

# MURDER IN THE LABORATORY

Mr. Boddy, a beloved Chemistry teacher, was found dead on the floor of the lab. As police investigated the scene, they found a clear liquid pooled around his lifeless face. Police quickly guessed that the clear liquid must be the murder weapon. There are signs of a struggle. The murder must have forced Mr. Boddy to ingest the chemical because a Chemistry Teacher would have NEVER done so willingly.



There are several different suspects. Each suspect has been found with a chemical that could be used as a murder weapon. All have motive to want Mr. Boddy dead.

Suspect

Chemical

Concentration

Motive

<u>Suspect</u>	<u>Chemical</u>	<u>Concentration</u>	<u>Motive</u>

HOW CAN WE USE CHEMISTRY TO SOLVE A MURDER?

# Assignments:

## Individually:

Each student will individually be responsible for a **police report**. This report will include evidence used to determine the murderer. There will need to be explanations of the test conducted and calculations that support your conclusions. All calculations need to be shown with correct significant figures. The police report will be scored by the following guidelines.

- Murder Weapon Lab
  - State the chemicals the murder weapon reacted with. Show the Balanced chemical equations for these reactions.
  - State the murder weapon and give evidence that supports your conclusion
- Concentration of Murder Weapon Lab
  - Summarize the Procedure
  - Calculations to determine molarity
  - Calculations for percent error
- How murder weapon solution made? The report should also include how the murderer could have made the murder weapon solution. Be sure to describe the two different methods in case you are called to testify.
  - Describe how the solution was made if the murderer started with the solid form of the compound.
  - Describe how the solution was made if the murder started with a stock solution.
- Who did it?
  - Accuse a suspect and cite evidence that supports your conclusion

## Group Presentation:

As a group, students will create a news broadcast on the case. Students are encouraged to be creative, but your clip can be no longer than four minutes. Each student must appear on camera. The news story must sum up the evidence of the case, but in a language that the general public would understand. The script must be critiqued by another group and your teacher before you can start recording.

I would suggest using Windows Live Movie Maker to edit the video.(Although, you may use other programs.) I will check out a few cameras that you may use while in the classroom. You can also use the webcam on the computer. The link to your newscast or actual file must be sent to your teacher before class \_\_\_\_\_ . We will view them as a class on that day.

The news broadcast will be scored by the following guidelines:

- Script – Script must be turned in before time of recording and closely resemble the final product.
- Explanation to viewers- Who? What? Where? When? How? And Why? must be thoroughly explained.
- Cite Police Evidence- The evidence gathered from each lab is explained in terms that the general public could understand.
- Production Quality – The video runs smoothly and there are a variety of texts and graphics.
- Group Cooperation- Each student is expected to be a valuable group member. There will be a peer evaluation piece at the end of the project.
- Creativity- This is totally up to you.

<b>Know</b>	<b>Need to Know</b>