AP Computer Science Principles

Unit: Game Design

Lesson 4: **Shooting Water/Ball Mechanics**
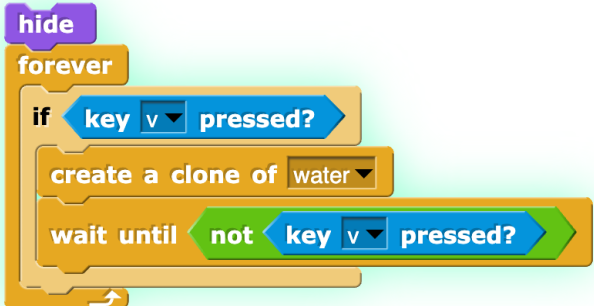
Link: [Shooting a Water Gun](#)
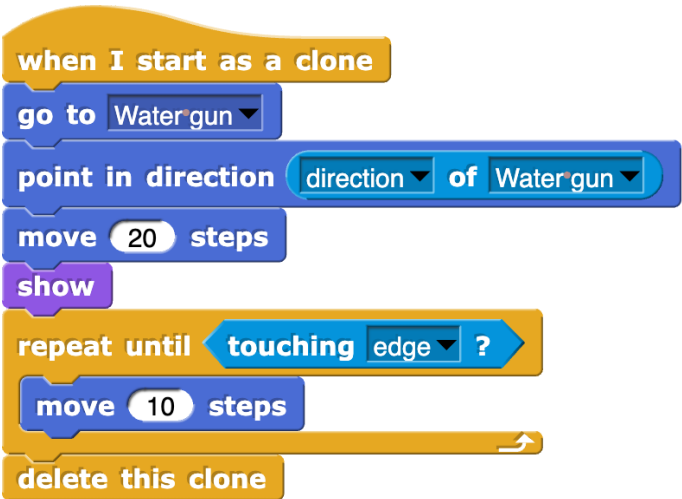
Learning Intentions:

☐ Explain steps in a game mechanic algorithm

☐ Incorporate shooting sprite interactions and score elements into a **very** simple game

Instructions:

1) Open and save the file above with your name in the title. Create a shared link (Go to open, click on name of file, select "share").

2) Paste the SHARED link to your project here (I will be able to see updates/changes as long as you save them. **Please also submit it as a link attachment to this assignment.**

3) Play around with the file until you get how it works. Explain the water code—just say what each step of the algorithm is doing.

CODE PIC	PURPOSE/FUNCTION/HOW IT WORKS
hide forever if key v pressed? create a clone of water wait until not key v pressed?	
when I start as a clone go to Water gun point in direction direction of Water gun move 20 steps show repeat until touching edge ? move 10 steps delete this clone	

4) Create a different way to control the aim of the water gun. Post a script pic of your method and explain:

CODE PIC	PURPOSE/FUNCTION/HOW IT WORKS

(Add rows as needed)

5) Make a <mark>very</mark> simple game:
- Add a sprite that moves on its own around the screen (like the octopi in Star Hunter). This will be a target.
- Make the target Create a score script that senses when you have hit the target and increases your score. **HINT**: if you drag the score script onto a sprite (under the stage) it will copy the script to that sprite.
- change costume and then disappear after it has been hit. (Use wait times wisely).

6) Find a classmate to run your very simple game.

Name of classmate:

[   ]

Your classmate must suggest **1-2 ways** to improve your program. Document the suggestions in the table below. Before making changes, paste a script pic of the code

that should be modified. After you make the changes, paste a pic of the improved code.

Suggestion	Old code	New Code

7) Add comments to your code to explain to yourself and anyone else looking at it what the purpose of the script is. (Right click in the black space and choose "comment. You can drag your comment onto the script to attach it).

8) SAVE SAVE SAVE! Please post the Snap! Link to the assignment when you turn it in.