**Unit 5 GRASPS:** Expenses & Multi-Criteria Decision Making

**GOAL**:

You will decide which college to attend using Multi-Criteria Decision Making (MCDM).

**ROLE**:

You are a high school senior.

**AUDIENCE**:

Your target audience is your family and yourself.

**SITUATION**:

You are in the second semester of your senior year in high school and have started to get back acceptance letters to college. You must decide which college you will attend by May 1st, 2014. There are many great things about each of your options, and some drawbacks. You will use MCDM to make an objective decision based on specific criteria and your personal preferences.

**PRODUCT PERFORMANCE**:

You will complete the attached work table that shows your research and calculations leading up to your decision. Additionally, you will write a paragraph that explains your decision making process and which college you have selected.

**STANDARDS and CRITERIA for SUCCESS**:

Your submission should include:

* A completed MCDM work table that shows your research results and calculations.
  + Choose at least three colleges to compare (earn extra points for comparing a fourth).
  + Choose at least three additional measures to include in your decision (earn extra points for including four or more).
* A written explanation that describes, in detail, your decision making process and your final decision. You should include responses to the following questions in your well-written paragraph:
  + What criteria and measures did you select? Why?
  + Which three measures are most important to you? Why?
  + Which three measures are the least important to you? Why?
  + Which college did you choose? Why?
* A bibliography of sources where you found your information.

**Unit 5 GRASPS: Expenses & MCDM Rubric**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Yet Quality** | **Quality** | **Value-Add** |
| **Fulfills minimum requirements** | One or more components is missing. | All required components are submitted. | Additional work is done to enhance the project. |
| **Selects appropriate criteria and measures** | Fewer than three additional criteria are selected and/or the criteria are inappropriate. | Three additional criteria are appropriately selected. | More than three additional criteria are selected. |
| **Obtains real data from selected colleges** | One or more raw data items are incorrect. | All raw data items are correct. | n/a |
| **Accurately rescales measures to common units** | Common units for one or more measures are incorrectly calculated. | Common units for all measures are correctly calculated. | n/a |
| **Appropriately assigns weights to each measure** | Weights for one or more measures are implausible and/or do not match explanation. | Weights for all measures are plausible and match explanation. | n/a |
| **Accurately calculates total score for each college** | Total score is inaccurate for one or more colleges. | All total scores are accurately calculated. | n/a |
| **Explains decision making process** | Written paragraph is missing required details to explain decision making process. | Written paragraph includes required components. | Written paragraph includes required components and is very well-written. |

**Unit 5 GRASPS: Expenses & MCDM Work Table**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | College #1: (required) | | | | College #2: (required) | | | |
| **Cost** | **Raw data** | **Common Unit** | **Weight** | **Weighted Score** | **Raw data** | **Common Unit** | **Weight** | **Weighted Score** |
| Tuition |  |  |  |  |  |  |  |  |
| Room & Board |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Location** |  |  |  |  |  |  |  |  |
| Average daily high temperature |  |  |  |  |  |  |  |  |
| Nearness to home |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Academics** |  |  |  |  |  |  |  |  |
| Average SAT/ACT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Social Life** |  |  |  |  |  |  |  |  |
| Social reputation |  |  |  |  |  |  |  |  |
| Size |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Total Score** | ---- | ----- | ---- |  | ---- | ---- | ---- |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | College #3: (required) | | | | College #4: (optional) | | | |
| **Cost** | **Raw data** | **Common Unit** | **Weight** | **Weighted Score** | **Raw data** | **Common Unit** | **Weight** | **Weighted Score** |
| Tuition |  |  |  |  |  |  |  |  |
| Room & Board |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Location** |  |  |  |  |  |  |  |  |
| Average daily high temperature |  |  |  |  |  |  |  |  |
| Nearness to home |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Academics** |  |  |  |  |  |  |  |  |
| Average SAT/ACT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Social Life** |  |  |  |  |  |  |  |  |
| Social reputation |  |  |  |  |  |  |  |  |
| Size |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Total Score** | ---- | ----- | ---- |  | ---- | ---- | ---- |  |