TITLE OF LESSON

Physical Science Unit 1 Lesson 45 – Final Project: Presentation
Nature of Matter: How do tribes gain an understanding of families?

TIME ESTIMATE FOR THIS LESSON

One class periods

ALIGNMENT WITH STANDARDS

California – Sciences: Chem, Atomic and Molecular Structure 1; Chemical Bonds 2; Chemical Equilibrium 9; Conservation of Matter and Stoichiometry 3; Reaction Rates 8; Investigation and Experimentation 1

MATERIALS

Final Project Unit 1 Rubric – Student Page
Word Table Requirements: Final Project – Student Page
Butcher paper
Markers
Calculators

LESSON OBJECTIVES

- To present an oral presentation on a family of the periodic table
- To grade other groups' presentations
- To create a relationship map between families in the periodic table
- To present their reasoning for placement of families in the relationship map

FOCUS AND MOTIVATE STUDENTS

Homework Check – You may want to collect student binders now.

ACTIVITIES – INDIVIDUAL AND GROUP

1. Presentation Instructions – Have students break into their lab groups to present the family and the family's relationship to the group's tribe. You decide beforehand the order in which you want the groups to present or have them draw numbers to decide the order in which they will present. Tell students the order in which they will present.

2. Rubric – Have enough copies of the **Final Project Unit 1 Rubric** for students to grade each group. Hand out copies of the **Final Project Unit 1 Rubric**.

3. Grading Instructions - Remind students that their grade is determined by you the teacher (50%) and the average of the students grading your group (50%). First, students will fill in the names of each group member presenting and the family of elements that they are presenting. They will determine a score for each group member for each section of the rubric (Presentation, Content, Visuals, Voice and Style, Organization, Sources) On the back of the rubric sheet, have them create a table that looks like this:

Name	Presentation	Content	Visuals	Voice and Style	Organization	Sources	Total Grade

Next to each student's name, they should give a score for each of the categories on a scale of 1 – 5, five being the highest score. Then they should total the score in the last box and record the total score on the front of the rubric in the space provided next to that student's name. Finally, they should use a calculator to average the grade based on the instructions directly to the right of the total on the front of the rubric.

4. Notetaking – All students are required to take notes during presentations. This is part of their final grade. Tell students that to grade effectively they need to take notes during each group's presentation in order to have information on which to base their scoring. They will also need their notes in order to create an informed Relationship Map (also part of their final grade).

5. Relationship Map Instructions – Remind students that they did the research of the elements in order for them to explain how the elements are similar to or represent their tribe (e.g., based on complimentary characteristics showing how tribe and element families best go together based on the characteristics represented by the elements.) After the presentations, they will be required to create a relationship map of how each of the tribes described during the presentations relates to one another, just like the periodic table shows relationships between elements. Good notes will be required in order to create the relationship map between the tribes based on the interpretations of the groups in terms of how the elements represent their tribes. Thus, the relationship map is about the characteristics of the tribes and how each of the tribes in the class might best fit together and why. This must be supported by evidence from the presentations. Thus, the need for good notes.

6. Presentations – Each group has 5 minutes to present their family of the periodic table to the class.

7. Student Grading – Give the students grading the presentation 2 minutes to complete their grading. Remind them to grade according to the rubric. When they finish ask them to give you their grades.

4. Presentations – Continue with the same process until all groups have presented and the students have completed their grading.

5. Relationship Map – Ask students to get in their groups. Have them assign group roles (see *Group Roles* below). Pass out butcher paper and markers. Tell them to create a relationship map between tribes based on how they think the elements represent their tribes and how they would best be grouped. This is like drawing a Sociogram (see *Teaching Strategies* portion of our site). They must use their notes on the presentations to provide support for how they chose to cluster the families. Two pieces of evidence must be provided for each relationship shown.

6. Class Presentation – Ask the manager of each group to present their Relationship Map and explain why they chose to cluster the families as they did.

7. Collect notes and Relationship Maps.

8. Portfolios – You will want to place the tables and the images for the presentations in student portfolios, after you have posted them in the room for a period of time. Take this opportunity to ask students to post their projects in clusters with their group members around the room. Also, have them post the relationship map.

HOMEWORK

None

GROUP ROLES

Manager – Present the relationship map to the class and explain the relationships between tribes.
Recorder – Write out the reasons for placing the families in the positions in the relationship map.
Illustrator – Draw the actual relationship map.
Facilitator – Keep everyone focused on the task at hand.

DOCUMENTATION FOR PORTFOLIO

Lab Report 2
Test 1: Matter
Lab Report 3
Class Periodic Table
Lab Report 4
Test 2: Atoms and Periodicity
Lab Report 5
Test 3: Compounds
Lab Report 6

Lab Report 7
Test 4: Chemical Equations
Final Project Unit 1: Tables and Images