

Honors Physical Science Summer Work

The purpose of this summer work is to review basic science skills before the start of the school year. Please be sure to complete the following before the first day of school.

1. Read Chapter One: Science Skills
2. Complete the worksheet packet over Chapter One
3. Purchase a spiral notebook. All of your notes for science class will be written in this notebook
4. In your science notebook, define the science words listed and look up the answers to the basic science knowledge questions that are on page one of the science summer work packet.

There will be test over Chapter One within the first week of school. If you have any questions you may email me over the summer mwalker@barbertonschools.org or use the science remind code to text me. To sign up for the science remind text 81010 and enter @1sci17 and you will receive messages from me and be able to send messages.

Enjoy your summer!

Mrs. Walker

Honors Physical Science Summer Work

Define the following words and answer the basic science questions. This should be your first entry in your science notebook. Bring this with you on the first day to class.

1. Analyze
2. Apparatus
3. Catalyst
4. Classifying
5. Composition
6. Concentration
7. Conductivity
8. Conversion
9. Correlation
10. Correspond
11. Extrapolate
12. Frequency
13. Generalize
14. Hypothesis
15. Inferring
16. Manipulative Variable
17. Predict
18. Probability
19. Responding Variable
20. Solute
21. Solution
22. Solvent
23. Spectra
24. Summarize
25. Theory
26. Variable
27. Vary

Answer the following question and use correct units!

1. What is the density of water?
2. What is air pressure at sea level?
3. What is the speed of light?
4. What is the acceleration of gravity?

CHAPTER 1 REVIEW

Name: _____

Period: _____

1. What is science?
2. How does science begin and end?
3. What is technology?
4. How are science and technology related?
5. What are the three main branches of physical science?

6. Chemistry :

Physics:

Geology:

Astronomy:

Biology:

7. What is the age of the universe? _____
8. How large is the observable universe? _____
9. All matter is made of building blocks called _____
10. What causes a change in motion? _____
11. What kind of energy does a moving object have? _____
12. What are the 4 Big Ideas in Physical Science?
13. What is the scientific method?
14. What is the goal of the scientific method?
15. What are the 5 steps to the scientific method?

16. What is an observation?

17. What is a hypothesis?

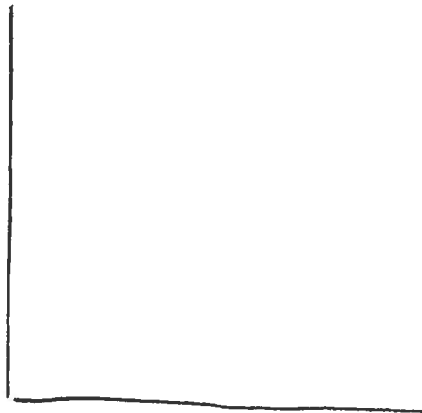
18. What is a controlled experiment?

19. What is the difference between a manipulative and responding variable?

20. What is a controlled experiment?

21. The manipulative variable is always put on the x-axis and the responding variable is placed on the y-axis. Read the experiment performed on p. 9 about running vs walking in the rain.

Identify the manipulative and responding variable, draw a graph showing your variables and the data. You can use a simple bar graph.



22. What is a scientific theory AND give an example.

23. What is a scientific law AND give an example.

24. Which is NEVER proven, a law or theory?

25. Why do we use scientific notation?

26. Write 0.00025 in scientific notation.

27. Write 540,000,000,000 in scientific notation.

28. Write in scientific notation: $(7.6 \times 10^{-4}) \times (1.5 \times 10^7) =$

29. Calculate how far light travels in 8.64×10^4 seconds. Light travels at a speed of 3.0×10^8 m/s.
Show your work

30. What are the SI units for:

Mass: _____ Length: _____ Temperature: _____

Time: _____ Volume: _____ Density: _____

31. What do the following prefixes mean?

giga: _____ mega: _____ kilo: _____

centi _____ milli: _____ nano: _____

32. What is a conversion factor?

33. What is precision?

34. What is accuracy?

35. What are the three scales used to measure temperature?

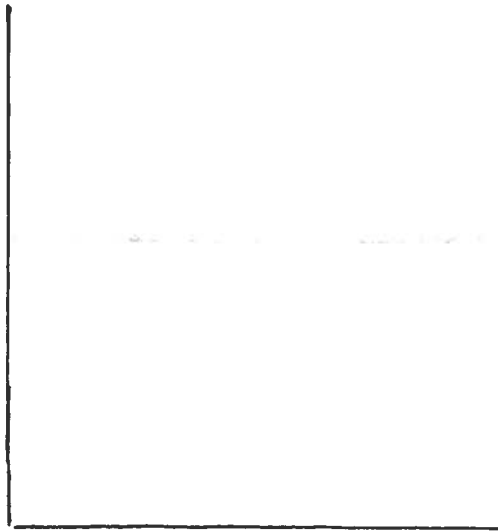
36. Convert 30 C to Kelvin.

37. What temperature does water freeze and boil in Celsius?

38. The steepness of a line on a graph is called _____.

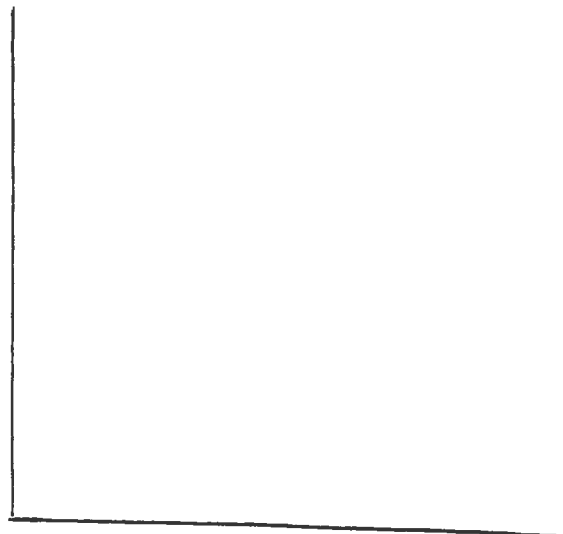
39. Draw a line graph showing a direct proportion and a line graph showing an indirect proportion.

40. What type of graph compares the parts to the whole?
41. What type of graph is visually easy to use and compare sets of values or measurements.
42. Name 4 ways scientists can communicate data.
43. Use the data table at the top of page 24 to create a line graph. Describe the relationship between modem speed and download time.



44. Use the data in the table below to create a line graph. Plot the distance on the vertical axis and the driving time on the horizontal axis. Calculate the slope of the line. If speed is the ratio of the distance to time, what is the average driving speed of the entire trip?

Driving Distance and Time		
City	Distance From Start (km)	Driving Time From Start (h)
New York City, N.Y.	750	9.5
Cleveland, Ohio	1300	16.25
Chicago, Ill.	1900	23.25
Omaha, Nebr.	2100	26.25
Cheyenne, Wyo.	2900	36.25
Salt Lake City, Utah	3600	45
San Francisco, Calif.	4800	60



45. Write a paragraph describing how advances in technology have affected your life. (The first sentence in your paragraph should state the main idea. Give supporting details/reasons)