






Renewable Energy Career Research Project

OVERVIEW

Wyounda Horton and Elijah Watson worked at Siemens Energy during the Summer of 2023. Together, they completed an interdisciplinary ELA/CTE lesson about renewable energy careers.

<p>AUTHORS Wyounda Horton and Elijah Watson</p>	<p>GRADE LEVEL Grades 6-8</p>	<p>CONTENT AREA Middle School ELA and CTE</p>
		
<p>ESSENTIAL QUESTIONS</p> <p>What do my interests, attitudes, and values say about my future career choice?</p> <p>How is my personality and learning style connected to my future career choice?</p> <p>What are the skills and abilities I need to have for my future career choice?</p>	<p>TIME NEEDED</p> <p>Time to prepare and set up materials: 2 Days</p> <p>Time to facilitate the activity: 3 weeks</p> <p>Time to wrap up/review: 2 days</p>	<p>STANDARDS</p> <p>The list of Standards is located here.</p>

MAKING CONNECTIONS

Piedmont IB Middle and Ranson IB Middle Schools teach students the international baccalaureate curriculum in conjunction with NC ELA and CTE standards. All IB programs aim to develop internationally minded people who recognize their common humanity and shared guardianship of the planet and help to create a better and more peaceful world. Moreover, this renewable energy career project teaches students the urgency and importance of learning about future careers to help the earth.

Materials

Chromebook, Smartboard

The Activity

Part 1–Career Exploration: [Resources](#)

- Students learn about their personal and transferable skills to help with future career choices
- Introductory video about renewable energy and teacher discusses renewable energy
- Students learn about the renewable energy jobs of the future

Part 2–Renewable Energy Career Project (Slide Deck to be presented using Shark Tank Format): [Resources](#)

- Students are introduced to the renewable energy career research project template
- Students select and start researching their renewable energy career

- Students start their Renewable Energy Google Slide presentation and start preparing their Shark Tank three-minute pitch

Part 3—Renewable Energy Essay: [Resources](#)

- Students start preparing their renewable energy essay
- Students write and edit their essay
- Students join the renewable energy essay competition

WRAP UP AND ACTION

Teachers will assess students' knowledge of the activity by participating in the Shark Tank competition and submitting their renewable energy essays.

Resources

Part 1 Resources:

- [2.03 Personal and Transferable Skills.pptx](#)
- [What is renewable energy?](#) [The BEST Paying Jobs In Renewable Energy](#)
- [Explore Clean Energy Careers](#)
- [14 Renewable Energy Careers \(And How To Start in the Field\)](#)
- [STEPS4GROWTH](#)
- [NC Clean Energy](#)
- [NC Careers](#)

Part 2 Resources:

- [Research Project Instructions](#)
- [Research Project Template](#)

- [Renewable Energy Presentation](#)
 - [Nialah Career Project Exemplar](#)

Part 3 Resources:

- [Essay Prompt](#)
- [Renewable Energy Essay Rubric](#)
- [Shark Tank Rubric](#)

About the Author

Wyounda Horton - Kenan Fellow 2023-24

Wyounda Horton is a middle school ELA teacher at Piedmont IB School in Charlotte, NC. Born and raised in Moore County, she has spent the last 12 years in North Carolina in a 6th-8th grade English or Science class. She earned her B.A Degree in Middle Grades Education from The University of North Carolina at Charlotte.

During her first years in the classroom, she was awarded the Optimist Hall Leadership Award, for her service and program creation. In 2022 she received the Extra Yard for Teachers Award from UNC-Charlotte Athletics for her leadership as a mentor for beginning teachers. She has been a beginning teacher Mentor for 5 years, and a Charlotte Teachers Institute Fellow (CTI) for the past two years (22'-24'). Ms. Horton serves as a Bosch B.E.S.T Grant Champion, after receiving her Bosch Teacher Grant Award in 2021.

As a teacher leader, Ms. Horton is pursuing her National Board Certification and just recently presented at The North Carolina Association for Middle Level Educators (NCMLE) 2024 Inspire Conference. She leads her PLC at Piedmont, presents at monthly staff meetings, and runs programs like the school Spelling Bee. Ms. Horton is a true NC teacher leader.

Elijah Watson - Kenan Fellow 2023-24

Elijah Watson is a National Board Certified Career and Technical Education teacher at Ranson IB Middle School in Charlotte, NC. Elijah was awarded Teacher of the Year during the 2021-2022 school year. In addition, Elijah received the Our Children's Hero Award presented by the Black Child Development Institute – Charlotte (2022). Previously, Elijah worked in the Trust Operations group of Wells Fargo Bank's Wealth, Brokerage, and Retirement Division for 16 years. He earned an M.B.A. from Strayer University and a B.A. in Finance from Morehouse College. Born and raised in Chicago, IL, Elijah was senior class president and valedictorian of his graduating class at John Marshall Harlan High School. In 2008, former Charlotte Mayor Pat McCrory recognized Elijah with the "Charlotte Mentor of the Year Award" for his involvement in the S.T.A.R.S. Academy. Elijah was also awarded the Bank of America's "Local Hero" Neighborhood Excellence Initiative (2011), the

Presidential Service Award by the Morehouse College National Alumni Association (2010), and the North Carolina Medallion Award for Outstanding Volunteer Service (2008).

Elijah is a member of Alpha Phi Alpha Fraternity, Incorporated. Elijah Watson is blessed to be married to Tissh Wilson Watson, and they both attend St. Paul Baptist Church. Elijah and Tissh are proud parents to Lauryn.

About the Fellowship

The most beneficial aspects of our internships were learning about Siemens Energy and shadowing Siemens managers. We enjoyed learning from the Siemens training department employees and the multiple tours. In addition, we had the pleasure of shadowing and learning from sixteen Siemens managers. They taught us about digitalization, project management, engineering, human resources, etc. All managers shared different management styles and the need for a well-rounded education.

In addition, we learned that Siemens' generators, gas, and steam turbines power over 30% of the world. One insight we had this summer was the importance of creating a teamwork atmosphere in a high-pressure work environment. Every manager we spoke with at Siemens stressed the need for collaboration and good communication.

Student Pages

MIDDLE SCHOOL CAREER RESEARCH PROJECT INSTRUCTIONS

1. Access California CareerZone <https://www.cacareerzone.org/>
2. Scroll to the top of the page and click on “Explore.”
3. Scroll down to “Quick Assessment.”
4. Follow the directions which will lead to three general interest areas.
5. Click on “View Results.”
6. Scroll through the occupations listed and find one that you would like to use for your career research project.
7. Click on that occupation and use the research information for your report.
8. Please be very creative and do extensive research on your chosen occupation. It is recommended that you do more than one slide per section. You can include brief videos of your occupation in your presentation.
9. The career zone website is for California; however, research colleges and wages for North Carolina. This is for page two and page three of the career project.
10. Scholars are to complete their project by using Google Slides and turn in through Canvas.
11. Project is worth 100 Perform grade points. Due on Monday, March 25.
12. **All Scholars who turn in their career research project through Canvas and prepare a three-minute presentation can enter the Shark Tank competition. Shark Tank is a popular television show in which contestants pitch business ideas to successful entrepreneurs for funding. The winner will receive a prize. The Piedmont and Ranson Shark Tank competitions will take place on Wednesday, March 27. Piedmont and Ranson staff will judge the competitions during class.**

TEMPLATE FOR THE CAREER RESEARCH PROJECT HANDOUT

PAGE 1 – TITLE PAGE

Name of Career
by
Your Name

**(Action pictures of people working in
this career)**

PAGE 2 – CAREER INFORMATION PAGE

Aspects About My Career

*ABOUT THE JOB

*IT IS ALSO CALLED

*WHAT THEY DO

*EDUCATION REQUIRED

*WAGES

*COMMON COLLEGE MAJORS

COST OF COLLEGE

*COLLEGE NAME, TUITION

*COLLEGE NAME, TUITION

MY OBSERVATIONS

*LIST NEW INFORMATION YOU LEARNED

*DO YOU SEE YOURSELF IN THIS JOB IN 15 YEARS?

Exploring Careers in Renewable Energy Essay

- Please write a minimum 3 paragraph essay using the prompt.
- Your essay should be organized, and your own original thoughts
- Complete your essay on a Google Doc and submit on Canvas

Prompt: As we move towards a more sustainable future, renewable energy sources such as solar, wind, hydroelectric, and geothermal power are becoming increasingly important. These technologies not only help combat climate change but also present numerous career opportunities. Imagine yourself, a seventh grader interested in exploring careers in renewable energy. Which career would you choose and why?

Appendix

Shark Tank Scoring Rubric for Exploring Careers & Employment

Title Page	Name of Career & Pictures	Scale 1-5 (5 is the highest)
Aspects About My Job	<ol style="list-style-type: none">1. About the Job2. It is also Called3. What they do	Scale 1-10 (10 is the highest)
Aspects About My Job	<ol style="list-style-type: none">1. Education Required2. Wages3. Common Colleges Majors	Scale 1-10 (10 is the highest)

Cost of College	<ol style="list-style-type: none"> 1. College Name, Tuition 2. College Name, Tuition 	Scale 1- 5 (5 is the highest)
My Observations	List new information you learned	Scale 1-10 (10 is the highest)
My Observations	Do you see yourself in this job in 15 years?	Scale 1- 10 (10 is the highest)
Delivery	<p>Thoughts and statements are well-organized and clearly stated; appropriate business language used.</p> <p>Demonstrates self-confidence, poise and good voice projection.</p>	Scale 1-10 (10 is the highest)

_____ /60 max

Student Name & Block:

ELA Standards

Writing

W.7.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

- a. Organize information and ideas around a topic to plan and prepare to write.
- b. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting, graphics, and multimedia when useful to aid comprehension.
- c. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
- d. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
- e. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- f. Establish and maintain a formal style.
- g. Provide a concluding statement or section that follows from and supports the information or explanation presented.
- h. With some guidance and support from peers and adults, develop and strengthen writing as needed by revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed

Research

W.7.5 Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

W.7.6 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Exploring Personal Characteristics and Careers CTE Standards

CC1.00	Understand interests, attitudes, values, personality, learning styles, and skills.
<i>CC1.01</i>	<i>Understand interests, attitudes, and values.</i>
<i>CC1.02</i>	<i>Understand personality and learning styles.</i>
<i>CC1.03</i>	<i>Understand personal and transferable skills</i>
CC2.00	Understand how interests, values, and personality influence career choices.
<i>CC2.01</i>	<i>Understand how interests and values influence career choices.</i>
<i>CC2.02</i>	<i>Understand how personality influences career choices.</i>