

# **MAKER FAIRE**

**BRAINSTORM, IMPLEMENT, REFLECT**

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**THURSDAY, JANUARY 26, 2017**

**BRAINSTORM, IMPLEMENT, REFLECT**

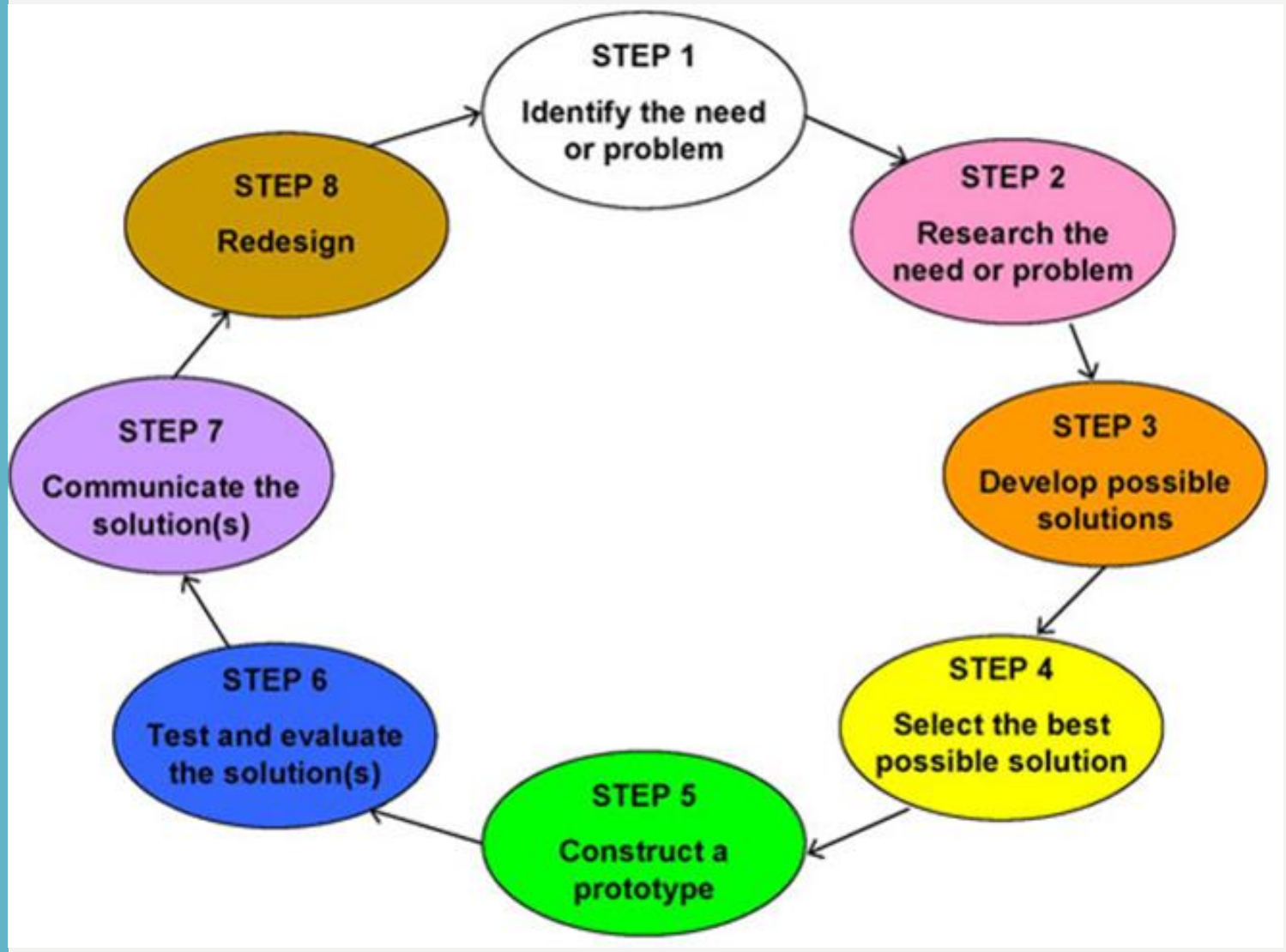
# DESIGN THINKING MODEL

Inspiration

Ideation

Experimentation

Evolution



# INSPIRATION-WHAT IS YOUR PASSION?



1. Improve lives?
2. Inform others?
3. Provide interactive opportunities?
4. Enhance the learning process?



# DOCUMENTATION



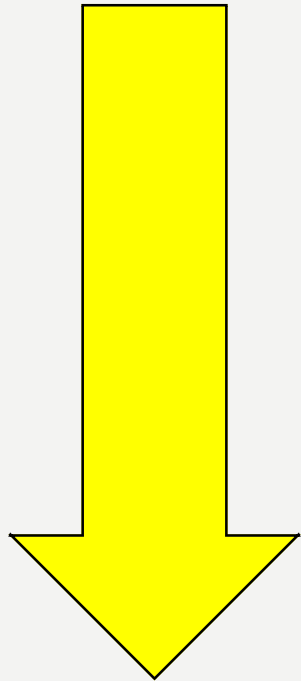
1. What are your **ideas**?
2. Provide a **description** of each idea (inspiration, usefulness/purpose)
3. What inspired your project/idea/invention?
4. How is your project unique?



# IDEATION-BRAINSTORM!



Original



Remix

1. How can you capitalize on opportunities to pursue your passion?
2. How will your idea differ from others?
3. Explore ideas from different angles.
4. How will you select which one to pursue?

# DOCUMENTATION



1. What questions or vocabulary are unique to your project?
2. How did you incorporate your questions into your research?
3. What was your method of choosing your final idea?
4. What skills do you need in order to complete your project?
5. How did you develop a plan?
6. What critical need are you addressing and how is this an important topic for you?

# EXPERIMENTATION-TRIALS!

1. What are the components?
2. Substitutions?
3. How will changes affect the original idea?
4. Challenges?
5. Conducting tests.
6. How will small adaptations improve the final product?



# DOCUMENTATION

1. Provide evidence of original ideas.
2. Provide evidence of changes made (pictures/sketches).
3. Provide evidence of trials and outcomes.

# EVOLUTION

1. Reflect on the process
2. Describe challenges.
3. How did you overcome?
4. Future processes/improvements?
5. Future experiments?

# DOCUMENTATION

1. What inspired your overall project?
2. What other topics did you consider?
3. Did you explain how the idea was formed?
4. Did you show evidence of plans for your project?
5. How did you search for information to further your ideas?
6. What helpful hints would you share with others who are working through a maker project?

	Developing Maker	Novice Maker	Expert Maker
Inspiration	Identified or described ONE opportunity/idea. Student may have surface level description of one issue.	Identified or described TWO opportunities/ideas. Student may have surface level description of a few issues or a deeper description of only one idea.	Identified or described THREE or more opportunities/ideas. Student explored multiple issues and constraints in depth.
Ideation	Student chose one idea. The idea is a duplication of an existing idea with little personal development or justification for constructing it again to make the idea unique.	Student documented several ideas and zeroed in on one idea that is a “remix” of an existing idea providing a strong explanation for selection. Student elaborated on a singled idea to explain how this choice was best and would meet the overall goal selected.	Student documented several ideas and zeroed in on one unique idea supported by a strong explanation for selection. The student documented the development process and elaborated on the explanation as to how this choice would best meet the overall goal selected.
Experimentation	Student documented one change or adjustment to the design, experiment, or model. Student documented the outcomes of the change at a surface level.	Student documented several general changes and the reasoning for changes as well as the outcomes resulting from the change.	Student provided detailed documentation of several specific changes or adjustments as well as the outcomes resulting from the change.
Evolution & Reflection	Student shows surface level reflection of the making process by addressing only one of the following: How the design met the original purpose, design obstacles, knowledge obstacles, frustrations, improvements in process or product, or potential future exploration. Student provided minimal elaboration of their experience; challenges listed.	Student reflected on the making process by addressing two of the following: How the design met the original purpose, design obstacles, knowledge obstacles, frustrations, improvements in process or product, or potential future exploration. Student provided some elaboration of their experience.	Student reflected on the making process by addressing three or more of the following: How the design met the original purpose, design obstacles, knowledge obstacles, frustrations, improvements in process or product, or potential future exploration. Student provided detailed elaboration of their experience using written and pictorial examples.

# KIDS IN ACTION MAKING DESIGNS THAT MATTER

<http://www.nbc.com/the-tonight-show/video/ge-fallonventions-meet-the-inventors/2780920>: Easy Moo Milk Dispenser, StethIO, Pizza Decrustifier

<https://www.youtube.com/watch?v=b4Y9zpctbN8&list=RDb4Y9zpctbN8#t=17>: Slider Bench, Fencing Dummy, Amazing Curb Climber