

## Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q1 Day 1 – Famous Chemists, Lab Safety

<b>Topic /Big Questions:</b> ( <a href="#">Question Stems</a> & <a href="#">Question Creation Chart</a> ) <ul style="list-style-type: none"><li>• <b>Who can be a chemist?</b></li><li>• <b>What do chemists do?</b></li><li>• <b>What safety precautions are taken when working with chemicals?</b></li></ul>	
<a href="#">State SOL</a>  CH.1 The student will demonstrate an understanding of scientific and engineering practices by	<b>Unpacking the Standards</b> ( <a href="#">Video explanation shown at 3:18</a> ) <ul style="list-style-type: none"><li>a) asking questions and defining problems</li><li><b>b) planning and carrying out investigations</b></li><li>c) interpreting, analyzing and evaluating data</li><li>d) constructing and critiquing conclusions and explanations</li><li>e) developing and using models</li><li>f) obtaining, evaluating, and communicating information</li></ul>
<b>Visible Learning (For the three items with asterisks*, think from a student perspective. Use simple language)</b>	
<b>*What am I learning today?</b> Chemists come from all walks of life - some rich, some poor, some men, some women, some old, some young, and so on. Famous chemists represent over 15 different countries and about 2,500 years of science! Chemists plan and carry out investigations.	
<b>*Why is it important?</b> Anyone – regardless of race, ethnicity, gender, etc - who has a passion for chemistry, can investigate chemical concepts, but they must learn to do it safely.	
<b>*How will I know I've learned it?</b> I will know it as long as I understand that the opportunity to be a chemist is available to everyone. People just need to look past prejudices and personal bias to see the possibilities. I will understand the safety precautions before trying an experiment in the lab.	
<a href="#">Differentiation strategies:</a>  <b>Interactive Game:</b> Students will compare and contrast information cards that contain photos and personal bios of famous chemists.  <b>Media Presentation:</b> Laboratory Safety Rules and Procedures Lab Safety Sign	
<b>Accommodations and/or modifications are being met for students with IEP's/504's.</b>  Priority seating during media presentation, access to all materials on Schoology, frequent checks for understanding	

**Daily Plan/Sequence of Instruction:**

Before class, teacher places famous chemist index cards on each student's desk. Cards are placed randomly, so that current and past, male and female, old and young, are all mixed together. This set of cards has a small photo of each chemist next to a short bio of what he or she accomplished. There is no pattern to gender, race, ethnicity, and so on. As students enter the classroom, teacher greets students and hands them a random index card with a photo of a famous chemist. The students must look through the room to find which face/bio that matches their card. This will be their seat for the day. Students are given time to find their seats and share their famous chemist bios with their neighbor. Once everyone is settled, the teacher will ask the following questions:

- Who has a chemist from North America? South America? India? Europe? Africa? Asia?
- Who has a chemist with a BC date? Who has a chemist from the 1600's? 1800's? 1900's? 2000's?

Asking specific questions, such as "Who has a female chemist?" or "Who has an African American chemist?", will create a negative effect of highlighting the gender and race differences. The goal here is to eliminate the prejudice and bias and make it "no big deal" for anyone to become a chemist. So instead, questions will be asked about the specific person as shown below:

- Who can tell me about (insert name of chemist here)?

After the famous chemist activity is completed, the teacher will explain that chemists need to use safety precautions and understand safety symbols when working in the laboratory. This will transition to the media presentations on Laboratory Safety Rules and Procedures and Lab Safety Signs. Students will record notes on presentations in their notebooks.

**Assessments (List all [formative](#)/[summative](#) assessments used to check for understanding during this lesson. Summative assessments may occur during a different class period.):**

Lab Safety Quiz – given on Q1 Day 2

After assessing today's lesson are you and your students comfortable moving forward with your next objective?

**Yes** - Students can review today's materials in Schoology. Teacher will also review tomorrow before quiz.

No, remediation required to proceed