

Working With Biomass



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Part I: Overview of Workplace

Kemin Industries develops and manufactures ingredients that are used in food production. They produce over 500 ingredients used in 120 countries.

Part II: Workplace Focus

- Improve extraction and measurement of plant protein.
- Specific Tasks** (related to project)
- Process raw material samples
 - Measure moisture content
 - Analyze data from protein measurement.

Part III: Introduce the Problem

The community in which you live is looking for a biomass alternative to fossil fuels that is more sustainable.

Tasks.

- Develop an argument based on evidence for a solution.
- Present their argument to local government officials/ community members.

Part IV: Background

Background Required/ Students will need to learn.

- Knowledge of plants and animals in their community.
- Knowledge of basic calorimetry.
- Knowledge about how electricity can be created from biomass.
- Knowledge of benefits and drawbacks of biomass.

Part V: Workplace Solution

- Research current methods in using biomass for electricity.
- Revise/ tailor the process for the community.

Part VI: Educational Pathways

- Manager - Doctorate Degree in Science
- Associate Director - Doctorate Degree in Science
- Associate Scientist - Masters in Science