STEP Technology Initiative Questionnaire
Summer 2003

Dear Student:

Welcome to STEP. We look forward to spending a wonderful few weeks with you. In order to help us accommodate your needs and interests we have devised a short questionnaire. Please take a few moments to answer the questionnaire and return it to your teacher. Your answers will be kept confidential and will be used only for research purposes.

Have a great summer!

The Robotics Initiative Team

1. Information

Your name:

_____

Age: _____ Grade: _____

_____

Gender: Male ☐   Female ☐

2. Background

How did you come to join STEP?

_____

_____

_____

_____

Do you plan on attending college?   Yes ☐   No ☐

If yes, what do you want to major in? _____

3. Previous Courses

Indicate the number of high school courses that you have successfully completed in the following subjects.

Number of Courses

⇦ ▫ ▫ ▫ ▫ ▫ ▫ ⇨

	0	1	2	3	4+
1. Mathematics	☐	☐	☐	☐	☐
2. Science	☐	☐	☐	☐	☐
3. Computers	☐	☐	☐	☐	☐
4. Robotics	☐	☐	☐	☐	☐

4. Course Interests

Based on your experiences, please indicate your level of interest in the following subjects.
(1 = Very Low, 2 = Low, 3 = Neutral, 4 = High, 5 = Very High.)

	VERY LOW		$\Leftarrow$ $\square$ $\square$ $\square$ $\square$ $\square$ $\Rightarrow$		VERY HIGH
	1	2	3	4	5
1. Mathematics	☐	☐	☐	☐	☐
2. Science	☐	☐	☐	☐	☐
3. Computers	☐	☐	☐	☐	☐
4. Robotics	☐	☐	☐	☐	☐

5. Personal Ability

Based on your experience, rate your ability level in the following subjects. (1 = Very Poor, 2 = Poor, 3 = Average, 4 = Strong, 5 = Very Strong.)

	VERY POOR		$\Leftarrow$ $\square$ $\square$ $\square$ $\square$ $\square$ $\Rightarrow$		VERY STRONG
	1	2	3	4	5
1. Mathematics	☐	☐	☐	☐	☐
2. Science	☐	☐	☐	☐	☐
3. Computers	☐	☐	☐	☐	☐
4. Robotics	☐	☐	☐	☐	☐

Do you think you could build a robot?   Yes ☐   No ☐

Have you ever built a robot before?   Yes ☐   No ☐

6. Computer Use

Does your family own a computer?   Yes ☐   No ☐

Please indicate approximately how many hours you spend each week using the computer for the following reasons:

	Number of hours per week $\Leftarrow$ $\square$ $\square$ $\square$ $\square$ $\square$ $\Rightarrow$				
	0-1	1-2	3-4	4-5	5+
1. Looking for Information	☐	☐	☐	☐	☐
2. Entertainment (Games, movies etc…)	☐	☐	☐	☐	☐
3. Homework	☐	☐	☐	☐	☐
4. Communications (Email, IM etc…)	☐	☐	☐	☐	☐

7. Problem Solving

Challenge 1:

You are in the subway station and you pull out your metro-card. You go to swipe your metro-card but it won't work. What are some of the possible reasons it did not work? How would you go about fixing the possible problems?

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Challenge 2:

Start State

2	8	3
1	6	4
7		5

Goal State

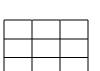| 1	2	3
8		4
7	6	5

Arrange the tiles so that all the tiles in the start state are in their correct positions in the goal state. You do this by moving tiles. You can move a tile up, down, left, or right, so long as the following conditions are met:

    A. There's no other tile blocking you in the direction of the movement; and
    B. You're not trying to move outside of the boundaries/edges.

Use the grids below to show your progression from the start state to the goal state. Make sure to write down every step. If you make a wrong move do not erase; just move on to the next grid. Please circle the grids that lead to the final solution. (Note: you do not need all these grids to solve the problem. They are just to give you space to work out the problem.)
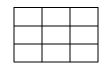
Challenge 3:

Below are four cards. There is a rule that states, "If a card has a vowel on one side, then it has an even number on the other side." Circle the card or cards you would turn over to find out if this rule is true?

Cards: E   K   4   7

Why did you pick the card(s) you circled?

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