**STEM Algebra 2 Hand Warmer PBL “Pugh Chart Practice”**

|  |  |
| --- | --- |
| 0 | Criteria is never met (HATE it) |
| 1 | Criteria is rarely met (can handle it) |
| 2 | Criteria is sometimes met (good with it) |
| 3 | Criteria is always met (LOVE it) |

**General Information:** You came into some money….and have decided to buy a car. There are many different cars which you can buy. The problem is that each of these have some things you like and some things that you don’t. As an example, maybe one is the perfect color but has awful gas mileage. Another could have the perfect price but it is a truck and you like 4 door cars (sedan). What do you do to determine which vehicle will meet the majority of your needs?

The answer is - use a **Pugh Chart** to evaluate your priorities. Remember, the higher the number the higher your priority. Think of the numbers this way

|  |  |  |  |
| --- | --- | --- | --- |
| **Best place for Coffee** | **Starbucks** | **McDonalds** | **Gas Station** |
| **Cost** | 0 | 2 | 3 |
| **Taste** | 3 | 2 | 2 |
| **Strength of Caffeine** | 3 | 2 | 3 |
| **Wait Time** | 1 | 2 | 3 |
| **Total:** | **7** | **10** | **11** |

**Coffee Example from class:** When I woke up this morning, I realized that my coffee machine had broken. Thus, I needed to go buy coffee on my way to work. I used a Pugh Chart to show the best option.

1. According to the Pugh Chart, where should your teacher get coffee?

1. Why would your teacher go to Starbucks instead (which criteria was most important to your teacher?)?

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics of Vehicle | Vehicle #1:   * Green * 4 door sedan * 35 mil/gal * $19,000 | Vehicle #2:   * Silver * Truck * 15 mil/gal * $7,000 | Vehicle #3:   * Black * 2 door sports car * 20 mil/gal (MPG) * $44,000 |
| Color |  |  |  |
| Type |  |  |  |
| Gas Mileage |  |  |  |
| Cost |  |  |  |
| Total: |  |  |  |

**Back to your car**…there are 3 Vehicles available to you. Which should you buy? Fill in the Pugh chart (using the same numbers discussed at the top of this sheet) Note: This one is a bit tricky!

3. Which Vehicle does the Pugh chart suggest you get?

4. Would you have picked a different car? Why?

**Team Design:** Your team needs to design your own Pugh Chart for ….A good study location. You have a big test coming and need to find a good place to study.

* Discuss and decide on 4 locations that are commonly used as places to study.
* Add them to the column headings on the Pugh Chart below.
* Discuss and decide on 3 criteria that makes a location a good place to study productively
* Add them to the row headings on the Pugh chart below.
* (you are not using the Pugh chart, but are setting it up)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Good Location to Study for a Test |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Total: |  |  |  |  |

**Peer Review:** Using what you have learned today, you are going to review another person’s Good Location location to Study for a Test Pugh Chart.

* Trade paper’s with someone from another team.
* Fill in the Pugh Chart.

Peer Review’s Name:

5. According to the Pugh Chart, which Location would work best for you? Do you agree with the Pugh Chart?