Name: _____ **Date:** _____

Engineer an Extreme Card

After learning how pop-up artists design their cards or books, it's your turn to design and create your own pop-up card.

> **Observe:** It takes a lot of planning and testing to design a pop-up book.
>
> **Define the Problem:** Can you design a pop-up card that meets the following criteria?
> - The card has at least two different types of moving parts.
> - The card can stand up on a flat surface.
> - The card is no bigger than a standard letter-sized 8.5-by-11-inch sheet of paper when opened.
>
> **Materials:** computer or tablet with internet access • colored copy paper • construction paper • index cards • tape • glue • coloring supplies, such as markers or crayons • ruler • pencil and paper

Design a Solution:

1. Research the basic techniques of pop-up making. To get ideas, visit these websites:
- **http://www.extremepapercrafting.com/p/pop-up-lessons-how-to-books.html**
- **http://www.technologystudent.com/designpro/popup1.htm**

2. Brainstorm ideas about how to design your card to meet the criteria. What materials will you use?

3. Draw a diagram of your design. Label your drawing with the techniques you plan to use.

4. Build your card.

5. Test your card.

6. Evaluate the performance of your card. As a class, discuss how your card met the criteria, and compare and contrast your methods with those of your classmates. Was there one technique that most people used?

Conclusions:

1. Did your pop-up techniques work? Why or why not?

2. Could you change your card to make it more successful? What would you add to it?

3. If you could build a new card, what would you do differently?