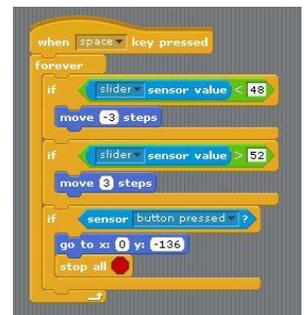


Project 8 – Cheese Puffs

1. Start Scratch or open a new project and make sure your picoboard is connected.
2. Delete the cat sprite. Select the bowl of *cheesy puffs* from the *Things* folder. Be sure to rename the bowl sprite
3. Resize the sprite and move it to the bottom-center of the display area.
4. Using the *Paint new sprite* button, draw a cheese puff. Click *OK*.
5. Using the *Duplicate* tool, make two addition cheese puffs. Be sure to rename each sprite.
6. Click on stage and import an appropriate background.
7. To create the script to control the bowl, click on the bowl sprite and add a Control block to start the scripts.
8. The slider on the pico board will be used to control the movement of the bowl. In a *forever* loop, we need the command, “if the slider sensor value is less than 48, move -3 steps”. Within the *forever* loop, drag an *if* statement. The operator block, $\square < \square$, is placed in the conditional section of the *if* statement. *Slider sensor value* goes into the first blank and the value 48 into the second blank.
9. Place the Motion command *move -3 steps* inside the *if* statement.
10. Repeat steps 8 & 9 to make the second *if* statement read, “if the slider sensor value is greater than 52, move +3 steps”.
11. To stop the game, drop a third *if* statement below the other. In the conditional section put the reporter *sensor button pressed*. Inside the loop place the Motion block *go to x:0, y:-140*. Also, add the *stop all* . Place all three *if* statements are inside a *forever* loop.
12. Now we are ready to write the scripts for the cheese puffs. Click on the first cheese puff and add a start command similar to the one to start the bowl.



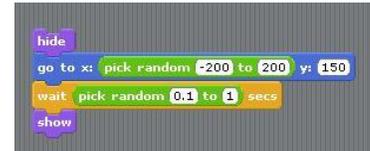
13. Prior to falling, the cheese puffs need to be hidden. Drag the *hide* block below the start statement. Position the cheese puff at the top of the screen

with a fixed y position and a random x position. Drag the *go to x: y:* block below the *hide* block.

Change the y value to 150. In the x value area, drag *pick random* to . Set the range from -200 to +200.



14. The cheese puffs need to appear at random times. Add *wait* secs and change the time to be a random time between 0.1 and 1. Place *show* below the random time block.

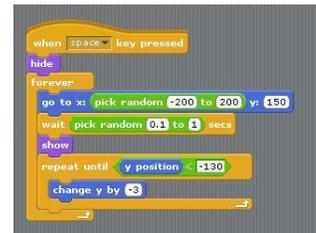


15. In order for the cheese puffs to fall, drag the *repeat until* loop below *show*. In the condition area, place the Boolean operator $\square < \square$. In the first blank, drop the *y position* block and the second blank should contain the y value of the bowl.



16. Inside the *repeat until* loop, place the Motion block *change y by* -3.

17. For the cheese puff to return to the top and fall, drag *forever* loop around all the scripts (except the start command).



18. Copy the script for the first cheese puff into the other puffs by dragging the script from the scripts area to the desired sprite. When the sprite is selected, drop the script.

Using blocks from the Sensing block palette, program a way to keep score (refer to Project 5 Pacman scoring). You may add other sprites such as ones that will reduce the score. Play around with adding levels of difficulty and changing the speed of the bowl and/or puffs.