

## 5<sup>th</sup> Grade STEM Blizzard Bag Assignments

### Blizzard Bag #1:

Name \_\_\_\_\_

Read the two following articles.

<http://www.livescience.com/48816-3d-printed-hearts-improve-surgery.html>

<http://www.livescience.com/41507-3d-printing-guns-weapons.html>

Write one paragraphs for each article explaining how 3d printing is making changes in the world. Write one extra paragraph with your opinion on the good and bad of the progress of 3d printing.

### Blizzard Bag #2:

Name \_\_\_\_\_ Date: \_\_\_\_\_

1. A \_\_\_\_\_ focuses attention on a problem resulting in an action.
  
2. True or False
  - a. A problem statement should include the solution. \_\_\_\_\_
  - b. The sun provides fossil fuel. \_\_\_\_\_
  - c. Criteria = Requirements. \_\_\_\_\_
  
3. What does each stand for
  - a. CAD \_\_\_\_\_
  - b. NASA \_\_\_\_\_
  
4. Another term for working together is \_\_\_\_\_.
  
5. Which is NOT a role in a team?  
Project manager      Recorder      Speaker      Resource manager

### **Blizzard Bag #3:**

Name \_\_\_\_\_ Date: \_\_\_\_\_

#### **Better Bicycle 5th Grade**

Project: Teams are to research bicycles and answer the questions below. Information will be used for Brainstorming and designing a bicycle.

This research will be used for Better Bicycle Project.

Steps: Teams are to research common bicycles and answer the following questions:

- What does it do?
- How does it do it?
- What does it look like?
- What are the obvious mechanical requirements?
- Are the designs user-friendly?
- What is the function of a bicycle?
- How does the function depend on the type of bike (e.g. racing, trail bike, road bike or about-town bike; child's bike or adult's bike)
- How can it be made to be easily maintained?
- What should it cost?
- What should it look like (colors, etc.)?
- How has it been made comfortable to ride?
- How do the mechanical parts work and interact?
- Besides pedaling, how can a bike be powered?
- How can a bike be powered that does NOT create pollution?