Green Tech NGSS Alignment CHART - Level 1 Activities

You've Got the Power	DIY Generator	Testing Turbines	Meet Adam: Mechanical Engineer
4-ESS3-1: Earth & Space Sciences: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. [1]	**3-PS2-2: Physical Sciences:** Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. [2]	**4-PS3-2: Physical Sciences:** Make observations to provide evidence that energy can be transferred from place to place by sound light heat and electric currents.	**5-ESS3-1: Earth & Space Sciences:** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
MS-PS1-3: Physical Sciences: Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	**MS-PS2-3: Physical Sciences:** Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	**4-PS3-4: Physical Sciences:** Apply scientific ideas to design test and refine a device that converts energy from one form to another.	
	3-PS2-4: Physical Sciences: Define a simple design problem that can be solved by applying scientific ideas about magnets.	**3-5-ETS1-2: Engineering Technology and Applications of Science:** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	
	HS-PS2-5: Physical Sciences: Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	**3-5-ETS1-3: Engineering Technology and Applications of Science:** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	
	HS-PS3-3: Physical Sciences: Design build and refine a device that works within given constraints to convert one form of energy into another form of energy.	**MS-PS2-3: Physical Sciences:** Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	
		MS-ETS1-2: Engineering Technology and Applications of Science: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	
		MS-ETS1-3: Engineering Technology and Applications of Science: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	
		MS-ETS1-4: Engineering Technology and Applications of Science: Develop a model to generate data for iterative testing and modification of a proposed object tool or process such that an optimal design can be achieved.	
		HS-PS3-3: Physical Sciences: Design build and refine a device that works within given constraints to convert one form of energy into another form of energy.	