Two-Way Frequency Tables: Teaching a New Statistics Standard Conceptually

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WARM UP

Here's some data to ponder before we get started.

	Lived					
Male	367					
Female	344					

What do you notice? (What statements can you make about this data?)

What do you wonder? (What questions do you want to ask?)

I invite you to share your thoughts with your elbow partners.

SOME STRUCTURED WORK SPACE

The table on the right is an example of a two-way frequency table that shows data broken into two categorical variables: mortality and gender.

	Lived	Died	Total
Male	367	1364	1731
Female	344	126	470
Total	711	1490	2201

What do each of the five cells labeled "total" represent?

Another way to examine this data is to create relative frequency tables, like this one:

	Lived	Died	Total
Male (n = _____)			
Female (n = _____)			

And this one:

	Lived (n = _____)	Died (n = _____)
Male		
Female		
Total		

And even this one:

n = _____	Lived	Died
Male		
Female		

QUESTIONS TO DISCUSS

What might be good titles for these tables?
Which conclusions are easier to see using these relative frequency tables?
Which conclusions are easier to see in the frequency table that contains the raw data?
Which table is "better"?

THE STANDARD THAT WE ARE EXPLORING

Read the standard below.

As you read, underline key vocabulary that you think is important to remember.

8.SP.4: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*

What questions do you have about standard 8.SP.4?

Here's some work space to play with data that you will receive later in the talk. Use it to create your own two-way frequency and relative frequency tables.

