|  | **Concepts** | | | | |
| --- | --- | --- | --- | --- | --- |
| Selection Criteria | A  Straight Sweep Windshield Wiper + manual (Reference) | B  AC Power + Timer Sensor + Rotational Motion | C  Battery + Efficiency Calculation Sensor + Linear Motion | D  Ultrasonic Vibration Force Field | E  Circular Windshield Wipers |
| Durability | 0 | + | 0 | + | 0 |
| Motion Efficiency | 0 | + | 0 | - | + |
| Low cost | 0 | + | - | 0 | + |
| Simplicity | 0 | + | - | 0 | + |
| Cleaning Effectiveness | 0 | - | 0 | - | - |
| Detection Efficiency | 0 | 0 | + | 0 | 0 |
|  |  |  |  |  |  |
| Sum +’s | 0 | 4 | 1 | 1 | 3 |
| Sum 0’s | 6 | 1 | 3 | 3 | 2 |
| Sum -’s | 0 | 1 | 2 | 2 | 1 |
|  |  |  |  |  |  |
| Net Score | 0 | 3 | -1 | -1 | 2 |
| Rank | 3 | 1 | 4 | 4 | 2 |
| Continue? | Revise | Yes, Combine | Yes, Combine | No | Yes |

Justification of Reference: We researched several patents and the overall product was the closest in design to the device that we wanted to create.

|  | | Concepts | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | A  Straight Sweep Windshield Wiper | | BC  AC Power, Sensor, Rotational Motion | | E  Circular Windshield Wiper | |
| Selection Criteria | Weight | Rating | Weighted Score | Rating | Weighted Score | Rating | Weighted Score |
| Durability | 15% | 3 | .45 | 4 | .6 | 4 | .6 |
| Motion Efficiency | 15% | 3 | .45 | 4 | .6 | 4 | .6 |
| Low cost | 20% | 3 | .6 | 3 | .6 | 4 | .8 |
| Simplicity | 15% | 3 | .45 | 3 | .45 | 4 | .6 |
| Cleaning Effectiveness | 20% | 3 | .6 | 3 | .6 | 2 | .4 |
| Detection Efficiency | 15% | 3 | .45 | 5 | .75 | 2 | .3 |
|  | | | | | | | |
| Total Score  Rank | | 3  3 | | 3.6  1 | | 3.3  2 | |
| Continue? | | No | | Develop | | No | |

|  | **Concepts** | | | | |
| --- | --- | --- | --- | --- | --- |
| Selection Criteria | A  Straight Sweep Windshield Wiper + manual (Reference) | B  AC Power + Timer Sensor + Rotational Motion | C  Battery + Efficiency Calculation Sensor + Linear Motion | D  Ultrasonic Vibration Force Field | E  Circular Windshield Wipers |
| Net Score | 0 | 3 | -1 | -1 | 2 |
| Rank | 3 | 1 | 4 | 4 | 2 |
| Continue? | Revise | Yes, Combine | Yes, Combine | No | Yes |