

# CHEMISTRY: FINAL EXAM – Authentic Performance Task

## It's as Easy as Pie !



You have been assigned to appear at the Knowledge Is Power Dessert Company to present information on the cooking of chemistry. The company would like to learn more about chemistry so they can add that information to their menus. You will have the task of presenting information on how different chemical processes work together to make a successful dessert.

You will research and use your past studies to make a brochure on how chemistry is seen in cooking. Students will also present this brochure to the Dessert Company (aka the class).

The areas of study are: ***chemical reactions (balanced equations)***, the ***gas laws (explain changes in temperature, pressure, volume and moles)***, ***stoichiometry (show all calculations)***, ***thermochemistry (exothermic/endothermic reactions)*** and ***solutions/mixtures*** (you may need to do further research on these topics). You will present information about ALL of these categories. Include a reference page!

Your main goals are to:

- 1) Explain and illustrate each of these chemistry topics in Chemistry Terms and also in terms that a *non-chemistry* person would understand, include the step by step recipe.
- 2) Analyze the chemistry behind the making of a dessert that must be baked or cooked in some way, include scientific evidence (aka the "recipe") of the chemical components, as supported by stoichiometric calculations of the chemical reactions. You must choose from the following list or get permission from your teacher to use another dessert: apple pie, chocolate cake, Creme-Brulee, fudge, caramel apples, candy apples, Baked Alaska, or cheesecake.
- 3) Create an informational brochure/flyer, include some pictures, that you will hand out to the dessert company. (You may also wish to make the dessert and share it with the class)

## **PROCESS:**

These are the general procedures you will have to follow to be successful in your task. Be sure to read all specific information given in the handout.

1) Working individually use resources such as the internet and the library or textbook to study the assigned topics in chemistry. **5/18 & 5/19** Begin research work

2) Design and create your brochure. **5/20 & 5/21** Continue work

3) Provide the brochure your teacher for feedback and revision. Email:

[ginger.martin@leeacademy.us](mailto:ginger.martin@leeacademy.us) Draft due to me by **5/21 & 5/24** - I will give you prompt feedback. Students then revise and resubmit for final grade.

4) Students will present their Recipe & Brochure to the class. **5/25 & 5/26.**

Make up day as needed **May 27 & 28.**

5) Be mindful of the grading rubrics (found in the attachments) to make sure you are meeting ALL criteria!

The brochure will be graded using the LA Content Presentation Rubric and a project specific rubric.

Congratulations! *The Knowledge is Power Dessert Company* has benefited from your presentation and you will now be considered a beneficial partner in the information given to their customers. You can now appreciate why knowledge truly is power!