

The Engineering

Design Process

Freebie!

By Sue Cahnalane, Science Teacher, Grades PK - 4





Next Generation Science Standards (NGSS)

Grades K- 2: ENGINEERING DESIGN

K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool

K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem

Grades 3-5: ENGINEERING DESIGN

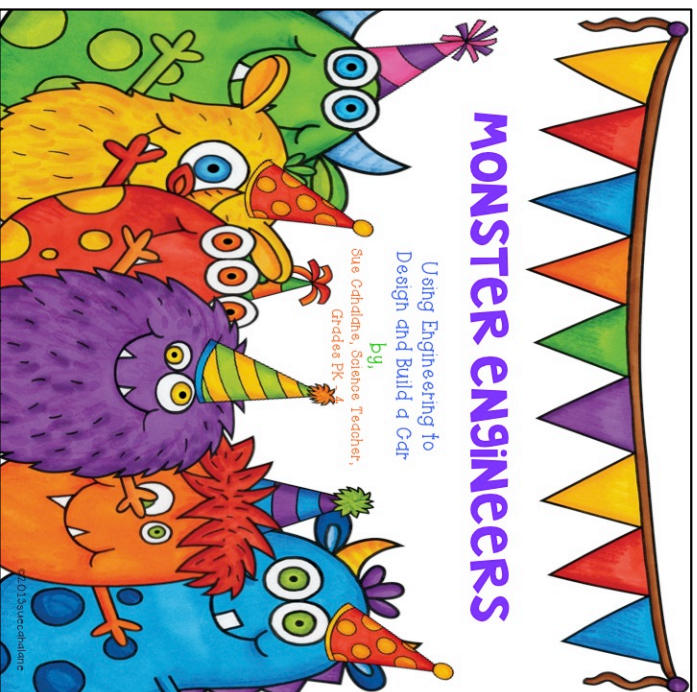
3-5-ETS1-1: Define a simple design problem reflecting a need or a want that included specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3: Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.



My lesson plans that address the NGSS engineering standards:

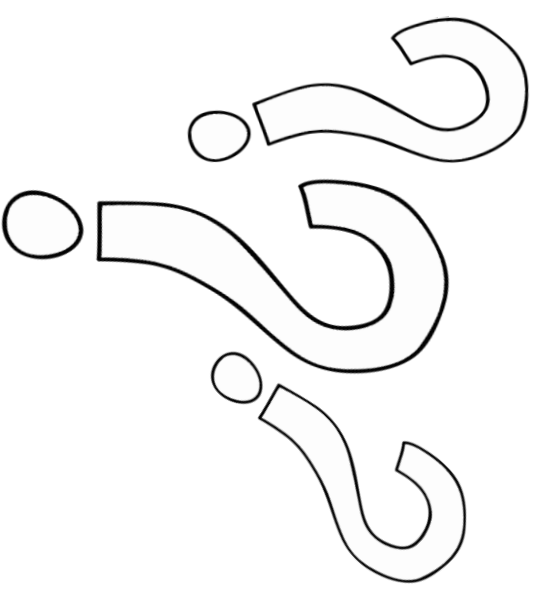


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Name _____

The Engineering Design Process

1. Identify the problem
2. Research!
3. Brainstorm ideas and solutions
4. Draw your design
5. Build a prototype (the first working model)
6. Test the prototype
7. Evaluate and redesign



Name _____

The Engineering Design Process

1. Identify the problem: _____

2. Research! _____

3. Brainstorm ideas and solutions _____

The Engineering Design Process, continued

4. Draw your design:

5. Build a prototype (the first working model)

6. Test the prototype

7. Evaluate and redesign. What needs to be changed? _____

thank you!

Thank you so much for visiting my TpT store & downloading this freebie!
I hope you and your students enjoy the hands-on science activities.

Sue Cahalane

Science Teacher

Grades PK - 4

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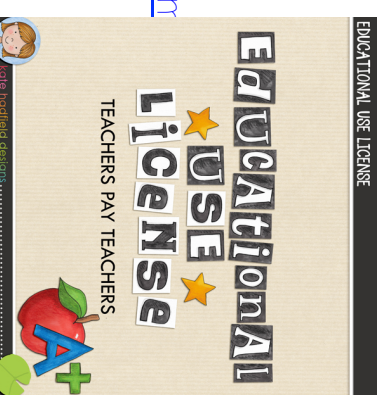
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