

Standards:

SI #3: Use appropriate mathematics, tools and techniques to gather data and information.

SI #5: Develop descriptions, models, explanations, and predictions.

SI #8: Communicate scientific procedures and explanations.

Handouts:

None.

On Board:

1. Get laptop from 9th period class (1-2 Period Only).
2. Log into your laptop.
3. Get out Science Assignment A or B depending on which one you had to complete.
4. Get out S.T.E. Unit 1 Lesson 6 Quick Lab - Day 6 (Technology in Science).
5. Get out your Science Composition books.
6. Do Bell Work on the Smart board.
7. Pencil

Up For Grabs:

Materials:

Computers

Procedures:

1. Take attendance.
2. Do Bell Work.
3. Discuss Bell Work.
4. Go over procedure for the day.
5. Go over focus for the day.
6. Check/collect S.T.E. Unit 1 Lesson 6 Quick Lab - Day 6 (Technology in Science)
7. Go over Assignment B answers.
8. Present Assignment A.
9. Take Open Note Follow Up Quiz over Unit 1 Lesson 6.
10. Begin working on homework assignment p. 83 in the Fusion book (Lesson Review).

Homework:

Finish p. 83 in your Fusion book (Lesson Review).

Begin to study for test over S.T.E. Unit 1.

**Science, Technology,
and Engineering Unit 1 -
Lesson 6**

Day: 6

To Do...

Bell Work - Day 6

1. Get laptop from 9th period class (1-2 Period Only).
2. Log into your laptop.
3. Get out Science Assignment A or B depending on which one you had to complete.
4. Get out S.T.E. Unit 1 Lesson 6 Quick Lab - Day 6 (Technology in Science).
5. Get out your Science Composition books.
6. Do Bell Work on the Smart board.
7. Pencil

Label This Bell Work: Science, Technology, and Engineering Unit 1 - Lesson 6. Use one box.

How are prototypes used in the engineering design process?

Bell Work - Day 6

Label This Bell Work: Science, Technology, and Engineering Unit 1 - Lesson 6. Use one box.

How are prototypes used in the engineering design process?

Prototypes are models that can be tested for efficiency.

Procedure

Today We will...

1. Take attendance.
2. Do Bell Work.
3. Discuss Bell Work.
4. Go over procedure for the day.
5. Go over focus for the day.
6. Check/collect S.T.E. Unit 1 Lesson 6 Quick Lab - Day 6 (Technology in Science)
7. Go over Assignment B answers.
8. Present Assignment A.
9. Take Open Note Follow Up Quiz over Unit 1 Lesson 6.
10. Begin working on homework assignment p. 83 in the Fusion book (Lesson Review).

Focus

- You will learn that engineers apply science and math to develop technology.
- You will learn that technology can be simple or complex.
- You will learn that engineers follow methodical process.

State Standard

SI #3: Use appropriate mathematics, tools and techniques to gather data and information.

SI #5: Develop descriptions, models, explanations, and predictions.

SI #8: Communicate scientific procedures and explanations.

Answers To S.T.E. Unit 1 Lesson 6 Quick Lab - Day 5 (Technology Science)

1. **Accept all reasonable answers.**
2. **Sample answer: Yes, I would know that it could serve as a fastening device.**
3. **Sample answer: Yes, a zipper might need to be hidden in order to serve its purpose. It would need to be slim and in a color that did not contrast with its surroundings.**
4. **Sample answer: I could not tell as much about what a remote does or how it works just by looking at it.**

Answers To S.T.E. Unit 1 Lesson 6 Quick Lab - Day 4 (Defining A Problem)

5. Sample answer: Electronic devices may be designed to look appealing. They maybe designed so that they are easy to hold and operate.

6. Accept all reasonable answers.

7. Sample answer: Technology can be simple,like a zipper,or complex, like a remote control. The appearance of a technology can influence how it used. The function of simple technology is more readily apparent through observation than is the function of complex technology.

S.T.E. Unit 1 Lesson 4 Assignment A or B

Students That Did Assignment A - "Change Over Time Timelines"

1. Get your assignment ready to present to the class.
2. Mr. McCully will select random people to present.
3. While I am going over assignment B, I would like you to work on approved games on your laptop, read A.R., or study for your science test quietly.

Students That Did Assignment B - "Fusion Book pp. 74-83"

1. Get out your assignment and get ready to go over answers together.

If you did not get 100 percent on the last quiz you will need to take the follow quiz for extra credit.

Answers To S.T.E Fusion Book pp. 74-83

5. Sample answer: A. This technology allowed people to make calculations that were too complicated to do mentally. B. Modern technology uses electronic circuits to perform calculations quickly.
6. They must know the shape and the size of the ear canal and how sounds are transmitted and interpreted by the brain.
7. Sample answer: A weather balloon can be used to gather information about weather conditions.
8. Sketch and label a solution for keeping a building cool.

Answers To S.T.E Fusion Book pp. 74-83

9. science skills, math, skills, and technical skills.
the ability to conduct valid investigations and thorough research.

draw blueprints in correct scale, calculate safe loads for bridges, or make the parts of a pacemaker work together.

the ability to use computers and other types of technology to collect and analyze data.

10. Circle Research, Investigation, or both depending on the questions they generate. Sample questions: Does the building currently contain any hazardous materials? How energy efficient are the existing windows? What technology would make the building more energy efficient?

Answers To S.T.E Fusion Book pp. 74-83

11. There is a need for an economical way to provide communication in these places.

engineers might need to research environmental conditions and existing telephone technology. New ways to send a signal might be possible

Solutions for providing cell phone service could include a different type of tower, increased signal strength, different wavelengths, or satellite relays.

If the team chose to use satellite relays for phone signals, for example, several prototypes could be used to determine what frequencies establish the most stable link to the satellite.

If a prototype phone tends to lose contact with the satellite, they determine what interferes with the link.

they may explain and promote the communication technology to potential customers and manufacturers. Or they may communicate with the public through news releases or advertisements.

Answers To S.T.E Fusion Book pp. 74-83

12. Answers will vary.

13. 5; 2; 6

14. Students should illustrate one of the remaining engineering design process steps listed (1. Identifying a Need, 3. Brainstorming and Selecting Solutions, or 4. Building a Prototype).

15. Sample answer: The prototype garden could help designers identify suitable plants for the garden and decide whether the engineering solutions for maintaining the plants are working.

Answers To S.T.E Fusion Book pp. 74-83

16. technology

17. science

18. identify a problem

19. Sample answer: I can't water the plants on the porch at home because they are hanging high along the edge of the porch roof. I can design a hose extension that goes on the end of a water hose so that I can reach the plants.

Present Change Over Time Timelines

1. Present selected timelines in class.
2. Collect all the timelines.

Open Note Quiz

1. Get dividers and prepare room for quiz.
2. Open up lap tops.
3. Log in and go to, "Think Central" from the, "Middle Leopard Techie" page.
4. Log into "Think Central."
5. Go to, "Things To Do" and click on the assignment given to you.
6. Take Unit 1 Lesson 6 Follow Up Quiz.
7. Read the screen about testing then hit, "Start Test."
8. **YOU ARE PERMITTED TO USE ONLY YOUR SCIENCE COMPOSITION NOTEBOOK AND YOUR KNOWLEDGE BUILDERS TO HELP YOU WITH THE QUIZ.**

WHEN YOU ARE FINISHED

9. Review and check your answers if you need to.
10. Click on, "Score Test."
11. Click on, "Score Test" again.
12. Click on, "Ok."
13. Raise your hand and let me record you score.
14. Log out of Think Central and close laptop.
15. Put dividers back. Keep chairs turned around until everyone is complete with quiz.
16. Begin to work on homework p. 83 in Fusion book (Lesson Review).

Homework

Finish p. 83 in your Fusion book (Lesson Review).

Begin to study for test over S.T.E. Unit 1.