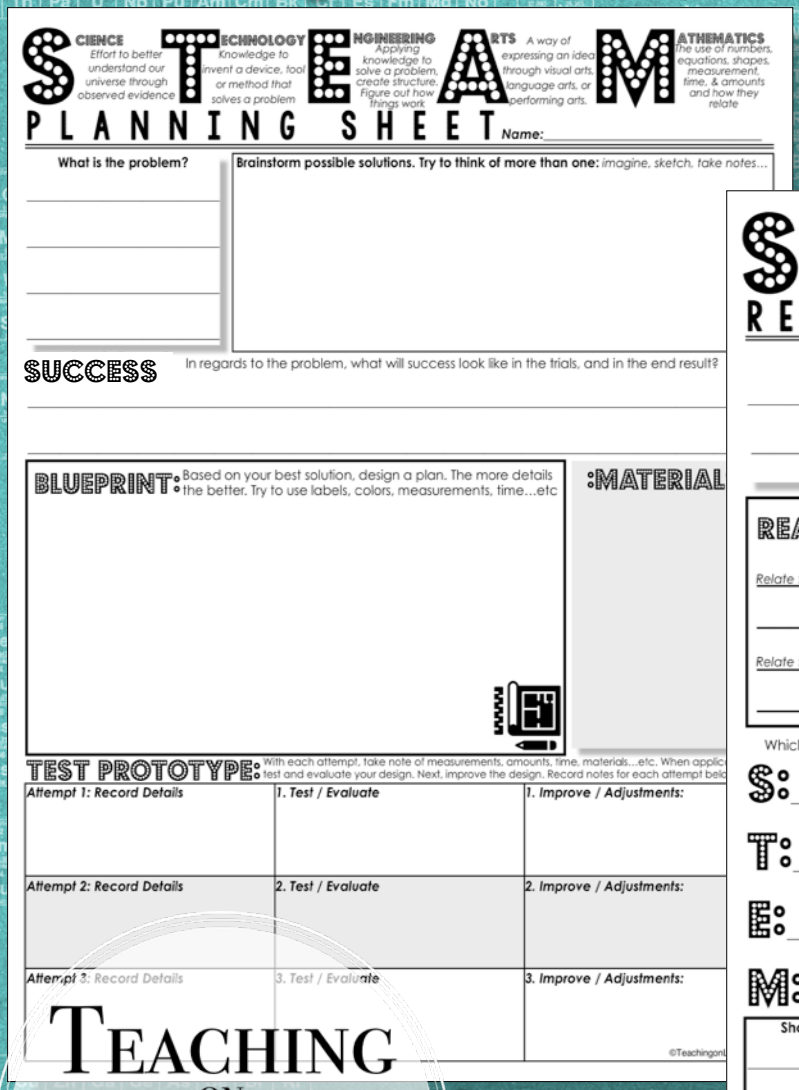
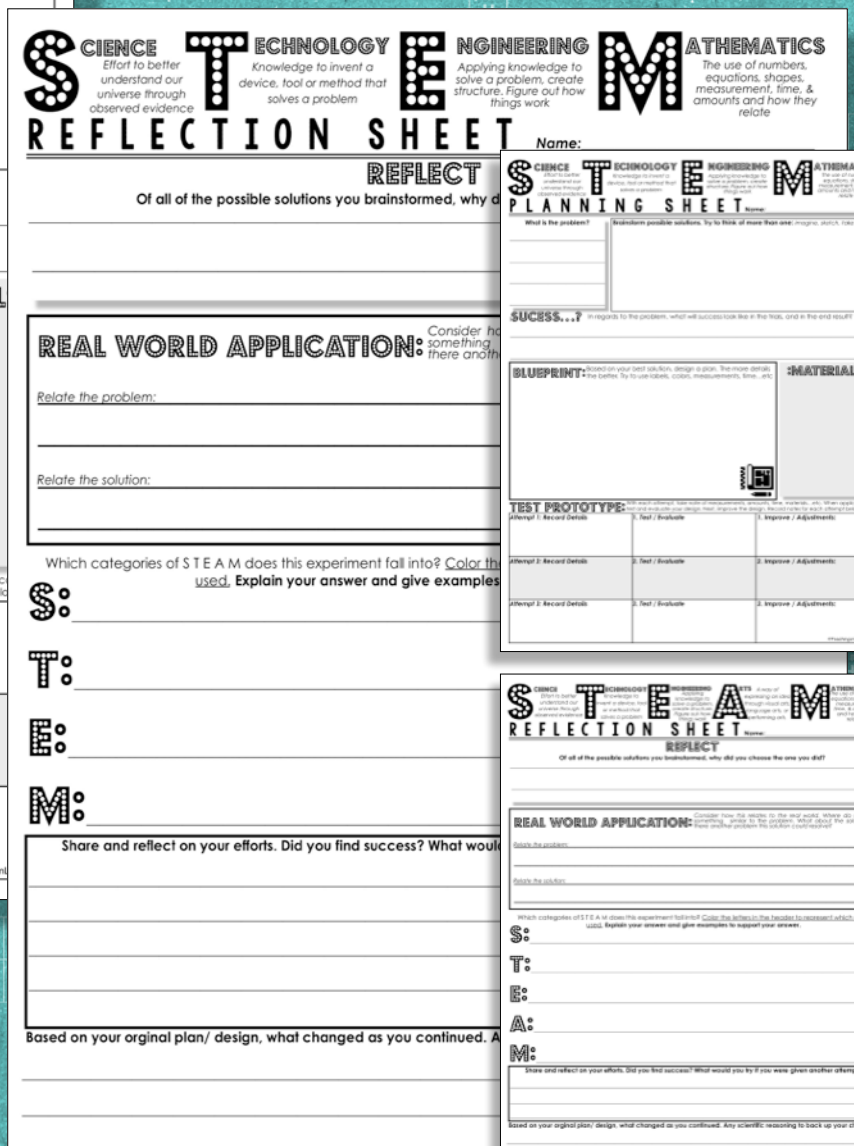
STEAM STEM PLANNING & REFLECTION RESPONSE SHEETS

WORKS WITH ANY CHALLENGE

use again, and again, and again...

VERSIONS FOR BOTH STEAM & STEM
THOUGHTFUL REAL WORLD APPLICATION
GET MORE OUT OF YOUR CHALLENGES





TEACHING ON lemon lane

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SCIENCE *Effort to better understand our universe through observed evidence*
TECHNOLOGY *Knowledge to invent a device, tool or method that solves a problem*
ENGINEERING *Applying knowledge to solve a problem, create structure. Figure out how things work*
ARTS *A way of expressing an idea through visual arts, language arts, or performing arts.*
MATHEMATICS *The use of numbers, equations, shapes, measurement, time, & amounts and how they relate*

PLANNING SHEET

Name:_____

What is the problem?

Brainstorm possible solutions. Try to think of more than one: *imagine, sketch, take notes...*

SUCCESS In regards to the problem, what will success look like in the trials, and in the end result?

BLUEPRINT: Based on your best solution, design a plan. The more details the better. Try to use labels, colors, measurements, time...etc

:MATERIALS:

TEST PROTOTYPE: With each attempt, take note of measurements, amounts, time, materials...etc. When applicable test and evaluate your design. Next, improve the design. Record notes for each attempt below.

Attempt 1: Record Details	*1. Test / Evaluate*	*1. Improve / Adjustments:*
Attempt 2: Record Details	*2. Test / Evaluate*	*2. Improve / Adjustments:*
Attempt 3: Record Details	*3. Test / Evaluate*	*3. Improve / Adjustments:*

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REFLECTION SHEET

Name:_____

REFLECT

Of all of the possible solutions you brainstormed, why did you choose the one you did?

REAL WORLD APPLICATION: *Consider how this relates to the real world. Where do we see something similar to the problem. What about the solution, is there another problem this solution could resolve?*

Relate the problem:

Relate the solution:

Which categories of S T E A M does this experiment fall into? Color the letters in the header to represent which were used. **Explain your answer and give examples to support your answer.**

S:

T:

E:

A:

M:

Share and reflect on your efforts. Did you find success? What would you try if you were given another attempt?

Based on your orginal plan/ design, what changed as you continued. Any scientific reasoning to back up your changes?

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