# NYHS Technology Initiative Questionnaire Summer 2003

Dear Student:

Welcome to the New York Hall of Science Robotics Workshop. We look forward to spending a wonderful week 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:	Email: (Optional)	
Gender:	Male	Female	
2. Backgro	und		
How did you co	me to participate i	in the robotics workshop?	
Do you plan on	attending college	? Yes 🗌 No 🗌	
If yes, what	do you want to ma	ajor in?	 

#### 3. Previous Courses

Indicate the number of classes that you have successfully completed in the following subjects.

	Number of Classes ⇔ □ □ □ □ □ □ □ ⇒				
	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. (N/A = Not Applicable, 1 = Very Low, 2 = Low, 3 = Neutral, 4 = High, 5 = Very High.)

		VERY LOW	¢		>	VERY HIGH
	N/A	1	2	3	4	5
1. Mathematics						
2. Science						
3. Computers						
4. Robotics						
5. Programming						

#### 5. Personal Ability

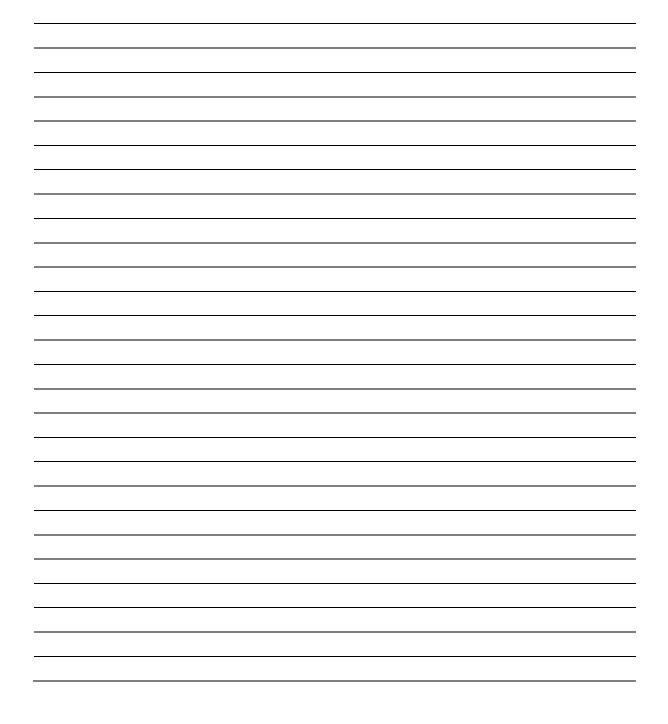
Based on your experience, rate your ability level in the following subjects. (N/A = Not Applicable, 1 = Very Poor, 2 = Poor, 3 = Average, 4 = Strong, 5 = Very Strong.)

		VERY POOR		00000	□⇔	VERY STRONG
	N/A	. 1	2	3	4	5
1. Mathematics						
2. Science						
3. Computers						
4. Robotics						
5. Programming						
Do you think you could build a robot?	Yes	□ <sub>No</sub>				
Have you built a robot before this workshop?	Yes	No No				
6. Computer Use						
Does your family own a computer?	Yes	No No				
Please indicate approximately how many hours y following reasons:	you spe	nd each v	veek using	g the comp	uter for th	e
			Nur	nber of hours		
		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?



#### Challenge 2:

Start State

Goal State



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.)



r	





1	

# Challenge 3:

Imagine that you are chosen to invent a robot to do something useful....

What would your robot do? What materials would you use to construct your robot? How would you make the robot do what it is suppose to do?

Draw your robot here: (Please label all of the parts)