

Creation Contest!

The Problem: St. Rose needs some help! We need machines to help us!

The Challenge: Design and create a machine that includes at least one wheel and axle, a pulley, and maybe a gear (if you think you can). You and **2-3** other inventors will create a machine with a **PURPOSE**.

Clotheslines can make it easier to grab clothes, cranes can lift heavy objects, what will be the purpose of your machine? What will you call your invention?

Possible Materials:

- String
- Paper clips
- Split pins
- Cardboard/paper
- Glue guns
- Tape
- Straws
- Rubber Bands
- Plastic Cups
- Aluminum Foil
- Popsicle Sticks

Success Criteria:

We can...

- Apply knowledge about machines and their parts to create one.
- Create a specific purpose for our machine.
- Include at least one wheel, axle, pulley, and gear in our design.
- Design and sketch a machine.
- Test out designs and prototypes.
- Build a model of our machine.

Checkpoints:

- After you have created the design, get your design checked by Miss Bond to make sure your design has the possibility of working and performing its function.
- After determining the materials check with Miss Bond to make sure the use of materials is present and any other materials listed can be found if not on the material list.
- Check to make sure simple machine mechanisms work when building machines.

Voting: We will have a vote to see which inventors created the best machine. This means try your best to create a machine that will wow your peers! Winners get a special prize.

Handout:

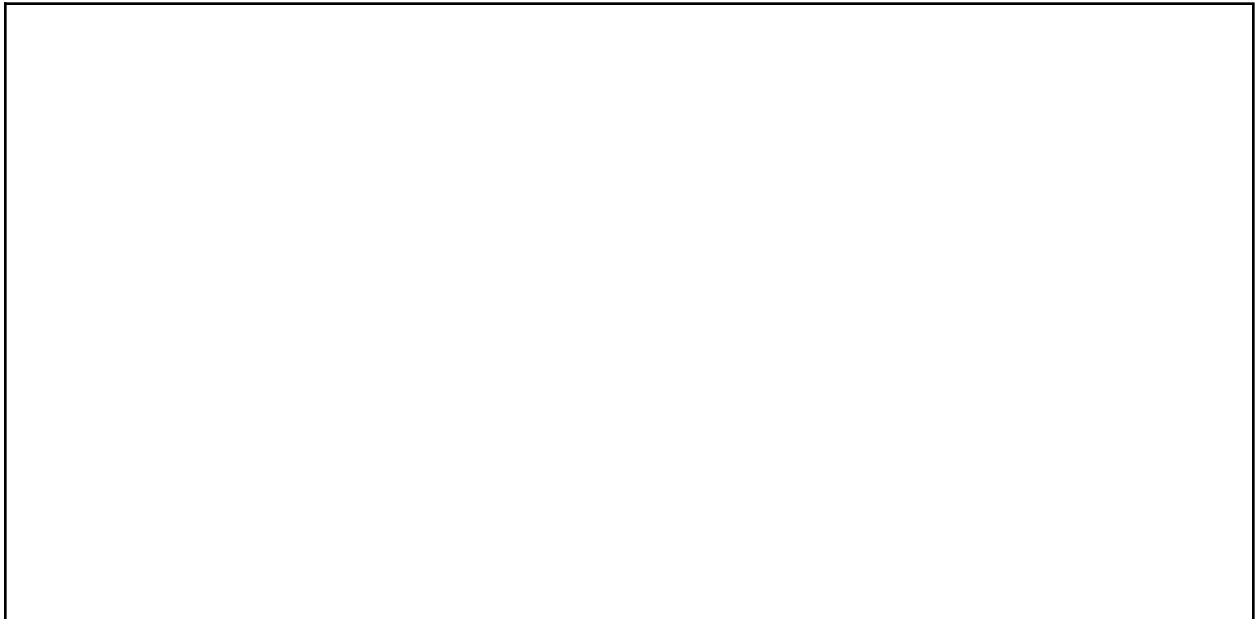
Machine Creation Process

Machine Name: _____

Group Members: _____

Purpose-explain the use of your machine:

Design Sketch-draw out what your machine will look like and where you'll put the simple machines:



List the Materials you need to build your machine:



Rubric:

Machine Creation Rubric

| Areas for Improvement | Criteria <i>Standards for This Performance</i> | Evidence of Exceeding Standards |
|--|---|---------------------------------|
| | Process: All elements of the design process are included with a well-thought out plan. | |
| | Design: Although looks don't matter that much, the machine is well built. The machine is designed in a way that includes at least a wheel, axle and pulley. | |
| | Function: Machine includes a purpose that is stated. Machines can perform that purpose efficiently. | |
| | Prototype: Prototype is completed and neat. Students explain functions and demonstrate the use with smaller prototypes. | |
| Reflection (What went wrong? What went well? What would you change?): | | |