**Energy Design Rubric Team Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_**

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| **Criteria** | **4** | **3** | **2** | **1** |
| **Research**  CCSS E.L.A 6-7.7 | -Summary of research cites 3-4 resources:energy source, technology, function of systems)  -MLA Format | -Summary of research cites 2 resources:energy source, technology, function of systems  -MLA Format | -Summary of research cites 1 resource:energy source, technology, function of systems  -Formatting is incomplete | -Research is not cited or complete. |
| **Proposal**  (RFP)  CCSS E.L.A 7.3 | -Models proposal set-up  -Expository writing (*formal voice, 3rd person voice*)  -*Clearly & professionally* addresses RFP  Proposal clearly includes a description AND/OR Images of:  -Includes description area of land developed (i.e. water features etc)  -Type of energy stored-Includes description area of land developed (i.e. water features etc)  - 3-4 Energy transformations & transfers of prototype  -Accessible for people with physical disabilities of at least two different types (wheelchair accessible)  -Design measurements are included  -Energy “*lost”* in design/function  -How to reduce “lost energy”  Description of energy transformations includes:  -Explain how energy is redirected to the community  - Explain how individuals use their bodies to make energy  -Explanation of energy storage *(Net addition - without measuring it but demonstrating that you can store energy) Cite source.*  -Identify where redirected energy be sent (stored -like an energy “well” or …)    Description of Prototype  -How it works  -Materials the actual design will be made from (e.g. *parallel the parts of your prototype to parts in the real world*)  - How does it meets the needs of the community?  **-**Technical drawing of prototype/model  -Calculate KE and MGH  INCLUDE Calculations!  -Cite source for data calculation (e.g. water wheel produces 100watts cited from…) | -Models proposal set-up  -Expository writing (*formal voice, 3rd person voice*)  -Addresses RFP  Proposal clearly includes a description AND/OR Images of:  -Includes description area of land developed (i.e. water features etc)  -Type of energy stored-Includes description area of land developed (i.e. water features etc)  - 3 Energy transformations & transfers of prototype  -Accessible for people with physical disabilities of at least two different types (wheelchair accessible)  -Design measurements are included  -Energy “*lost”* in design/function    Description of energy transformations includes:  -Explain how energy is redirected to the community  - Explain how individuals use their bodies to make energy  -Explanation of energy storage  Description of Prototype  -How it works  -Materials it’s made from  - How does it meets the needs of the community?  **-**Technical drawing of prototype/model | -Models RFP set-up  -Expository writing follows formal voice 50% or less of the time.  -Addresses 50% of RFP.  Proposal includes a description:  -Types of energy stored  - 2 or less energy transformations & transfers of prototype  -Design sometimes fits in given area & volume of development.  Description of energy transformations includes:  -Partially explains how energy is redirected to the community  - Loosely explains how individuals use their bodies to make energy  -Explanation of energy storage is unclear  Description of Prototype is  -unclear and includes some of the materials it is made of.  **-**Technical drawing of prototype is not clearly labeled. | -Writing voice is inconsistent, addresses less than 50% of RFP  Proposal includes a vague description:  -Types of energy stored  - 2 or less energy transformations & transfers of prototype  -Design is *generally* outside of given area & volume of development.  Description of energy transformations contains less than 50% of:  -how energy is redirected to the community, how individuals use their bodies to make energy or  -Explanation of energy storage is  Description of Prototype is  -unclear and includes few of the materials it is made of.  **-**Technical drawing of prototype is not clearly labeled. |
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| **Calculations** | -Calculate square footage of development  -Scale drawing of design within park space within map section  -Budget includes money to build & Maintain development (Cite sources for assumptions of costs)  -Itemize materials with cost | -Calculate square footage of development  -Scale drawing of design within park space within map section  -Budget includes money to build & Maintain development (Cite sources for assumptions of costs) | -Calculate square footage of development has a few mathematical errors  -Scale drawing contains some errors | -Calculated square footage of development is incorrect, lacks scale |
| **Prototype/ Model** | -3D Model/Prototype is *functional, well designed, well thought out*  -Models how it will generate energy  -Requires at least two individuals to work and/or requires human created stored energy to work  -Prototype/model is able to use stored energy then transforms energy  -*Prototype has 3-4 energy transformations* | -3D Model/Prototype is functional  -Models how it will generate energy  -Requires at least two individuals to work and/or requires human created stored energy to work  -Prototype/model is able to use stored energy then transforms energy | -3D Model/Prototype is *occasionally functions*  -Models how it will generate energy  -Requires at least two individuals to work and/or requires human created stored energy to work  -Accessible for some people  -Prototype/model is somewhat able to use stored energy then transform energy | -3D Model/Prototype is *not present or does not function*  -Unclearly models how it will generate energy  -*Does not* requires at least two individuals to work and/or requires human created stored energy to work  -Accessible for few people  -Prototype/model unable to use stored energy or transforms energy |