

Standards:

SI #4: Analyze & interpret data.

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

Handouts:

S.T.E Answers To pp. 56-66. We just need a class set (30).

On Board:

1. Get laptop from 9th period class (1-2 Period Only).
2. Get out Science Assignment A or B depending on which one you had to complete.
3. Get out your S.T.E U1 L5 Lesson - Day 5 (Quick Lab).
4. Get out your Science Composition books.
5. Do Bell Work on the Smart board.
6. Pencil

Up For Grabs:

Materials:

Answers to Assignment B pp. 56-66 in the Fusion Book to give to peer tutors.

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 U1 L5 Lesson - Day 5 (Quick Lab).
7. Peer tutors will present answers to Assignment B pp. 56-66 in Fusion book with students that were required to do the assignment.
8. Present Assignment A - "Family Statistics - Histogram" and then collect.
9. Take Open Note Follow Up Quiz over Unit 1 Lesson 5.
10. Begin working on homework assignment p. 67 in Fusion book (Lesson Review).

Homework:

Finish p. 67 in your Fusion book (Lesson 5 Review).

Note: All the students that scored above 75 percent will be given a few questions from pp. 56-66 at the beginning of class. They need to review how they are going to present it to the class. If you have enough have them go in pairs.

Science, Technology,
and Engineering Unit 1 -
Lesson 4

Day: 6

To Do...

Bell Work - Day 6

1. Get laptop from 9th period class (1-2 Period Only).
2. Get out Science Assignment A or B depending on which one you had to complete.
3. Get out your S.T.E U1 L5 Lesson - Day 5 (Quick Lab).
4. Get out your Science Composition books.
5. Do Bell Work on the Smart board.
6. Pencil

Label This Bell Work: Science, Technology, and Engineering Unit 1 - Lesson 5. Use two boxes.

How do you find the mean for a set of data?

How do you find the median for a set of data?

Bell Work - Day 6

Label This Bell Work: Science, Technology, and Engineering Unit 1 - Lesson 5. Use two boxes.

How do you find the mean for a set of data?

You add up all the numbers and divide by the total number of numbers in the set of data.

How do you find the median for a set of data?

You find the middle number if you have a odd number of numbers. If you have an even number of numbers then you take the two middle numbers and divide by 2.

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 U1 L5 Lesson - Day 5 (Quick Lab).
7. Peer tutors will present answers to Assignment B pp. 56-66 in Fusion book with students that were required to do the assignment.
8. Present Assignment A - "Family Statistics - Histogram" and then collect.
9. Take Open Note Follow Up Quiz over Unit 1 Lesson 5.
10. Begin working on homework assignment p. 67 in Fusion book (Lesson Review).

Focus

- You will learn that tables can be used to represent data, especially numbers.
- You will learn that graphs are a way of representing data.
- You will learn that statistics are used to analyze data.

State Standard

SI #4: Analyze & interpret data.

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

Answers Quick Lab: Heart Rate and Exercise

Time (min)	Heart rate (beats per minute)	Time (min)	Heart rate (beats per minute)
0 (at rest)		5 (running)	
1 (running)		6 (at rest)	
2 (running)		7 (at rest)	
3 (running)		8 (at rest)	
4 (running)		9 (at rest)	

Answers To Quick Lab: Heart Rate and Exercise

5. Answers will vary.

6. Sample answer: The heart rate was lowest at 0 minutes. It increased steadily for the first 2 minutes and then leveled off until the subject stopped running. When the subject stopped running, the heart rate slowly returned to its initial level.

7. Sample answer: Other subjects had different actual heart rates, but the general shape of the curve was the same for all groups.

8. Sample answer: The physical fitness of the subjects, the accuracy of the data collector, and the speed at which the subjects ran may all have affected the results.

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

Students That Did Assignment A - "Family Statistics - Histograms"

1. Get your assignment ready to present to the class.
2. Mr. McCully will select random groups to present.
3. I will be giving each of you questions that you are going to go over with the class from pp. 56-66. Please review the question and answers to the questions given to you.

Students That Did Assignment B - "Fusion Book pp. 56-66"

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. 56-66

5. The high temperature is the independent variable. The number of cold drinks sold is the dependent variable. The number of cold drinks sold changes as the temperature rises.
6. X-axis, or horizontal axis
7. yes, as the high temperature increases, the number of cold drinks sold increases.
8. underline, "Angle" and "Distance Traveled"
9. scatter plot, bar graph, circle graph.
10. Students should plot angle on the x-axis and distance on the y-axis; sample title for the graph: Effect of Launch Angle on Distance Traveled by Tennis Ball.

Answers To S.T.E Fusion Book pp. 56-66

11. An angle of 45 degrees; the graph shows that distances peak around 45 degrees. Balls launched at angles higher and lower than that do not go as far.

12. 7 g

13. Students histograms should accurately reflect data given in the table.

14. month with greatest amount of rainfall: November;
months with least amount of rainfall: June and October
range: $16 - 1 = 15$ cm.

15. 6 cm

16. 4.5 cm

17. 3 cm

Answers To S.T.E Fusion Book pp. 56-66

18. Only one variable should be changed at a time during an investigation.

19. range of masses of balls = $0.5 - 0.1 = 0.4$ kg; range of distances traveled = $62.4 - 55.1 = 7.3$ m

20. Make a scatter plot that shows the relationship between two sets of data. Their graphs should accurately reflect the data in the table.

21. Kaylee's hypothesis was supported by her data because balls with lighter masses traveled farther than did balls with heavier masses when launched with the same force.

Answers To S.T.E Fusion Book pp. 56-66

22. column headings

23. independent

24. Range

25. Sample Answer: Scientists can better view trends in data using graphs. For example, they can use a scatter plot or line graph to see how a dependent variable changes when an independent variable changes. They can use line plots and histograms to see how data are distributed.

Present Histograms To Class

1. Present selected histograms to the class.
2. Collect all the histograms.

Histogram

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 5 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. 67 in Fusion book (Lesson Review).

Homework

Finish p. 67 in your Fusion book (Lesson 5 Review).