**Designing a Wearable (Prototype) using Nanotechnology**

In groups of 3’s or 4’s, students will use their knowledge gained from their research, presentation, and the investigation to brainstorm and design a wearable device that could be developed by engineers that focuses on the One Health Initiative Challenge.

1. **The Wearable Device Prototype Design**

The design will consist of one of the following:

* 3-D design using Sketch-up app download.
* Artistic Drawing of a prototype
* Legos or some other creative idea… the sky is the limit!
* There are some students who are in computer, engineering, robotic classes who are capable of designing actual prototypes using Arduinos and lily pads. Have materials ready for these students.

1. **Relating Your Prototype Design to Mathematics**

**Write a summary about how mathematics can be used with the design:**

How can mathematics be incorporated or used to inform and/or to assist with current research centered on health topics related to your prototype design?

**Scoring Rubric: Ideation, Design, and Mathematical Connections**

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| --- | --- | --- | --- | --- |
| CATEGORY | 4 (100-90) | 3 (89-80) | 2 (79-70) | 1 (69- below) |
| Ideation and Design | Great ideation and design completely relates to and expands on the on the topics we have investigated. The design is exceptionally attractive in terms of layout and neatness. | Good Ideation and Design, relates to the topic we have discussed. The design is attractive in terms of layout and neatness | Somewhat, related topic, but does not add to what we have talked about very much. The design is acceptably attractive in though it may be a bit messy. | Not really related to what we have learned and/or investigated. The design is distractingly messy or very poorly designed. It is not attractive |
| Mathematical Connection | Explanation shows complete understanding of how mathematical connection can be used for further predictions and development with the design. | Explanation shows substantial understanding of the mathematical connections can be used to make further prediction and development with the design. | Explanation shows some understanding of a mathematical connection to make further predictions and development with the design. | Explanation shows very limited understanding of the underlying math connection that can be used to make a further predictions and development with the design. |

Ideation and Design Score: \_\_\_\_\_\_\_\_\_

Mathematical Connection Score: \_\_\_\_\_\_\_