1.3 Civic Engagement and Engineering

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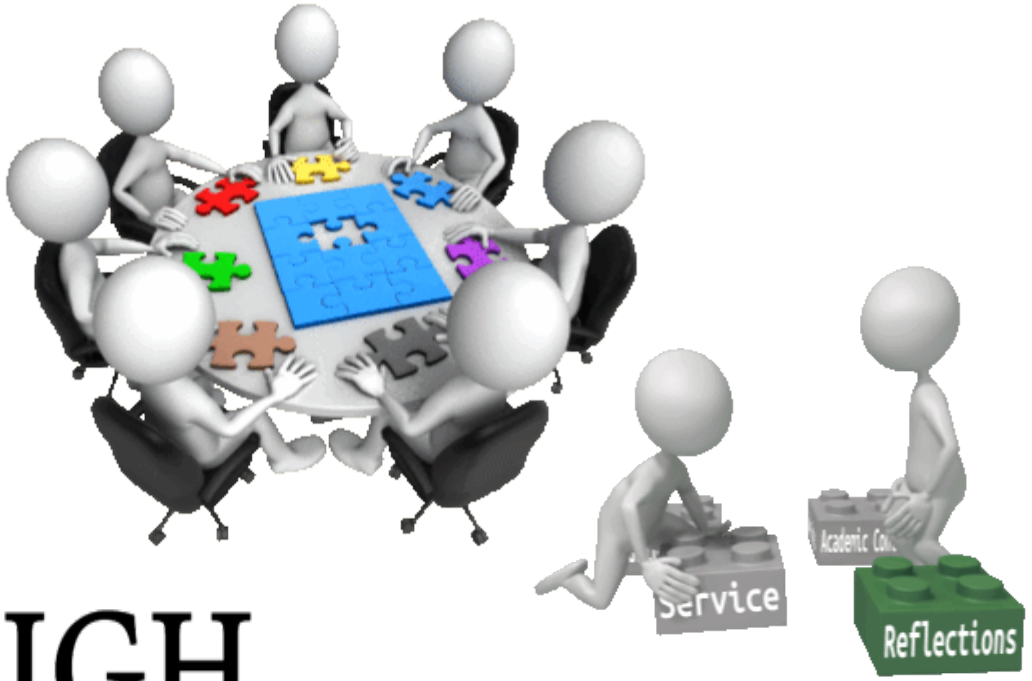
Essential Question:

Why is it important to give back to the community where you live with your time, talents and skills?



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1.3 Civic Engagement and Engineering Overview

1. *Class Basics*
   - *Notebook*
   - *Line of Learning*
   - *Common Core Standards*

2. *Video- You don't know Jack*

3. *Importance of Civic Engagement*

4. *Reflection*

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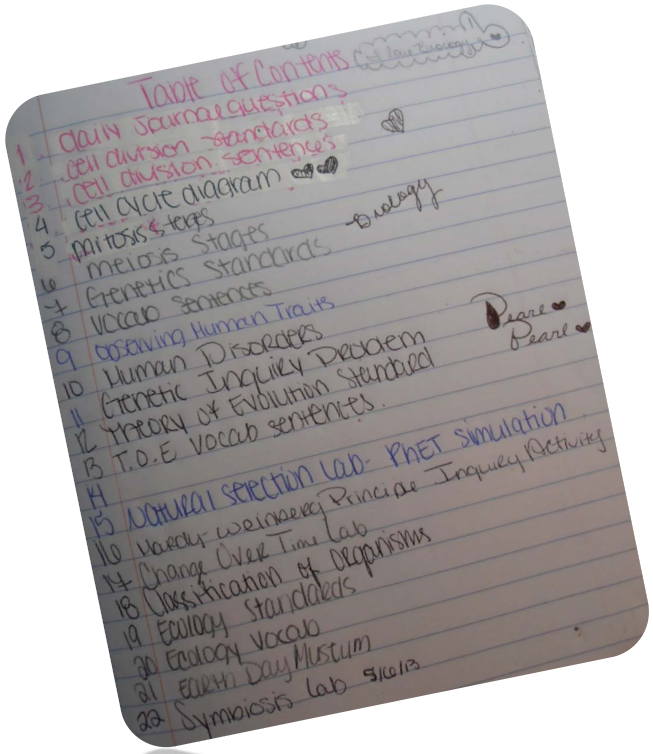
Prepare your notebook

- *Table of contents*



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Standards:

NGSS HS. Engineering Design HS-ETS1-1. HS-ETS1-3.

ELA/Literacy – RST.11-12.9

Standards Statement

Students will create a list of objectives that will guide their learning through this lesson based on the above standards. It is important to see that all students have a voice and have skills, talents and critical thinking skills that can tackle important issues in the community.

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Review: Service-Learning

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Service-Learning

"Service-learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility and strengthen communities."

Resource: *Corporation for National and Community Service*.
www.nationalservice.gov

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You Don't Know Jack

Watch the Video

Alternative testing procedure for pancreatic cancer

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Click on the picture to launch the youtube video

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How did Jack serve the community?

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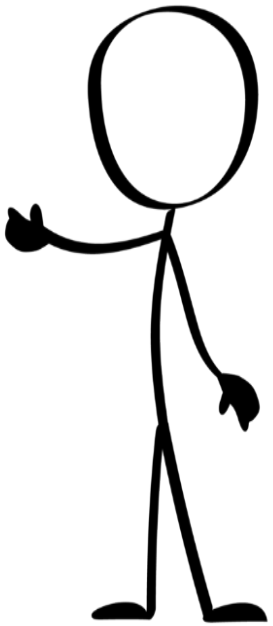

What skills did Jack have to master to accomplish his goal?

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Why is it important to give back to your community?

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How did this project differ from the Bicycle Helmet project?

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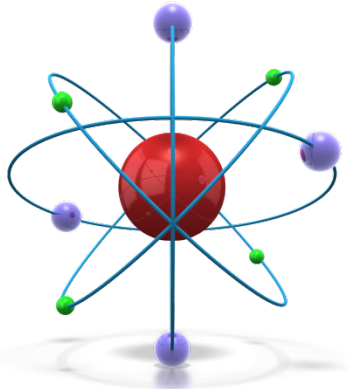
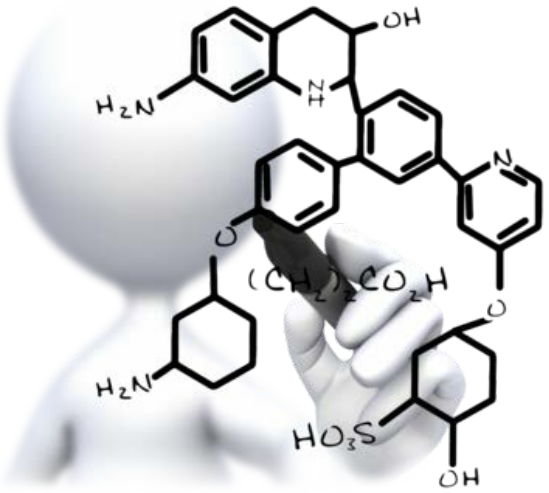
What Scientific Principles would you need to know to be able to test this product?





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Constraints

Evaluate the pancreatic cancer testing procedure

Aesthetic Appeal

Cost

Safety

Reliability

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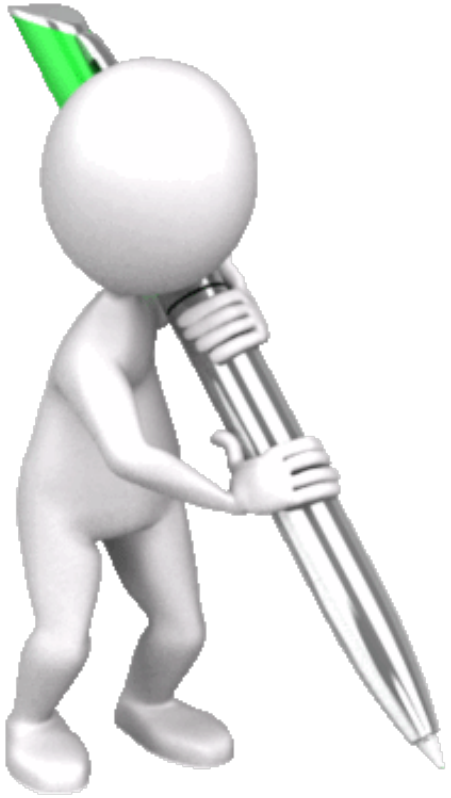
How can civic engagement not only help the community but also help you?



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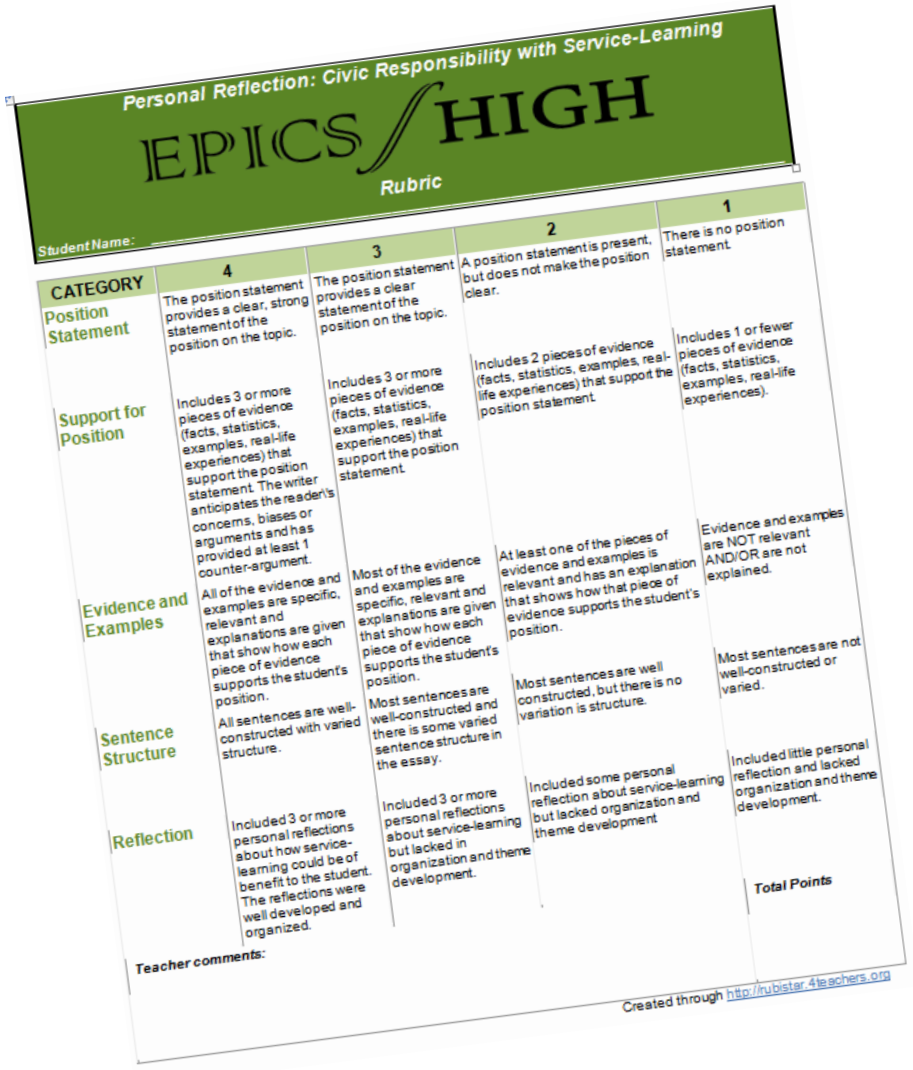
Rubric

Explore your own talents, skills and passions about how civic engagement is essential not only for the community but beneficial to the students.



Personal Reflection: Civic Responsibility with Service-Learning

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Rubric

Student Name: _____

CATEGORY	4	3	2	1
Position Statement	The position statement provides a clear, strong statement of the position on the topic.	The position statement provides a clear statement of the position on the topic.	A position statement is present, but does not make the position clear.	There is no position statement.
Support for Position	Includes 3 or more pieces of evidence (facts, statistics, examples, real-life experiences) that support the position statement. The writer anticipates the reader's concerns, biases or arguments and has provided at least 1 counter-argument.	Includes 3 or more pieces of evidence (facts, statistics, examples, real-life experiences) that support the position statement.	Includes 2 pieces of evidence (facts, statistics, examples, real-life experiences) that support the position statement.	Includes 1 or fewer pieces of evidence (facts, statistics, examples, real-life experiences).
Evidence and Examples	All of the evidence and examples are specific, relevant and explanations are given that show how each piece of evidence supports the student's position.	Most of the evidence and examples are specific, relevant and explanations are given that show how each piece of evidence supports the student's position.	At least one of the pieces of evidence and examples is relevant and has an explanation that shows how that piece of evidence supports the student's position.	Evidence and examples are NOT relevant AND/OR are not explained.
Sentence Structure	All sentences are well-constructed with varied structure.	Most sentences are well-constructed and there is some varied sentence structure in the essay.	Most sentences are well constructed, but there is no variation is structure.	Most sentences are not well-constructed or varied.
Reflection	Included 3 or more personal reflections about how service-learning could be of benefit to the student. The reflections were well developed and organized.	Included 3 or more personal reflections about service-learning but lacked in organization and theme development.	Included some personal reflection about service-learning but lacked organization and theme development	Included little personal reflection and lacked organization and theme development.
				Total Points

Teacher comments:

Created through http://rubistar.4teachers.org

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Questions??

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Reflection

Have you?

- Evaluate a real example of a student involved in service-learning and how it was beneficial academically, professionally, socially and was personally satisfying.
- Explore how Service-Learning improves the lives of the community and has personal benefits.
- Make the connection that service-learning involves both local and global issues.
- Examine the criteria of an engineering project to determine cost, safety, reliability, aesthetic appeal and additional questions that they still had.

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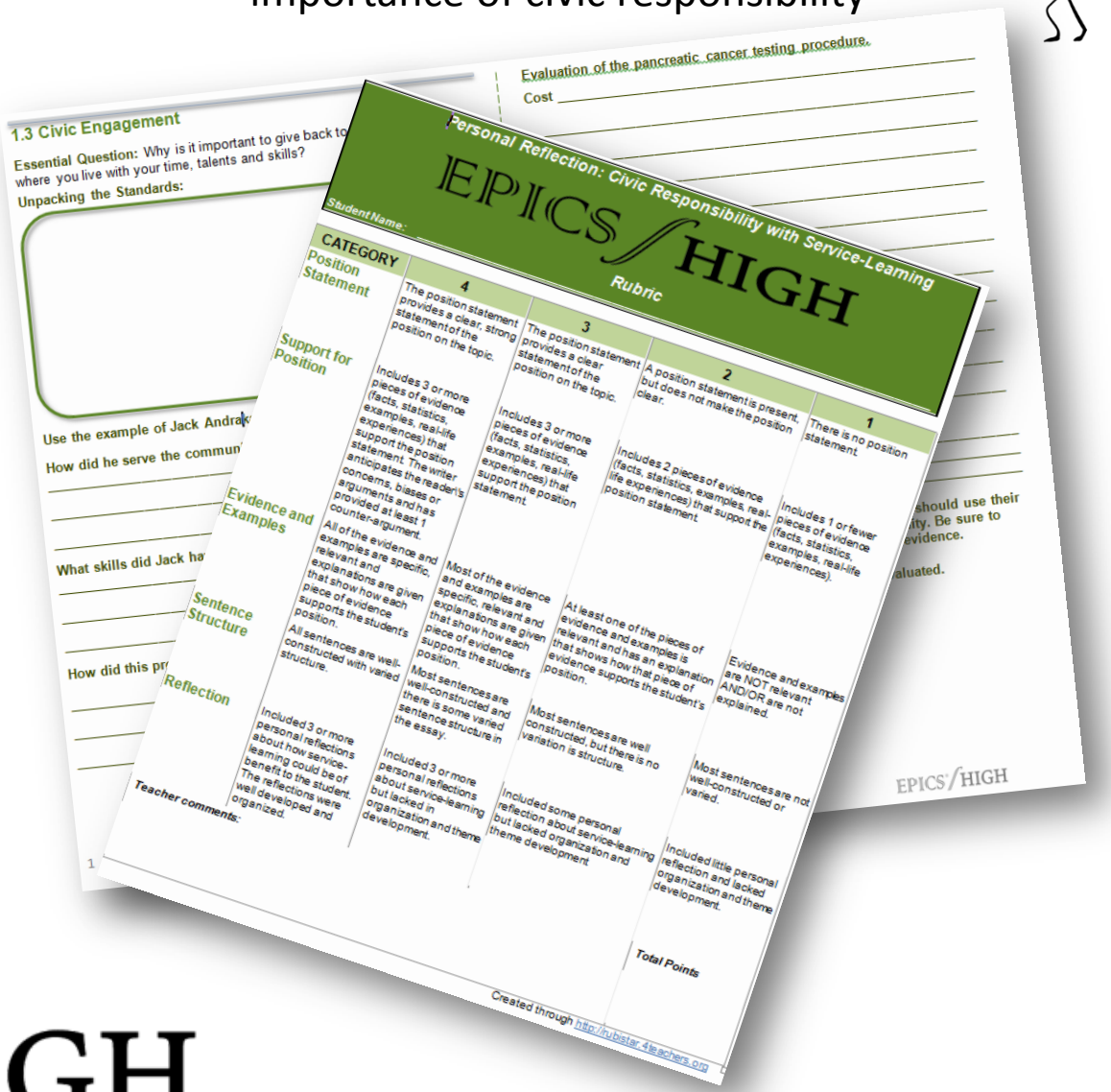
Lesson Artifacts

- Notebook Check

Student sheet 1.3

Entry in notebook or paper- The importance of civic responsibility



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Exit Slip

Name _____ EPICS/HIGH

Three things I learned about the personal benefits of service-learning.

3 ★★★

Two ways I contributed to class today:

2 ★★

One question I still have is:

1 ★

My efforts in class were:

Fabulous ☺ OK Could Be Better ☹

- *Answer the Questions on the sheet*
- *If you have further questions write them on the back*

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