Team Organization

There are several ways to organize the student design teams. The following one can be used in a club or in class. There are at least three different areas that the students can work on separately—builders, programmers and strategists—however, they are also interconnected, as a strategist cannot create a strategy without knowing about the design and the builders need to incorporate thinking strategically in their design construction. As a result of these investigations, students will work together as a team to solve a challenge.

1. Builders: KSB's 1 & 2. Follow directions to build a simple robust robot and test it using installed program.
    a. Wiring
    b. Gear Relationships
    c.
2. Programmers: KSB's 3, 4 & 5. Complete a tutorial to learn how to program in Robolab.
    a. Robolab environment: tool, function and help panels; modifiers.
    b. Downloading program.
    c. Program to go straight.
    d. Modify program for motor power and time.
    e. Modify program to make 90^0 turn. (Replace command)
    f. Write a program to solve a challenge. (Copy and paste.)

3. Strategists: Generate Alternatives. Plan to complete challenge and earn the most points.
    a. Study challenge board and rules; determine maximum # of points possible.
    b. Develop strategy for completing challenge.
        i. Brainstorm methods for completing missions.
        ii. Determine what missions to attempt, in what order, within time constraints.
    c. Determine attachments necessary; communicate to builders.
    d. Write pseudo code for programmers; communicate to programmers.
    Ex. Go forward for 2 seconds, stop. Turn right, stop.

4. Together: Work to test, evaluate, modify (repeat), to build and program robot to earn the most points.