STUDENT MATERIALS

PART 1 – CREATE A TWO-WAY TABLE

Michaela made a claim that middle school helps students decide what they want to be when they grow up. She decided to test her claim by surveying random students at her school.

Here are the questions she asked them:

- What grade are you in?
- Do you know what you want to be when you grow up?

Use the facts below to complete Michaela's two-way table.

- Michaela surveyed a total of 35 Grade 6 students.
- Of all of the students Michaela surveyed, 90 knew what they wanted to be when they grew up.
- Of the Grade 7 students Michaela surveyed, 30 knew what they wanted to be when they grew up and 15 did not.
- Of the Grade 8 students Michaela surveyed, 40 knew what they wanted to be when they grew up.
- In all, Michaela surveyed 130 students

	Know what they want to be	Do NOT know what they want to be	TOTAL
Grade 6 Students	20	15	35
Grade 7 Students	30	15	45
Grade 8 Students	40	10	50
TOTAL	90	40	130

PART 2 – ANALYZE A TWO-WAY TABLE

Mable was at a football party when the University of Michigan was playing Michigan State. Before the game, each fan completed a survey and answered these questions:

- Are you a Michigan State fan or a University of Michigan fan?
- Do you like the color green or blue better?

Mable created a two-way table of the results.

	Prefers BLUE	Prefers GREEN	
University of Michigan Fan	120	15	135
Michigan State University Fan	12	80	92
	132	95	227

Answer the following questions based on Mable's data. **Provide clear mathematical evidence to support your claims in your responses.**

1. Each fan will receive a cookie with the school's mascot. What percent of the cookies that are ordered should be Michigan State University cookies? Remember to support your claim.

$\frac{92}{227} \rightarrow \approx 40.5\%$ of the cookies should be MSU.

*This makes it clear that it doesn't matter what the fans' favorite color is.

227 is the total amount of fans and 92 being the total amount of fans of Michigan State University. After knowing this, I made a fraction so I could then divide the numerator of the fraction by its denomenator to get the rounded percentage.

2. If Mable chose a person at random, which person is Mable more likely to find at the party?
   - A University of Michigan fan who prefers green

   or
   - A Michigan State University fan who prefers blue

Mable is more likely to find

☑ A University of Michigan fan who prefers green $\frac{15}{227}$

☐ A Michigan State University fan who prefers blue $\frac{12}{227}$

Support for your claim:

We can find the right answer fairly easily by finding the two fractions that are needed. There are $\frac{15}{227}$ total fans that are for Michigan, but prefer green, and $\frac{12}{227}$ total fans that are for MSU but prefer blue. Knowing this, it is clear that it would be more common to pick a person that is for Michigan but prefers green.

3. Ten (10) more University of Michigan fans (who prefer blue) showed up late to the party. How many total people were at the football party after the late fans arrived?

237 total fans

PART 3 – REFLECTION

Respond to each of the following reflection questions:

1. What strategies did you use, if any, to check that the two-way table you completed in Part 1 was correct?

I used the given data and used it to add/subtract from to fill the rest of the chart in.

2. What did you find challenging or difficult about the assessment items? How did you overcome those challenges?

To be legitimately honest, the only challenge I have come across on this assesment was thinking of the right words to put in the boxes (which didn't take long).

I don't have any way of explaining how I overcame that challenge. Overall, the assesment wasn't that difficult.