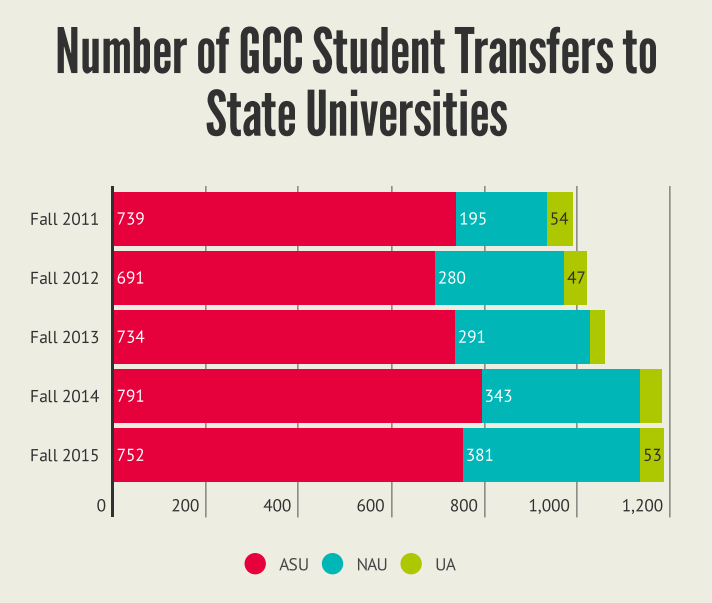
**Contingency Table Activity-Teacher**

**Goal**: The goal of this activity is to read a table and gather data from it and use it to create a contingency table. Students will then be asked a series of questions discussing what they see when they create a contingency table and what are some of the benefits with using one.

**Material Needed:** This worksheet and a pencil.

**Directions:** Break up students into groups of 2 or 3 and have them complete the activity. Depending on the grade level, you can choose to give them the contingency table pre-set up or delete it in their activity and have them create their own from scratch.

Glendale Community College is one of the 10 colleges in the Maricopa Community College District. Each year data is collected about Glendale Community College’s Population. Below is the data from 2011-2015 of the number of GCC student transfers to a state university.



Retrieved from: <http://www.gccaz.edu/sites/default/files/imce/Administrative_Departments/SPA/gcc_facts_at_a_glance_online.pdf>

1. What can you conclude about the information from the chart above?

**It appears that for all of the fall semesters the largest group of students transfer to ASU. The second largest transfer of students transfer to NAU and then U of A.**

1. Using the chart above, construct a contingency table by year (2013-2015) and state university.

**The students will have to estimate the total student transfers for U of A for Fall 3013 and Fall 2014. This is a great time to bring up precision and discuss the possible differences that each group found.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Fall 2013 | Fall 2014 | Fall 2015 | Total |
| ASU | 734 | 791 | 752 | 2277 |
| NAU | 291 | 343 | 381 | 1015 |
| U of A | Answers will vary (20-25) | 52 or 53 | 53 | 125 (Answers will vary) |
| Total | 1045-1052 | 1186 or 1187 | 1186 | 3417 (Answers will vary) |

1. Do you see any associations with any of the variables?

**The contingency table also identifies that students at GCC transfer more to ASU, then NAU and then U of A. We also see that both the Fall 2014 and Fall 2015 years had about the same number of students transfer to a state university.**

1. Can you make any inferences on why these associations could be taking place?

**Answers will vary. ASU might have the largest number of associations due to the fact it is the closest state college for students to transfer.**

1. If you compare the chart that was given at the beginning of the activity and the contingency table, which one do you prefer? Why? Is one chart better than the other? Why or why not? Please be prepared to explain yourself.

**Answers will vary, but the first chart gives a better visual of the student transfers. The contingency tables allows for calculations of the totals which allows for a better understanding between each of the categories.**