Newton's Attic Field Trip Worksheet

Engineering Process

1. There are 7 steps in the engineering process. How many can you name?

    1. _____
    2. _____
    3. _____
    4. _____
    5. _____
    6. _____
    7. _____

G Force

1. Acceleration is a change in _____.
2. A _____ _____ is used to amplify force and pull the cart back.
3. Two types of energy are _____ and _____.

The Ballista

1. Great _____ is required to pull back the bow strap.
2. The coiled ropes store _____ energy.
3. When the pumpkin or melon is flying through the air, it has _____ energy.
4. The projectile follows a _____ pathway.

Rockets

1. Pressure is defined as _____ _____ _____.
2. When the rocket blasts from the end of the barrel, what kind of energy does it have? _____.
3. What type of energy is this converted into? _____
4. What purpose do the fins on the rockets serve? _____
5. The nose cone makes the rocket more _____.

SPINtron

1. Why was the multi-axis trainer invented in the first place?

    _____

_____

2. What is center of gravity? _____
3. What is a degree of freedom, and how many does SPINtron have?

   _____

   _____

4. What is an axis? _____
5. How many axes does SPINtron have? _____

Science at Newton's Attic

Things you will learn about today:

1. Simple Machines
2. Stored Energy
3. Mechanical Advantage

Three different simple machines used today at Newton's Attic:

1. _____ found on _____
2. _____ found on _____
3. _____ found on _____

Three examples of stored energy:

1. _____ found on _____
2. _____ found on _____
3. _____ found on _____

Three ways we used simple machines to get mechanical advantage:

1. _____ used to _____

2. _____ used to _____

3. _____ used to _____