



# Quantum Leap Voyages

## ROBOTICS TRAVEL LOG



Mentors Emily and Andrew

STUDENT NAME	EMAIL ADDRESS	START DATE: END DATE:
<p><b>"The mission of this exploration is to make the student aware of the PATHWAYS to career success!"</b> <b>Your responses to each adventure should be three or more sentences!</b></p>		
PATHWAY 1 HIGH SCHOOL STEP #1 CLASSES AND CLUBS	What classes are available in your school to help Emily and Andrew explore robotics and computer applications? What <a href="#">Career and Technical Education</a> courses are available? List the courses from both groups.	
STEP #2 – ROBOTICS CLUB	Emily's and Andrew's teacher suggested that they explore the video: <a href="#">First Robotics Club</a>	
Does your school have a FIRST Robotics Club? If not, is there a Technology Club? Has this video inspired you to join or help create a FIRST Robotics Club? What did you learn about FIRST?		
STEP #3 – ROBOTICS COMPETITION	Watch: <a href="#">Dean Kamen's FIRST Robotics Competition</a> What segments of this video really excited you about this career field?	
STEP #4 – CAREERS IN ROBOTICS	Emily and Andrew decided to join their school's Robotics' Club. Their teacher suggests that they explore more about the robotics as a career. Using a search engine such as Google, help them find the answers to these six questions. <ol style="list-style-type: none"><li>1. What is a robot?</li><li>2. What are the 5 major fields of robotics?</li><li>3. How do beginners learn robotics?</li><li>4. What is the use of robotics?</li><li>5. What are the advantages of robots?</li><li>6. Is Amazon's Alexa a robot?</li></ol>	



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<b>PATHWAY 2 HIGH SCHOOL SUMMER ADVENTURES STEP #5 ROBOTICS KITS</b>	Research these two robotic kits -- <a href="#">Raspberry Pi</a> or <a href="#">Lego Mindstorm</a> . Which Robotics kit would you like to try and why? Write your choice and a brief comparison overview.
<b>STEP #6 – LEARNING ROBOTIC LANGUAGES</b>	The single most important goal for anyone in the field of robotics is to learn the languages of computers. Review <a href="#">What is Coding: Coding 101</a> and <a href="#">RobotiQ's Best Programming Language for Robotics</a> .
What is the difference between programming and coding?	
What language would you begin with and why?	
<b>STEP #7 – ROBOTICS SUMMER CAMP</b>	Find a summer robotics camp locally by searching: " <a href="#">New York State summer camps STEM/Robotics</a> ." Also check out: <a href="#">Stony Brook University Summer Tech Camps</a> and <a href="#">Robotics Alliance Project</a> summer camps.
Record your findings about the summer camp you may want to go. Why did you choose this camp?	
<b>STEP #8 PROGRAMMING MINDSET – WHICH LANGUAGES TO KNOW?</b>	As your proficiency with the programming mindset is mastered, it makes it easier to learn any new language. Check out <a href="#">Must Learn Top Programming Languages for Robotics</a> and journal the top five you want to master.
1.	
2.	
3.	
4.	
5.	



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<b>PATHWAY 3 COLLEGE STEP #9 – EMILY STAYS LOCAL AT 2-YR COLLEGE</b>	Emily decides the world of manufacturing is an excellent way to develop an in-depth understanding of automation manufacturing. She believes it will be helpful in fulfilling her vision of a career in robotics. Review her course of study <a href="#">SCC's Manufacturing Technology</a> .
Do you think Emily is making a good choice to start her college studies towards a career in the field of Robotics?	
<b>STEP #10 – EMILY DOES RESEARCH AT THE LOCAL LIBRARY</b>	Assist Emily with her research: Review <a href="#">10 Impacts of Robots in Everyday Life</a> and <a href="#">The Future of Robots and Robotics</a>
Do your own investigation. In what area of robotics did you find interests you most?	
<b>STEP #11 – ANDREW JOINS A ROBOTICS PROGRAM</b>	Andrew found a connection through his H.S. Robotics Club for a great Robotics program at Stony Brook. Review: <a href="#">Stony Brook Robotics Team</a>
What current projects are they working on?	
What programs are they involved in?	
Who are their corporate partners?	
Does this college program excite you about your future in robotics? Why?	
<b>STEP #12 – ANDREW CONSIDERS WIDENER UNIVERSITY</b>	Andrew would like you to take a look at the school, watch video overview and give him your opinion. Visit: <a href="#">Widener University</a> Explore: <a href="#">College Catalog</a> Review: <a href="#">Robotics Engineering Degree</a>
What is your opinion of this college?	
Do you think this is a good choice for Andrew?	
How many credits does Andrew need to graduate from this major?	
Would you consider attending this University?	



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<b>PATHWAY 4 COLLEGE SUMMER ACTIVITIES STEP #13 – EMILY’S OPTIONS AFTER 2 YEARS OF COLLEGE</b>	At her local college, Emily learned a good deal about the latest manufacturing skills and techniques. She'd real world experience. On the other hand, she sees the value of continuing her studies at a four-year college to earn a B.S. Bachelor of Science degree. Assist Emily with making a decision by reviewing <a href="#">Suffolk Community College's Manufacturing Technology</a> associate degree.
Do you think Emily should join the job market after her graduation from SCC? Why?	
Do you think she should instead continue her education to achieve a B.S. Degree in Robotics? Why?	
What would you want to do and why?	
<b>STEP #14 – FIND EMILY A LOCAL INTERNSHIP</b>	Job and Internship Resources for Emily: <a href="#">Handshake</a> , <a href="#">500 Companies Hiring</a> , <a href="#">Top Employers</a> , <a href="#">Indeed.com</a> . Also check out companies that support First Robotics: <a href="#">First Alumni</a>
Find at least TWO job opportunities related to robotics/engineering and explain why you chose your findings.	
<b>STEP #15 – ANDREW’S SUMMER INTERNSHIP AWAY FROM HOME</b>	Andrew has been researching the following websites for summer internships: <a href="#">Glassdoor.com</a> , <a href="#">Monster.com</a> , and <a href="#">Indeed.com</a>
Help Andrew find at least two job opportunities related to robotics/engineering and explain your choices.	
<b>STEP #16 – COOPERTIVE EDUCATION OPTION FOR ANDREW</b>	Andrew is looking into Widener University’s Co-op Career Program, an experiential learning program that allows students to gain up to 18 months of professional or research experience related to their academic interests. Investigate Widener’s program <a href="https://www.widener.edu/news/news-archive/turning-co-op-career">https://www.widener.edu/news/news-archive/turning-co-op-career</a> .
Would you advise Andrew to take advantage of this opportunity during his four years at the college? Why?	
What would you decide and explain why?	



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<b>PATHWAY 5 LIFELONG LEARNING</b>	Choose any 2 companies listed. Explore their websites. Answer the following: <ol style="list-style-type: none"><li>1. What is the corporation's vision? Goals? Mission?</li><li>2. What services or products does the company provide?</li><li>3. Using the organization's website career page – list the current job openings/internships which relate to your career goal.</li><li>4. Find the organization's <a href="#">LinkedIn site</a>. What else can you learn about the company and its vision/goals?</li></ol> <p>Companies: <a href="#">#1</a> <a href="#">#2</a> <a href="#">#3</a> <a href="#">#4</a> <a href="#">#5</a> <a href="#">#6</a> <a href="#">#7</a> <a href="#">#8</a> <a href="#">#9</a></p>
<b>STEP #17 - LEARNING @ THE JOB SITE</b>	
<b>STEP #18 - APPRENTICESHIPS</b>	An apprenticeship is a paid period of training. Watch NYS <a href="#">Apprenticeship Video</a> Google search: robotics, engineering, manufacturing apprenticeships. Check out: <a href="#">Robotics Business Review</a>
Record your findings. Would any of these apprenticeship opportunities or activities interest you?	
<b>STEP #19 - U.S. MILITARY</b>	Choose the armed services you would consider and describe the training program you would want to join that could lead you to Robotics related position in the future armed services group. Watch <a href="#">video</a> . Read: <a href="#">Military Robotics...</a>
<a href="#">ARMY</a> – <a href="#">NAVY</a> – <a href="#">AIR FORCE</a> – <a href="#">MARINES</a> – <a href="#">U.S. COAST GUARD</a>	



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Congratulations on completing the career pathways for Robotics! Please summarize your experiences in the reflections below.

### STEP #20 – REFLECTION: IS THIS A CAREER PATHWAY FOR YOU? Watch Video: [Robotics Engineer](#)

1. Have you taken some of the high school courses you need to take to get yourself started on the pathway?
  
2. Which summer activity are you eager to take in order to validate your interest in this career field?
  
3. What “Life-long” learning options pathway will you take upon leaving high school? You can choose among full time employment, apprenticeships, armed services and post-secondary education which are all sound choices.
  
4. If applicable, what college major and courses would you choose to study at a two-year or four-year college?
  
5. What summer activities are you eager to explore to increase your success chances of entering the field of employment after completion of high school or college?
  
6. When ready what full-time employment opportunities will you choose?
  
7. Which apprenticeship program(s) would you join for on-the-job training leading to full-time employment?
  
8. What military service would you consider for “FREE” education and training in the field you would like to pursue?
  
9. Did you enjoy this career pathway adventure?
  
10. Would you like to try another pathway?