

# 1 Problem Analysis

## 1.1 Introduction

This section discusses the specifications, considerations, criteria and its constraints. The proposed project is to be done in a classroom setting as an educational experience for students of 8-12 years of age.

## 1.2 Specifications

The specifications of this project are the aspects that must be met when designing the project. The specifications for this project are as follows: The blender must be human powered, it must last between 3-5 years, and it needs to be economically compiled from accessible parts.

## 1.3 Considerations

Our considerations are mainly centered around the school's abilities and resources. Our assumptions are that the teachers will be doing the majority of the building and will have adequate access to resources for construction.

## 1.4 Criteria

### Criteria

- Cost
- Durability
- Efficiency
  
- Nifty
- Reconstruct-ability
  
- Safety

### Constraints

- Must be within budget
- Must last between 3-5 years
- Adequately blend contents with less than 20% energy loss.
- Adds extra educational experience
- Must be composed of readily available and simple parts. Simple instructions.
- All moving parts must be secure and concealed when possible.