Graphing Practice

For each research project described below, create an appropriate graph. Be sure to label the axes and include units, provide a title, and answer the questions that follow.

1. A study was conducted on the feeding preference of slugs. Specimens were fed a variety of food sources and data were collected on the number of grams of each food type that were eaten. Construct an appropriate graph and answer the questions that follow.

Food Source	Food Eaten (grams)
lettuce	4.0
mushroom	8.2
dog food	0
spinach	6.5
apple	8.6
peach	5.4
orange	1.0

   a. What type of graph will you use? _____

   b. What is the independent variable? _____

   c. What is the dependent variable? _____

   d. Which food source was favored by slugs, and how do you know?

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2. Baby chickens require a constant source of food. As chickens grow, more energy is needed for daily activities. The following table gives the total mass of food eaten by a chick over a one-week period. Beware: the scientists forgot to collect data for a couple of the days. Construct an appropriate graph and answer the questions that follow.

Day	Food Eaten (grams)
0	0.0
1	1.0
2	3.5
3	?
4	8.5
5	11.0
6	?
7	16.5

    a. What type of graph will you use? _____

    b. What is the independent variable? _____

    c. What is the dependent variable? _____

    d. Use the graph to estimate the missing value for each of the missing days and write your estimate below:

                day 3   _____

                day 6   _____

3. A study was conducted on endangered birds to see if their populations were increasing by being protected from hunters. Scientists went out into the same habitat once every ten years and counted the number of Whooping Cranes, California Condors, and Black Swans they found. Construct an appropriate graph and answer the questions that follow.

Bird Species	Years		
	1950	1960	1970
Whooping Crane	24	41	78
California Condor	76	43	20
Black Swan	56	58	57

    a. What type of graph will you use? _____

    b. What is the independent variable? _____

    c. What is the dependent variable? _____

    d. Interpret the graph to make a conclusion about the Whooping Crane population.

    _____

    _____

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    e. Interpret the graph to make a conclusion about the California Condor population.

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f. Interpret the graph to make a conclusion about the Black Swan population.

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4. A study was undertaken to measure the effects of smoking on the rate of development of lung cancer in both men and women. Construct an appropriate graph and answer the questions that follow.

Age Group	Annual Death Rate from Lung Cancer (per thousand)		
	Heavy Smokers (over 1 pack per day)	Light Smokers (less than 1 pack per day)	Non-smokers
35 – 44	2.5	2.0	0.0
45 – 54	10.2	6.5	0.0
55 – 64	22.5	16.5	2.0
65 – 74	60.0	23.0	4.2
75 – 84	85.0	25.2	6.4

a. What type of graph will you use? _____

b. What is the independent variable? _____

c. What is the dependent variable? _____

d. Interpret the graph to make a conclusion about the effect of smoking.

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