Group Members _____

Engineering Lab Report
Electronic Music Instruments

DEFINE
- What problem are you trying to solve?

- What are the *requirements*?
  (rules or directions that must be followed)

- What are the *constraints*?
  (restrictions that keep something from being the best that it can be)

Group Members _____

RESEARCH

Give an example and write one or two sentences about an Arduino-controlled electronic instrument that uses each the following sensors:

1. force sensor (piezo)

2. Button

3. Flex sensor

4. Knob (potentiometer)

5. Light

6. Ultrasonic

7. Infrared

8. Capacitive touch

Group Members _____

BRAINSTORM
- We will do a brainstorming exercise in class to help elicit unique, creative electronic music ideas.
- Describe the instrument that your group has decided to build. What makes this idea unique? How can you make this idea your own?

Group Members _____

PLAN
- What materials will you need to complete your project? Create a table and calculate the **total cost** of building your instrument.

Item	Quantity	Cost

- Using http://circuits.io or Fritzing, design your circuit. Attach an image or include a link to your circuit.

ANALYZE
- What about your circuit worked well? What could be improved?
- What about your code worked well? What could be improved?
- If you could iterate on this project, what would you change?