

Curriculum Review: Electronics Projects I : FA24

I. Electricity Introduction:

- "Introductory Concepts" video
- Definitions, electrical properties, terms, examples of artist(s) projects
- Setting up breadboards, multimeters, power supplies, etc.

II. Discrete component introductions:

- Resistors, potentiometers, transistors, LEDs
- hardware introduction: Switches
- Visiting Artist: Ian Winter (Interactivity with Isadora software)

III. The Voltage Divider and Sensors:

- Light sensitive switch with photo-resistor, transistor and relay
- Variable resistance: Potentiometers, Photoresistors

IV. Resistor-Capacitor circuits (timing):

- Capacitors and 2-transistor oscillator

V. Introduction to ICs (the 555)

- IC circuit for a timer, diodes
- IC circuit for an oscillator

VI. 555 as Servo Motor controller and Visiting Artist

- Dennis Svoronos

VII. Soldering and Working with Kits:

- IR Light barrier Kit, LED chase, Robot voice, etc.

VIII. Intro to Project Descriptions

- More kit building
- Motor polarity with SPDT Relay

IX. Bringing things together: Enclosures

- Soldering, protoboards, connectors

X. In-class Work day (test):

- Test: "What are these things?" (What are you retaining?)
- Test solution handout

XI. Reflections on success of final projects