## Project Number 2 Dancing

1. Start Scratch or open a new project.

2. Remove the cat.

3. Add a new sprite from the People folder.

4. Select the sprite *anjuli-1*.

5. Rename the sprite to *Anjuli*-1 and reduce its size. (Please use this naming style. It will be needed later in the activity.)

6. Using the *Motion* script, *change x…,* move the sprite a few steps to the right.

7. You can make the sprite move in the opposite direction by adding another *change x...* and entering a negative value. (Note: At this time, we are only moving along the x-axis. Later you may practice with the y-axis.)

8. To make the sprite appear to be dancing, you will need the sprite to move back and forth. This is an excellent time to use a repeat loop.

9. Yes, the sprite did move, but it may have been too quick for you to see. To slow down the movement, a *Control* script is needed. In the orange *Control* scripts, locate the script, *wait 1 second*”. Click and drag the script between the two blue “*change*” scripts. A white bar will appear between the two blue scripts when it is in the correct location. Do not forget to add the *Control* script to start the animation when the green flag is clicked. Now run the animation.
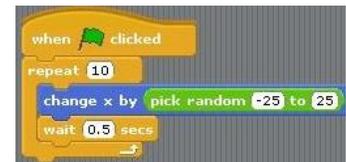
    Hint: Save often.

10. The *wait* time may be change in the same manner as the number of steps was changed. Time intervals less than one second may be used (I am using 0.25).

11. Something still seems to be missing. There is a *wait* when the sprite moves in one direction, but no pause when it moves in the other direction. (Move to the right 25 steps, wait ½ second, move to the left 25 steps, immediately move to the right.) Add another *wait* script.
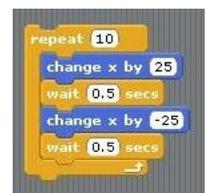
12. You may change the number of times the script completes the loop before stopping. Another *wait* script may be added after the second *move* script, the time may be adjusted as well as the distances and number of loops.

13. To stop a script before the number of loops have completed, click the red stop sign located in the upper, right corner of the stage or press the ENTER key on your keyboard.

14. The sprite dances back and forth between two locations. To make the movement look more realistic, the sprite needs to move to random locations. Click on the green *Operators* button. This group contains scripts with mathematics symbols and Boolean concepts. Drag the script *pick random 1 to 10* and drag over the number in the *change x by* script. Change the number values – one positive and the other negative.

15. Since the *Random* script will move the sprite in both x directions, remove the other *change x* and *wait* scripts. Test your script to see if the animation is correct.

   Hint: Save often.

16. Now we need to add additional costumes for the sprite. Instead of editing a present costume, we will import additional costumes from the Scratch files. Click on the *Costumes* tab located above the Scripts area. Click on *Import*. Click on *anjuli-2* and then click *OK*. Repeat the process until you have imported all 5 anjuli costumes.

17. Return to the *Scripts* for the sprite. We now need to add a script to change the costume. In the purple *Looks* group, drag the *next costume* script inside the loop. Place the script in various locations within the loop. How does it change the animation?

18. Now we need to make the order of the costume changes random. Discard the *next costume* script. Drag the *switch to costume…* script inside the *repeat* loop. Click on the green *Operators* button. Drag *pick random 1 to 10* script over the name of the costume (in the *switch costume* script). Change the number to go from 1 to 5. (We imported 5 costumes.) How has this changed the animation?

19. Now we need to add a stage. Click on the stage icon (located in the sprite bin). Click on the *Backgrounds* tab and import an appropriate background. You may delete the blank stage.

   Hint: Save often.

20. Next, we need to add a sound script. This script will be placed on the stage. Make sure the stage is selected in the *Sprites bin*. Click on *Scripts*. In the red *Sounds*, drag *play sound…until done* onto the *Scripts area.*

21. Choose the *Sounds* tab and click *Import*. There are several copyright free sound clips in the *Music Loops* folder. If you click the title, you may preview the sound. Clicking *OK* will import the sound loop.

22. Go back to the script. Click the drop down arrow and select your sound loop. Be sure to add the *Control* script to start the sound when the green flag is clicked.

    Hint: Save often.

23. In my animation, the music stopped before the dancer. Experiment using *repeat* and *forever loops* in the scripts for both the dancer and the stage. You may add additional dancers/sprites to your animation. You may also want the dancer to move along both the x and y-axes.

    Be sure to save your animation prior to beginning a new one.

    Using the scripts in project 1 and 2, you can make a person, animal, bird or fish walk/fly/swim across the stage. Find a sprite with multiple costumes and make this sprite walk/fly/swim across an appropriate background.