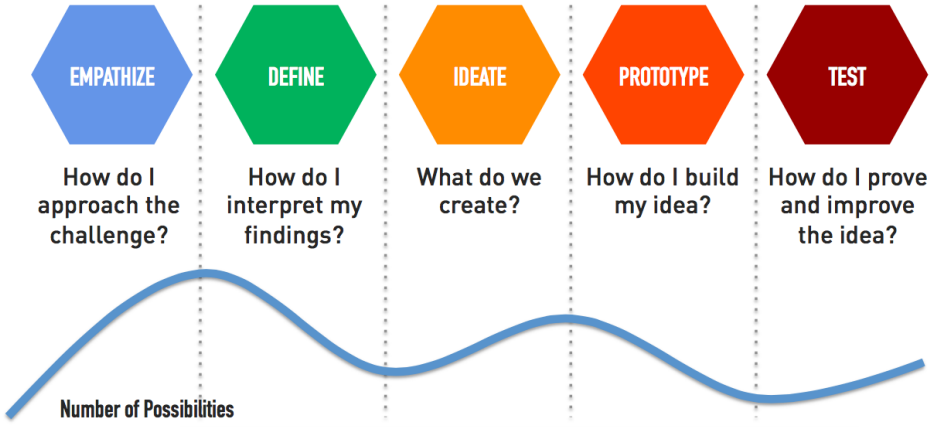
Hygiene Elementary
STEAM Fair
Imagine. Innovate. Inspire.
Jan. 25th and 26th

Choose One: ____ Design Thinking ____ Scientific Method

1. DESIGN THINKING - Identify a real problem involving real people with real needs. Use the Design Thinking method to design and create a solution to the problem.



IDEAS:
Invent and create a new product to meet a need.
Take a product that has already been invented and improve it.

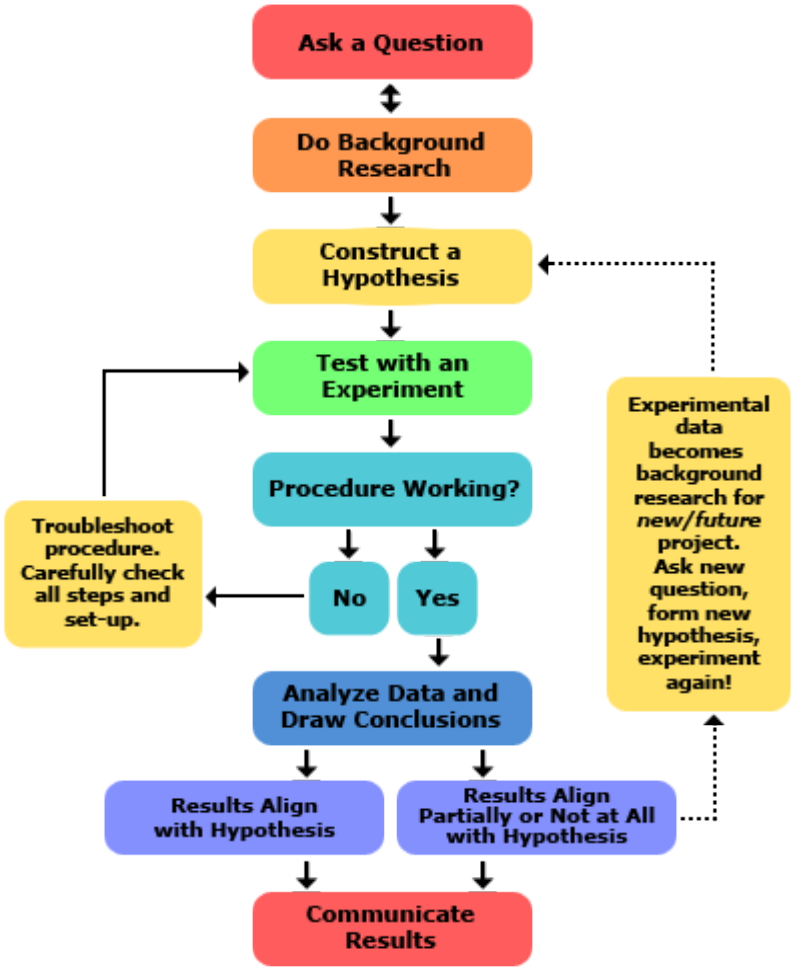
1. Design and create a new animal habitat
2. How can we help people exercise more?
3. How can we use less electricity?
4. How might you create something for a younger or older sibling?

You can create a Working Model that really works and demonstrate at the STEAM FAIR.
OR
You can create a Non-Working Model - Make a model of your invention or a drawing/sketch design.

Name your invention and label the different parts. Write an explanation about how your invention would work, how it improves life, and who would use it.

Step 1: Empathy -- Who is the user/client? Get information on them and find out what they need and why. **Step 2: Define**--What is the problem that needs to be solved? **Step 3: Ideate**--Brainstorm ideas to help solve the problem. No idea is a "bad" one! Be creative! **Step 4: Prototype**--Create a model of your idea that you can test. **Step 5: Test and Feedback-**-Did it work? Did you need to go back and try again? What did you learn from your work? **Step 6: Presentation** – Creatively display the step-by-step process you used for others to view and learn from.

2. **Scientific Method -** A method of research in which a problem is identified, data is gathered, a hypothesis is formulated from the data, and the hypothesis is tested.



The first thing to do with the scientific method is to come up with a question. You can't find the answer until you know the question after all!

Next you need to observe and gather information in order to come up with a guess (called a hypothesis) or a number of guesses to the answer.

Then you run experiments to see if your guess is right. As you run experiments you can change your guess, or hypothesis, to fit your results. A key to good experiments is to only change one thing, or variable, at a time. This way you can check your results and know what you changed that changed the answer.

Finally, after running all the tests you can think of, you present your final answer. By going through this process, scientists have a way to verify their guesses and to double check each other. Another scientist can take a look at your tests and add some more tests and continue to refine your answer to the question.

ANY QUESTIONS?? PLEASE EMAIL Sara Morison sara_morison@yahoo.com

Hygiene Elementary
STEAM Fair
Imagine. Innovate. Inspire.
Jan. 25th and 26th

ENTRY FORM

DUE DATE: December 13, 2017

Participant(s) Name:_____

Is this a group Project? _____ If so, names of all group members_____

_____

Teacher:_____ Grade:_____

Design Thinking:_____ **Scientific Method:_____**

Project Name:_____

Do you need electricity?_____