# NYHS Technology Initiative Questionnaire Summer 2003

Dear Student:

Congratulations on successfully completing New York Hall of Science's first robotics workshop. 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.

Enjoy the rest of the summer!

The Robotics Initiative Team

1. Informa	ation							
Your name:								
Age:	Grade:	Email: (Op	tional)					
Gender:	Male	Female						
2. Course	e Interests							
	ur experiences, ple pplicable, 1 = Very						ts.	
				VERY LOW	<b>6</b>	000000	>	VERY HIGH
			N/A	1	2	3	4	5
1. Math	ematics							
2. Scier	nce							
3. Com	puters							
4. Robo	otics							
5. Prog	ramming							
	al Ability ur experience, rate or, 2 = Poor, 3 = Ave				ects. (N/A	x = Not Ap	plicable	
				VERY POOR	<b>(</b> =	000000	<b>&gt;</b>	VERY STRONG
			N/A	1	2	3	4	5
1. Math	ematics							
2. Scier	nce							
3. Com	puters							
4. Robo	otics							
5. Prog	ramming							

4. Computer Use					
Does your family own a computer?	Yes No	]			
Please indicate approximately how many following reasons:	hours you spend ea	ach week using	the computer for the		
Number of hours per week					
		0-1 1-2	3-4 4-5	5+	
Looking for Information					
2. Entertainment (Games, movies e	etc)				
3. Homework					
4. Communications (Email, IM etc	)				
5. Feedback					
If given the opportunity would you want to	o learn more about r	obotics? Yes	s 🗆 No 🗆		
Please rate your change in interest in the	e following subjects a	itter taking the	obotics class?		
	Decreased	Same	Increased	$\neg$	
1. Mathematics					
2. Science					
3. Computers					
4. Robotics					
5. Programming					
If your interest has increased or decrease	ed in any of the abov	ve subjects plea	ase indicate why?		
•	·	, ,	•		
				_	
Please rate your perceived change in ability in the following subjects after the robotics class?					
	Decreased	Same	Increased		
1. Mathematics					
2. Science				1	
3. Computers				1	
4. Robotics				1	
5. Programming					

What were your favorite three things about the robotics class? Why?
If you could change three things about the robotics class what would you change? Why?
If you have any additional comments please write them here:

## 5. Problem Solving

## Challenge 1:

You have a CD player and a CD with your favorite song on it. All you want to do is play you're your favorite over and over again. You put the headphones on and nothing happens. What are some of the possible reasons it did not work? How would you go about fixing the possible problems?

#### Challenge 2:

Start	State	
Start	Sidie	

1	3	4
8	6	2
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.)

## 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)