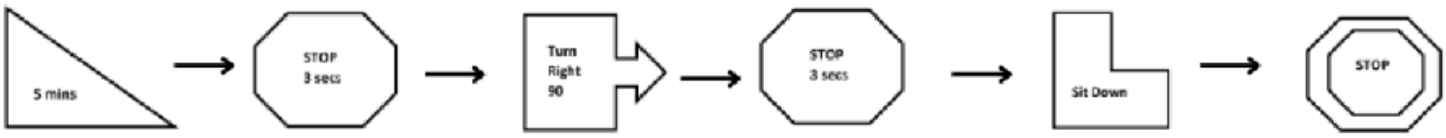
Activity 1: By Encode!

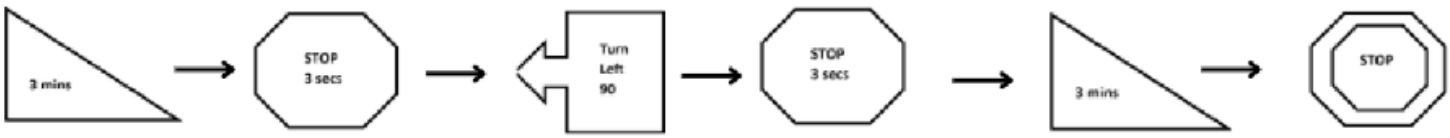
Direction: Write the program of the given commands by connecting the correct pictures in a series using an arrow line. Study the example it is done for you.

Commands to be encodde are:

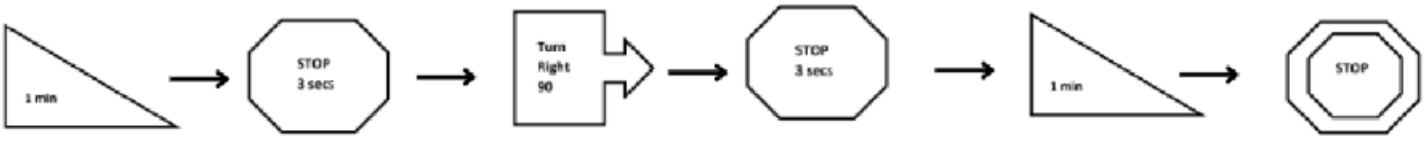
1. Walk for 5 minutes then, stop for 3 secs then, turn 900 right then, stop for 3 secs then, sit down then, stop.



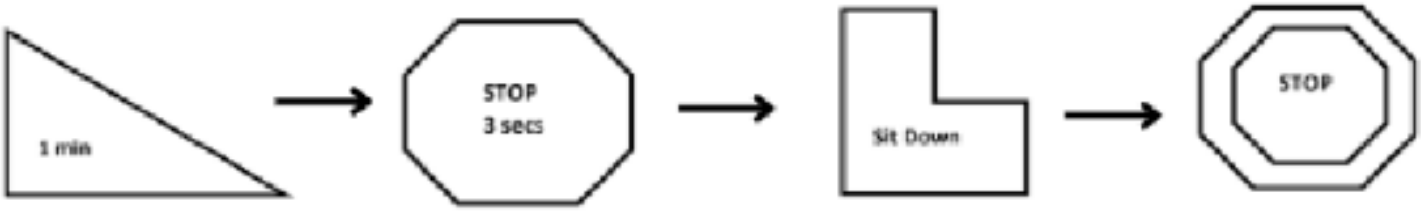
2. Walk for 3 minutes then, stop for 3 secs then, turn 900 degrees left then, stop for 3 secs then, walk for 3 minutes then, stop.



3. Walk for 1 minute then, stop for 3 secs then, turn right, stop for 3 secs then walk



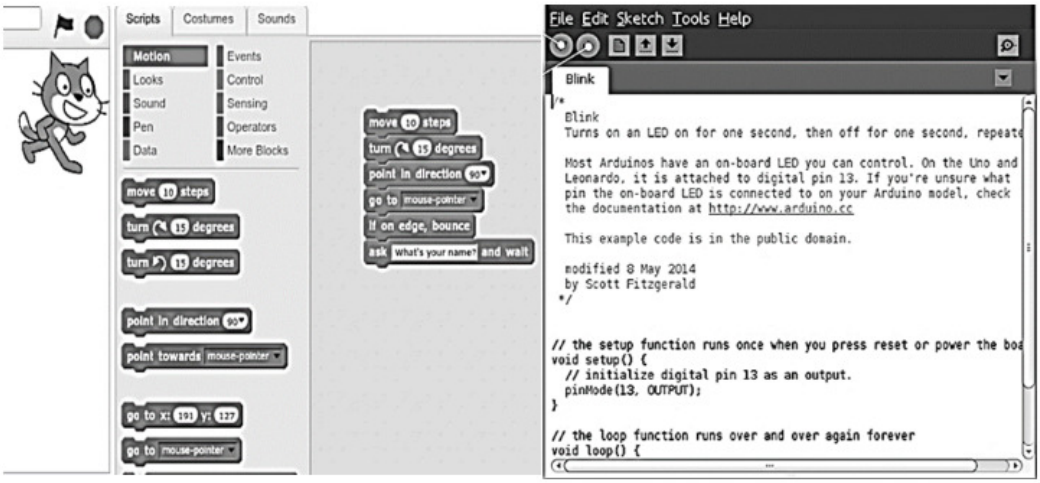
4. Walk for 1 minute then, stop for 3 secs then, sit down then, stop.



Activity 2: Look at us!

Direction: Analyze the two (2) program codes shown below and answer the following guide questions.

Code A **Code B**



Guide Questions:

1. Describe the way the progress is written in Code A and Code B?

In Code A, we can see clearly, when the robot/program starts, it moves 10 steps forward, turn 15 degrees, face in 90 degree and go to mouse pointer or cursor.If the robot is on edge, it'll prompt the user to ask "what's your name?" and wait until the user entered it.

In Code B, Blink is an example code provided by arduino to test out microcontrollers like Arduino Pro Micro ATmegaU32. Anything in between /* and */ means that they are multi-line comments and will not be recognized by the C++ compiler. We can see that there is a function called setup that returns nothing. It initializes pin 13 as the output and LED is expected in that pin for it to blink.

2. In your opinion, which do you think is easier? Why?

For non-programmers, Code A looks and they think it's easier.

3. In your opinion, which do you think is harder? Why?

Same as the previous question, for non-programmers, Code B looks more difficult.

4. In your opinion, can the appearance and symbols in coding programs affect the way we use specific programming tools? Explain further.

Yes, for non-programmers, Code A is a better option as it is not as complex as Code B and there's symbols and figures to help them visualize the logic. Code B is much better in the long run for programmers as this is text and the flexibility is far better than those that use symbols like scratch. Playing with text is much more efficient and effective than using mouse to drag and drop blocks to visualize logic.