Lesson 5: Wind Experiment Handout

**Variation 1:**

Note: Keep gear ratio the same for all tests

Hypothesis: How do you think the wind speed will affect the power generation of the wind turbine?

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| **Number of Blades** | **Wind Speed** | **Do the Blades Turn?**  **Y/N** | **LED Brightness** |
| 6 | High |  |  |
| 6 | Medium |  |  |
| 6 | Low |  |  |

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| How does the brightness of the LED correlate to power generation? |
| How does the wind speed correlate to power generation? |
| Explain why the speed effects the power generation. |

**Variation 2:**

Note: Keep gear ratio the same for all tests

Hypothesis: How do you think the number of blades will affect the energy generated by the wind turbine?

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| **Number of Blades** | **Wind Speed** | **Do the Blades Turn?**  **Y/N** | **LED Brightness** |
| 6 | High |  |  |
| 4 | High |  |  |
| 3 | High |  |  |
| 2 | High |  |  |

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| How does the number of blades correlate to power generation? |
| Explain why the number of blades effects the power generation. |