SSTFI Workshops  
Friday, April 1st, 2016

10:00AM:  
1. Balloon Powered Car – Visitor’s Locker Room or Media Room  
2. House of Cards – Women’s Basketball Locker Room  
3. Egg Bungee Jump – Men’s Basketball Locker Room

11:00AM:  
1. Protect the Pringle – Women’s Basketball Locker Room  
2. Gum Drop Towers - Visitor’s Locker Room or Media Room  
3. Making DNA – Men’s Basketball Locker Room

1:30PM:  
1. Egg Bungee Jump – Men’s Basketball Locker Room  
2. Balloon Powered Car – Visitor’s Locker Room or Media Room  
3. House of Cards – Women’s Basketball Locker Room  
4. Solar Car – East Ramp

2:30PM:  
1. Color Changing Chemistry – Visitor’s Locker Room or Media Room  
2. Making DNA – Men’s Basketball Locker Room  
3. Protect the Pringle – Women’s Basketball Locker Room  
4. Solar Car – East Ramp

House of Cards
Summary: Build various architectural shapes out of cards to discover which will create the most stable structure!  
Students will learn about the concepts of tension and compression. They will then be asked to choose a geometric shape and then construct a building of note cards that only uses the chosen shape. Each building will be tested to determine how much weight it can sustain. Students will then be able to discuss which geometric shapes are the most stable.

Balloon Powered Car
Summary: Compete to build the fastest balloon powered car and discover Newton’s Third law of Motion!  
In this activity students will investigate Newton's third law of motion by designing and constructing rocket-powered racing cars. Through repeated trials, they will be able to experiment with ways to redesign their cars to increase the distance traveled. The activity will culminate in a competition for the car that travels the furthest distance.

Egg Bungee Jump
Summary: Design a bungee cord that will safely bring an egg as close to the ground as possible!
Students will be challenged to design a bungee cord out of everyday materials. They will use estimating, data analysis, and measuring skills to make the bungee cord drop the egg as close to the ground as possible without making contact with the floor.

**Making DNA**
*Summary: Learn about the structure of DNA by creating a model!*
Students will learn about the structure of DNA as they create a model out of candy! This activity will end with a discussion about the role of DNA.

**Color Changing Chemistry**
*Summary: Observe a shocking chemical reaction, then experiment by manipulating variables to speed up this reaction!*
Students will watch a demonstration of the iodine clock reaction (a clear liquid suddenly becomes dark blue)! Then they will be challenged to manipulate the setup procedure in order to speed up the reaction. This activity requires 45-60 minutes.

**Protect the Pringle**
*Summary: Create a package that will protect a Pringle from a series of challenges!*
Students will be challenged to create a package for their Pringle that will protect it from 3 different tests. However, they won't know what the tests are until after they have finished designing! This activity also requires students to build efficiently with limited materials and time!

**Gum Drop Towers**
*Summary: Work as a team to build the tallest standing tower out of gumdrops and spaghetti!*
Students will learn about the concepts of compression and tension and how they are applied in building. Then they will be challenged to create the tallest free-standing tower. For an additional challenge, students can compete to build the tower that will hold the most weight as well.