Student Choice Board

ACTIVE LEARNING FOCUS

SINGLE LESSON – **Project Development Guide with Templates and Examples**

TEMPLATES AND EXAMPLES

ABOUT THIS RESOURCE

A student choice board is an effective strategy for fostering engaging and student-centered learning environments. They empower students by providing them choices to demonstrate understanding or mastery of content. This basic choice board provides both structured expectations and opportunity for differentiation, so that you can meet the needs of an entire class or group of students with one assignment.

HOW TO USE THIS RESOURCE

- ☐ Define your goals. What specific standards, learning goals, or skills do you want students to practice or master?
- ☐ Determine where you can offer choice.
  - ☐ **Content:** choices in instructional materials (articles, videos, audio texts, etc.)
  - ☐ **Process:** choices in activity sequence or pacing, choices in tasks to show mastery or for building toward work product
  - ☐ **Product:** choices in assessment or culminating task/project
- ☐ Review and customize the template on the following page. Reference the chemistry example for inspiration.
  - ☐ Optional: Consider using AI to help create the activities for your menu. Check out Using AI to Support Student Choice.

<< TEMPLATE >>

CHOICE BOARD

Complete one box from each column.

EXAMPLE

CHOICE BOARD - STOICHIOMETRY

Complete one box from each column. Use the blank table on the next page to record your solutions.

Mole-to-Mole Conversions Use mole ratios to calculate moles of products and reactants.	**Molar Mass** Calculate molar mass (Hint: Have a periodic table nearby!)	**Moles to Grams Conversions** Use molar mass to convert between grams and moles.
1. $2KClO_3 \rightarrow 2KCl + 3O_2$ How many moles of oxygen are produced by the decomposition of 6.0 moles of potassium chlorate, $KClO_3$?	1. NaBr 2. $PbSO_4$ 3. $Ca(OH)_2$	1. $Mg(s) + 2HCl(aq) \rightarrow MgCl_2(aq) + H_2(g)$ How many grams of HCl are consumed by the reaction of 2.50 moles of magnesium?
2. $Zn + 2HCl \rightarrow ZnCl_2 + H_2$ How many moles of hydrogen are produced from the reaction of 3.0 moles of zinc?	1. Na_3PO_4 2. $(NH_4)2CO_3$ 3. $C_6H_{12}O_6$	2. $3\ Mg + 1\ Fe_2O_3 \rightarrow 2\ Fe + 3\ MgO$ How many moles of iron, Fe, are produced with 25.0 grams of magnesium, Mg?
3. $C_3H_8 + 3O_2 \rightarrow 3CO_2 + 4H2_2$ How many moles of oxygen are necessary to react completely with 4.0 moles of propane (C_3H_8)?	1. $Fe_3(PO_4)$ 2. $(NH_4)2S$ 3. AgF	3. The following reaction produces Acetylene gas (C_2H_2) $CaC_2(s) + 2H_2O(l) \rightarrow C_2H_2(g) + Ca(OH)_2(aq)$ How many grams of $Ca(OH)_2$ would be formed with 3.20 moles of CaC_2?

EXAMPLE

STUDENT SOLUTIONS AND REFLECTIONS

Solutions		
Mole-to-Mole Conversions (Write your solution to at least one box below.)	**Molar Mass** (Write your solution to at least one box below.)	**Moles to Grams Conversions** (Write your solution to at least one box below.)
1.	1. 2. 3.	
2.	1. 2. 3.	
3.	1. 2. 3.	
Reflections		
Which activity did you choose? Why? What did you learn? What are you still wondering?	Which activity did you choose? Why? What did you learn? What are you still wondering?	Which activity did you choose? Why? What did you learn? What are you still wondering?

EXAMPLE

SOLUTIONS

IMPLEMENTATION

- Students must complete one box from each column. Each column provides opportunities to practice different skills in stoichiometry.
- Options are designed so that students will be able to practice skills in converting mole-to-mole and moles to grams and calculating molar mass. Students who have finished other work or those still needing support in any of these skills may be asked to complete more than one box.
- This activity is designed to be completed independently. Feedback should be given to students individually and solutions should not be shared digitally with students.

Mole-to-Mole Conversion	Molar Mass	Moles to Grams Conversions
1. = 9 mole O_2 6 mole $KClO_3$ | 3 mole O_2 2 mole $KClO_3$	1. NaBr = 102.9 g/mol 2. $PbSO_4$ = 303.3 g/mol 3. $Ca(OH)_2$ = 74.1 g/mol	182 g HCl
2. = 3 mole H_2 3 mole Zn | 1 mole H_2 1 mole ZN	1. Na_3PO4 = 164.0 g/mol 2. $(NH_4)2CO_3$ = 96.0 g/mol 3. $C_6H_{12}O_6$ = 180.0 g/mol	0.686 moles Fe
3. = 12 mole O_2 4 mole C_3H_8 | 3 mole O_2 1 mole C_3H_8	1. $Fe_3(PO_4)_2$ = 357.4 g/mol 2. $(NH_4)2S$ =68.1 g/mol 3. AgF = 126.9 g/mol	237 g $Ca(OH)_2$

Get more resources like this at www.opportunityeducation.org/resources