Student Name _____

STUDENT WORKSHEET #1: Develop an Animation Plan
**complete and get your teacher's approval by the end of Session 6*

Choose an earlier portrait in one of the three portrait styles: Chuck Close-style grid portrait, oil pastel portrait, or cartoon caricature.

Sketch your animation plan in your journal and label the parts that move. Put an X on the places you will need to cut holes.

Moving Part #1 _____

Moving Part #2 _____

Moving Part #3 _____

Student Checklist	Teacher Checklist
____ Choose a portrait style	____ Is the project workable in time allowed?
____ Plan for 2-3 moving parts	____ Will motors be attached near the center of each moving part?
____ Share your idea with a classmate	____ Are 2-3 motors used?

Student Name _____

STUDENT WORKSHEET #2: Complete Your Portrait
**complete and get your teacher's approval and complete by the end of Session 7*

Complete an earlier portrait based on your animation plan in one of the three portrait styles: Chuck Close-style grid portrait, oil pastel portrait, or cartoon caricature.

Create moving parts in the same medium you created your portrait.

Be sure your cords will reach (plug motor cords into the ABC plugs on the robot, and arrange the motors and brain on the board).

Label where all the motors and the NXT brain will be placed by tracing them onto the back side of your foam board and marking where holes need to be cut.

Student Checklist	Teacher Checklist
____ Finish drawing your portrait	____ Check cord lengths
____ Draw and color the moving parts	____ Be sure the motors will be attached near the center of each moving part
____ Check cord length	____ Troubleshoot and adjust animation plans
____ Mark foamboard for robot parts	____ Confirm that cutting holes are clearly marked
	____ Cut holes in foamboard

Student Name _____

STUDENT WORKSHEET #3: Mount the Robotic Parts
**complete by the end of Session 8*

Glue your portrait to the foamboard.

Attach the motors and brain to the foamboard with LEGO pieces and tape.

Attach the moving parts to the motors. This will take some creativity!

Once you have motors and the brain attached to the foam board and the design assembled, you will start the last step: programming your animatronic with the group!

Student Checklist	Teacher Checklist
____ Glue the portrait to foamboard	____ Portrait ready for programming
____ Tape the motors and brain	
____ Attach the moving parts to motors	

Student Name _____

STUDENT WORKSHEET #4: Program Your Animations

Before you begin the programming exercises, write down which motor plug (A, B or C) each moving part is plugged into.

Part of the portrait	**Port (circle one)**	**Movement (choose one)**	**Draw a circle showing how far the part will turn/move**	**Unit (choose one)**
_____	A B C	____ Spin in circles ____ Spin half way around ____ Wiggle a little ____ Other (describe below)		____ Rotations ____ Degrees ____ Seconds
_____	A B C	____ Spin in circles ____ Spin half way around ____ Wiggle a little ____ Other (describe below)		____ Rotations ____ Degrees ____ Seconds
_____	A B C	____ Spin in circles ____ Spin half way around ____ Wiggle a little ____ Other (describe below)		____ Rotations ____ Degrees ____ Seconds

Student Name _____

STUDENT WORKSHEET #5: Add Sensors

**for advanced students only*

If you're ready for an additional challenge, add sensors to your project. For example, when the button is pushed, the eyes could move. Below draw a line from the motors to the sensors you'd like to add.

Motor A controls _____ and will be controlled by the _____ sensor.

Portrait Part (eye, nose, etc) *Choose one: light, touch (button), sound or ultrasonic*

Motor B controls _____ and will be controlled by the _____ sensor.

Portrait Part (eye, nose, etc) *Choose one: light, touch (button), sound or ultrasonic*

Motor C controls _____ and will be controlled by the _____ sensor.

Portrait Part (eye, nose, etc) *Choose one: light, touch (button), sound or ultrasonic*

*** You may only use each sensor type once.**

Student Name _____

STUDENT WORKSHEET #6: Preparing the Artist Statement

Look back in your journal and reflect on your intentions for your self portrait and the reasons behind your animation decisions. Be sure your write about how the portrait and animations work together to reveal something important about your personal identity.

Sample Artist Statement

> Personal identity is not just about the self, it *is* the self. When I really think honestly about myself, I consider who I am and who I want to be.
>
> I am an artist. I am also a wife, daughter, and friend.
>
> I want to be a bright smile in my loved ones' day, and I like to express myself through my words. So, my mouth is a powerful part of who I am and who I want to be. I want to offer the world smiles, love, and a little comedy.
>
> But I am much more complex than what you see. My eyebrows point to the mysterious me, the parts nobody else knows, and I'll keep them to myself!

Begin your own artist statement by answering the following questions in your journal.

1. What do you like most about your final portrait?

2. Why did you use this portrait for your project instead of the others you made?

3. What does the portrait tell other people about who you are or who you want to become?

4. Create an "I am" list like the one in the sample artist statement above. What aspects of "you" does your portrait show?

5. Do you think your portrait and its animations are funny, serious, or something else?

6. What do the animations say about your personality or the way you look?

7. Do you think your final animated portrait show people how you really look, how you want to look, or how other people see you? Explain why.