Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q3 Day 15 – Gas Law Relay Races & Unit 9 Quiz

Topic /Big Questions: (Question Stems & Question Creation Chart)

- **How does pressure affect volume when temperature is constant?**
- **How does temperature affect volume when pressure is constant?**
- **What is the relationship between pressure, temperature, and volume?**

State SOL	Unpacking the Standards (Video explanation shown at 3:18)
CH.6	CH.6 The student will investigate and understand that the phases of matter are explained by the Kinetic Molecular Theory. Key ideas include a) pressure and temperature define the phase of a substance; b) properties of ideal gases are described by gas laws; and c) intermolecular forces affect physical properties.

Visible Learning (For the three items with asterisks*, think from a student perspective. Use simple language)

***What am I learning today?** Pressure (P), Volume (V), and Temperature (T) of a gas are related through the Kinetic Molecular Theory.

***Why is it important?** The movement of atoms and the relationship of energy and the phases is outlined in the Kinetic Molecular Theory. The gas laws describe the relationships of pressure, volume, temperature and number of particles of a gas.

***How will I know I've learned it?** I will understand that P vs. T and V vs. T are both directly proportional. P vs. V is inversely proportional.

Differentiation strategies:

Gas Law Relay Races

Unit 9 Quiz

Accommodations and/or modifications are being met for students with IEP's/504's.

Small group activities; materials available in Schoology; small group testing; frequent checks for understanding

Daily Plan/Sequence of Instruction:

Students will be divided into groups. Each group will be given a Gas Law Relay worksheet. When the teacher says GO, the first student must solve the Boyles Law problem and write their answer in the Gay Lussac Law problem for

student #2. Then that students should solve the Gay Lussac problem and write the answer for Charles Law. Then student #3 will solve Charles Law and write the answer in the Avogadro problem. Finally, student #4 will solve the Avogadro problem and call DONE! The first team to finish correctly wins some candy!

After the races, answer any last minute questions and begin the Unit 9 Quiz.

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

Gas Law Relay Races – formative

Unit 9 Quiz – summative

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

Yes - students scored 80% or higher on the Unit 9 Quiz

No, remediation required to proceed – Parent/guardian will be informed if students fail the quiz; tutoring will be available during One Lunch