



## Activity 2A: The Results Support Information - Person Months

# TEKS

6th-8th

- (2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:
- (D) construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
  - (E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- (3) Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists. The student is expected to:
- (A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student;
  - (B) use models to represent aspects of the natural world such as a model of Earth's layers;
  - (C) identify advantages and limitations of models such as size, scale, properties, and materials; and
  - (D) relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content.



### UNDERSTANDING "PERSON-TIME"

Person-time refers to all the people in a study who are exposed to a medicine in a given amount of time. Person time can be measured in as person-months, person-years, or person-hours; it depends on the exposure of the drug. During a cohort study patients may be taking different amounts of a drug at various times. Person-months would be calculated by adding the total number of months each person is taking the drug over a given time. For example, patients A, B, and C were prescribed a drug over a six month period. In order to calculate the total exposure of the drug in the study, add the total number of months prescribed for each patient. The following diagram is an example of how to understand person-months: (XXX indicates a month of drug use) Consider the following diagram:





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**Patient A:** |---XXX---|---XXX---|---XXX---|---XXX---|-----|-----|

1 mo  
20 mg

1 mo  
20 mg

1 mo  
60 mg

1 mo  
75 mg

1 mo  
0 mg

1 mo  
0 mg

**Patient B:** |-----|---XXX---|---XXX---|---XXX---|---XXX---|-----|

1 mo  
0 mg

1 mo  
10 mg

1 mo  
20 mg

1 mo  
100 mg

1 mo  
100 mg

1 mo  
0 mg

**Patient C:** |---XXX---|-----|---XXX---|-----|---XXX---|-----|

1 mo  
75 mg

1 mo  
0 mg

1 mo  
20 mg

1 mo  
0 mg

1 mo  
20 mg

1 mo  
0 mg



Imagine each interval represents a one month period. What would be the total exposure of the drug for all three patients? In other words, what are the person-months for this study? The person-months are equal to 11, which means the total exposure to the drug is 11 person-months.

You can also calculate person-months per dosage using this information. For example, at a dosage of 20 mg, it is 5.

### ACTIVITY SUGGESTIONS:

- Students can work in pairs or groups of four.
- Laminate and cut the scenario cards before conducting the lesson

### EXTENSION:

- Create other scenario cards for students.
- Have the students record the amount of soda they drink for 30 days. Make a chart of the last 4 weeks and record the number of sodas you consumed. Get with your groups and calculate the person-days for the amount of soda and the total person-days.

