

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Fretwell Homeroom  
S.T.E.M. Home Challenge Assignment

S.T.E.M. is an acronym for Science, Technology, Engineering and Mathematics. Each month you are expected to complete a S.T.E.M. home challenge using the specific material of focus. The goal is for you to think critically, solve complex problems, and drive advancements in science and technology. More importantly, these are 21<sup>st</sup> Century Skills vital to succeed in today's challenging world.

The assignment is constructed of two parts: the design brief and the completed solution. A design brief is simply a written proposal of what you are trying to create and for what purpose. You may have the greatest of intentions, but the final product may not reflect your brief in its entirety. That is okay for that is science. One of the major components of this project is responding to trial and error; therefore, mistakes are expected. Please review the following expectations and attached example for the design brief portion of the S.T.E.M. home challenge assignment.

Design Brief Assignment:

1. Seek a problem that is in need of a solution.
2. Turn the problem statement into a question.
3. Create an illustration of your proposed solution including the identified problem. Be detailed in your illustration and include labels when necessary.
4. Write a brief description of the problem and an explanation of the proposed solution.  
HINT: *What is the problem you are trying to solve? How will this solution help solve the problem?*
5. Your brief must include a title, materials needed to construct the solution, and anticipated S.T.E.M. areas used. *See attached example for support.*

Part II of the S.T.E.M. home challenge is to actually create the proposed solution using the material of focus in some capacity. Other materials are allowed in the design and construction process. As always, remember to seek adult supervision when working with sharp objects, glue guns, and other materials that may result in injury. Come to class with your created solution. Be prepared to present the identified problem, the need for a solution, a brief description as to how you came up with the idea, trials and errors, and S.T.E.M. areas used. Please review the attached rubric for greater insight as to what is expected for the home challenge.