

Chemistry

Collaboration Extension Instructions

Throughout the Chemistry course you will be provided with opportunities to collaborate with your fellow classmates. Why collaborate in an on-line class you ask? View the Collaboration Presentation or read the collaboration overview to get the answer to this question and tips and guidelines for working together (found in Module 1, Lesson 1.01).

Although you may sometimes feel as if you are a lone student working in the course, it is important to remember you are still part of a larger "learning community." There will be many opportunities for you to collaborate with and help your fellow classmates and be able to have deeper conversations concerning class issues and topics.

This is a description of how to complete the Collaboration Project required in Chemistry.

Each module has one or more Collaboration Extension Opportunities within some of the lessons (except Module 1: Chemistry and You). The collaborative activity does not replace the lesson assessment; it is completed in addition to the required assessment for the lesson. You can see where they are in the Checklist at the beginning of each module.

Each collaborative activity involves careful planning and extended time. You will need to meet with your project team on multiple occasions to complete the activity. Please plan accordingly.

- The project is outlined in a link to the **Instructions** at the bottom of the page on the **Activity tab** in the lessons with an Extension. (There is a summary of each of the projects below.) ***You do not have to wait until you are in that module to do the Collaboration Option for that module.***
- To find a partner, read **The Why and the How**. This tells how to use the Discussion Groups link. ***Please be sure to include an email for another student to be able to contact you.***
- Decide on a project that you and your partner(s) want to do.
- ***Keep a log of your communication with your partner(s), since you will need to provide this evidence for the Collaboration Assessment.***
- Complete the project, **following the directions** for that Extension Opportunity.
- Read **Making the Grade** to view the **rubric** provided to guide your work on the project.
- **Collaboration.** Your project may be a PowerPoint, video, or whatever format you and your partner decide on.
- ***You and your partner must each submit the final project in your own Assessments.***
- For the **Collaboration Assessment Guide** you will evaluate your experience completing project, and working with a partner, by answering all four parts. Submit this part after you have completed the project.
- Submit both the Project and the Assessment Guide in the link for the appropriate assessment.

Don't wait too long; this must be submitted before taking the Segment Exam.

- The Segment 1 project should be completed by **December 20**, before we break for the holidays.

Summary of Collaboration Project Options for Chemistry

Segment 1

02.01 Early Chemistry and Atomic Structure

Scientific Method

You have learned that scientific inquiry, such as the scientific method, is a process used for observing and investigating and not just a step-by-step procedure. Your team will use what you know about scientific inquiry to analyze the scientific process used in an episode of *Myth Busters* or another science TV show.

02.05 Electron Arrangement and EMR

EMR and Waves

Your city is considering installing solar panels to provide power to City Hall and the library. You are on a committee to determine if the solar panels are safe, effective, and cost efficient for the city. Conduct research and then prepare a report (in the form of a slide presentation, written report, or video) that explains how solar panels work, the advantages and disadvantages of using this form of power, and whether or not your committee recommends the installation of solar panels.

03.04 Valence Electrons and Bonding

Fluorine in Your Water

Your city needs to decide whether or not to continue fluoridating its water supply. You have been asked to be on a committee that will make a recommendation as to whether or not the city should consider continuing to fluoridate its water. Conduct research and then prepare a report (in the form of a slide presentation, written report, video, or other creative format) that explains what is involved in the fluoridation of a water supply, the advantages and disadvantages of adding fluorine to water, and whether or not your committee recommends doing so.

04.05 Chemical Reactions: Combustion

Fire Safety

You and your team are researching fire safety for a local news story. Conduct research and then prepare a report (in the form of a news broadcast, web site, video, or public service announcement) that explains how some common fire safety equipment works.

04.06 Stoichiometry

Chemistry Tutorial

Chemistry can be a challenging course for many students, so the more help they can get from teachers and classmates the better! For this collaboration assignment, your team has been asked to create an engaging tutorial that can be used to help other students taking this course. Your team will create a

tutorial that will teach the content of a lesson or group of lessons in an engaging and creative way that will help other chemistry students relate to and learn the material.

Segment 2

05.08 Electrolytes

Your team has been given an assignment by a local science magazine, web site, or news channel to create a special report on the truth behind electrolytes. This report can be presented as an article or newscast.

07.02 Antacids

Antacids and other stomach treatments often contain bases such as carbonates, hydroxides, and bicarbonates. Your team will research at least two different bases that are ingredients used in over-the-counter antacids. The final product can be in the form of a research paper, science article, or any other appropriate presentation.

07.03 Acid Rain

- What, if anything, is being (or can be) done to try to reduce the occurrence of acid rain around the world?
- Presented as a news report or news article, or as a persuasive report to be sent to political representatives.

A new factory may be built in your area, and some community members are concerned that this factory's pollution may cause acid rain. You are on a committee that has been asked to research the causes and effects of acid rain to help the city to make recommendations to the factory owners on how to reduce the chances of acid rain.

Conduct research and then prepare a report (in the form of a slide presentation, written report, or video) that explains the causes of acid rain, where it is the most prevalent, its damaging effects, and what, if anything, can be done to reduce the occurrence of acid rain.

08.04 Energy-Efficient Home

Your group is designing a new "green" home or school that will be more environmentally friendly and energy efficient. Conduct research and then prepare a report (in the form of a slide presentation, written report, video, or other presentation) that explains the features of your building and aspects of the construction process that make it more environmentally friendly and energy efficient.