 Day 1 Plan:

During Course:

-         Re-cap day, discuss all students each evening

-         Update google doc spreadsheet every evening

-         Photocopy as needed for student evaluation records

-         Touch base with students often, give constructive feedback

o      How well understanding

o      Completing tasks

o      Contribute to discussions, share ideas

o      How well working with others

o      Ask informed questions

o      Display critical thinking skills

o      Put forth consistent effort

o      React well to challenges

o      Engaged and on task

o      Patient and persistent

o      Organized and well-prepared

o      Proficient at problem-solving?

o      Successful on assignments?

-         Check journals

-         Give small quizzes and worksheets

-         Build and Run each activity the night before

-         Preview presentations

-         Prepare next day

Schedule

9:00 – 11:30

-         Pre- test

-         Introductions

o      Tell us a little about yourself.  Where are you from?  Hobbies?  What do you like to do?

o      What are you interested in about robots?

o      Tell us about a cool robot you have seen or heard about.

o      What would you like to learn?

o      What do you hope to build?

o      Have you used Lego Mindstorms NXT

-         Honor Code

o      Develop Interactively, then sign

-         Computer Use Code (other side)

o      Sign

-         Campus and Classroom Expectations

-         Robotics Presentation (Short)

o      Define Robot (questions)

o      Ask them for some examples

o      Examples of Robots

▪       Slides, video

Break

-         Human Robots

o      Form groups (3 groups of 3, one group of 2)

o      Pick person A, B, C (TA fills in last group)

o      A is programmer; B and C robots

o      B starts in one location, C in another

o      Possible instructions are ONLY:

▪       Take one step forward

▪       Turn Left 90 degrees

▪       Pickup ball

▪       Hold out hand

▪       Put down ball

o      Task:  B must pickup ball, somehow give ball to C, C must put ball in designated location

-         Discuss

o      Observations?

o      Did you succeed in getting the ball to its location?

o      What were some challenges?

o      What did you learn?

o      How did you feel about being a robot?

-         Kit Inventory (worksheet)  (Galen and Andrew)

o      Go over names, uses of parts

o      Make sure kits are complete

o      Have TA take students upstairs to gets extra parts to complete kits

▪       Bring down a few boxes and share

12:30 -2:30

-         Programming Interface Tutorial (Andrew)

o      Mindstorms Interface

o      Basic Control Tab

▪       Motor, looping, sensors  (Not variables, Not conditionals)

-         Explorobot exercise  (teams of 2 or 3)

o      Read story (have students take turns out loud)

o      Make sure we understand task

o      Create Design Journal sections in journal

▪       Robot Name

▪       Robot Description

▪       Task List

▪       Limitations/Constraints

▪       Mindstorm (Brainstorm)

▪       Sketches

o      Build Simple Robot (slide and have pre-built)

▪       Add ultrasound sensor to front

o      Skip book building plans

o      Use design journal

o      Setup course using tubs and tape measure

o      Program it, test it, debug it

2:45 – 4:15

-         Journaling

o      What to cover in journal

▪       Observations

▪       Discuss the process

o      Questions on projector/whiteboard?

-         Discussion

o      Observations

o      What did we learn?

-         Cleanup