**Day 2 Plan**

**TO DO:**

* Finish schedule
  + Print Schedule (x 2)
* Print Parts Quiz
* Clean classroom
* ~~Get 4 folders~~
* Hang safety plan next to classroom door
* Grade pre-assessment (Andy doing)
* Bring camera
* Photocopy stringbot from book (Ch. 5) (5x)
* Print stringbot image,
  + Photocopy (5x)
* Build in flexibility
  + Students draw pictures of robots
    - With definition of robot
    - Draw in pencil, color in.
* TA:
  + Rig up stringbot string
  + Make vocabulary/concepts posters
  + Classroom behaviors/Honor Code posters
  + Enter evaluations in Google doc
  + Poster of design journal steps
  + Poster about programming (see below first break below)
    - Use “task list/algorithm” so they know they are the same

**Day 2 Plan:**

**9:00 – 11:30**

* Explorobot Using Simple-bot (Mayan Adventure)
  + Read story in book
  + Show course
* (20 min.) (optional) Journaling AND/OR LAB1 SKILLS CHECKLIST

What to cover in journal - Before

* This time will do together interactively
* Show picture of simple bot
  + Day #
  + Robot Name
  + Problem Description
  + Constraints/Limitations
  + Task List
  + Brainstorm
  + Sketch (top and side)

**Break**

* (0 min.) Build Simple Robot (this time, just use simple bot)
  + (slide and have pre-built)
  + Add ultrasound sensor to front
  + (Skip book building plans)
  + TA/Instructor Setup course using tubs and tape measure
  + (30 min.) Program it, test it, debug it
* Introduce good robot design

**Lunch**

* 45 min. or so) Programming Interface Tutorial (Andrew)
  + Talk about wiring (which are for motors, etc.)
  + Mindstorms Interface
  + Motor, looping, sensors, conditionals
* Program, Test, Debug
* Journaling Afterwards:
  + what went well/poorly in group? (1 thing, another 1 from discussion)
  + What went well/poorly about robot? (same)
  + well/poorly about programming? (same)
  + Other observations
  + Challenges
  + Ways to improve design
  + Discuss the process
  + Discussion
* (45 min.) Talk about computers and simple programming

**(Also, be setting up strings for stringbot)**

* + Inputs, processing, outputs
  + Procederal programming
  + Algorithm
  + Looping
  + Branching (Conditional Statements)
  + Programming, testing, debugging
* Etch-a-Sketch-Bot

12:30 -2:30

* Stringbot
  + (10 min.) Read story (have students take turns out loud)
  + (5 min.) Make sure we understand task
  + (20 min.) Create Design Journal sections in journal
    - Robot Name
    - Robot Description
    - Task List
    - Limitations/Constraints
    - Mindstorm (Brainstorm)
    - Sketches
  + (60 min. or more) Build
* In-class verbal quiz on Mindstorms programming blocks
  + Label handout sheet
* Stringbot challenge (from book – get 5 pieces from start into cup or ring on floor)
* Lab checklist on programming
* Journal
  + Observations
  + Challenges