Science Skills Practice Test

Section 1 Graphing

1. Explain why graphs are useful in science.
2. For the following data table create a graph that represents the data. It is up to you to decide which type of graph to create. Don't forget labels, symbols, and an explicit title. Explicit means to explain completely in the most detail as possible.

Concentration of Oxygen in Water

Temperature (°C)	Oxygen Concentration in Freshwater (ppm)	Oxygen Concentration in Seawater (ppm)
1	14.0	11.0
10	11.5	9.0
15	10.0	8.0
20	9.0	7.5
25	8.0	7.0
30	7.5	6.0

3. Explain what this graph shows.
4. What temperature has the greatest Oxygen Concentration Range (range = biggest difference between high and low) between Freshwater and Seawater.
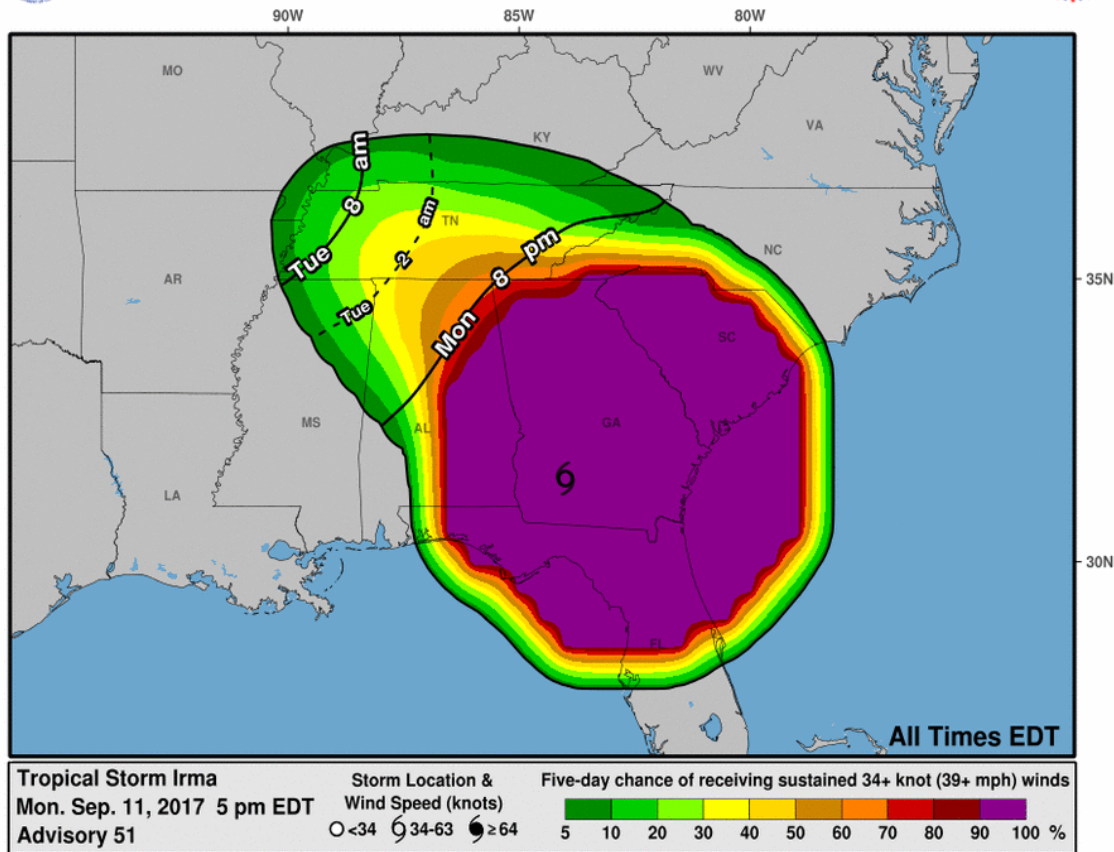
Section 2 Measuring, Mass, Volume, and Density

5. How many millimeters are in a meter?
6. Use a ruler to find the area of this paper in cm^2.
7. Convert 20cm. into inches to the nearest hundredths place.
8. What is the mass, in grams to the nearest tenth, of the metal rod at the triple beam balance? Make sure to write down what color rod you are using.
9. Use the whole number of the object on your table (if the weight of the object was 21.9 grams use, 21 grams for this problem) to solve the following problem.
    a. How many ounces is it? (1g=.035oz) Show your work.
10. Find the volume of the object at the sink next to the graduated cylinder.
11. In your own words, explain density. How would you find the density of the object you weighed?
12. Go to the chrome book and use the density simulation to answer these questions:
    a. What is the density of mystery block C?
    b. What is the density of mystery block E?

Section 3 Mapping

Title?????

Tropical Storm Irma
Mon. Sep. 11, 2017 5 pm EDT
Advisory 51

Storm Location & Wind Speed (knots)
○ <34 ◐ 34-63 ● ≥64

Five-day chance of receiving sustained 34+ knot (39+ mph) winds
5 10 20 30 40 50 60 70 80 90 100 %

All Times EDT

13. List at least 2 pieces of relevant (meaningful to you) information that make this map understandable and useful.
14. Using the information you listed from question 12 what could the title of this map be (be as explicit as possible)?
15. This map is an example of what type of map?
16. Infer (come up with a solution based on what you know) what direction will the storm most likely head next. (pick North/East/South/West, or between them NE/NW/SE/SW)

Section 4 Periodic Table and Research

17. In your own words, what is the periodic table and why is it useful?
18. Pick any topic and tell me how you would research that topic. Explain in as much detail as you can things you need to be aware of when searching for information about your topic, what to avoid, and what is important in creating high quality research.