January Engineering Activity Worksheet

1. What is Industrial and Systems Engineering:
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

2. Definitions:
- **Efficient**: lots of product with not a lot of waste
- **Statistics**: the process of collecting and analyzing data and information
- **Assembly line**: a series of workers or machines in a line who perform the same simple step repeatedly

3. Questions:
- What steps did you use in the Engineering Design Process for this activity?
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
- Is making an assembly line more efficient or each student making their own bag?
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
- How did you make packing the bags more efficient?
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
- Industrial and system engineers use ___________ to analyze data to find the best solution
January Engineering Activity Worksheet

1. What is Industrial and Systems Engineering:

   Industrial and Systems engineering uses mathematics and statistics to processes more efficient like in an assembly line.

2. Definitions:

   - **Efficient**: lots of product with not a lot of waste
   - **Statistics**: the process of collecting and analyzing data and information
   - **Assembly line**: a series of workers or machines in a line who perform the same simple step repeatedly

3. Questions:

   - What steps did you use in the Engineering Design Process for this activity?
     Brainstorm Solutions, Plan, Create, Test, Improve, Retest, and Share
   - Is making an assembly line more efficient or each student making their own bag?
     An assembly line of more than one student. It allows each students to only focus on one simple task that is easy to repeat quickly.
   - How did you make packing the bags more efficient?
     Write down the answers your students put once they retested. Some of the options they could do to improve is: pre-sort snacks into smaller cups, pre-counting how many you need per bag, etc.
   - Industrial and system engineers use ___________ to analyze data to find the best solution.
     Statistics