

# Active Learning Lesson Plan

## Chemistry - Metals

### Reactivity of metals (Badaboom!)

School :	XXX Secondary School		
Subject :	Chemistry		
Form :	S4	Date:	DD/MM/YYYY
Number of students:	24	Time:	50 minutes
Topic :	Balanced chemical equations		

#### Prior Knowledge:

- Chemical symbols of elements, molecules and compounds
- Word equations for the reactions

#### Learning Objectives:

- write balanced chemical equations to describe various reactions

#### Learning activities planned for this lesson:

- Review the concepts related to balanced chemical equations using **Badaboom!**.

### Flow/Breakdown of lesson

#### Review and Warm-up (10 mins)

Teacher helps students to recall the prior knowledge including:

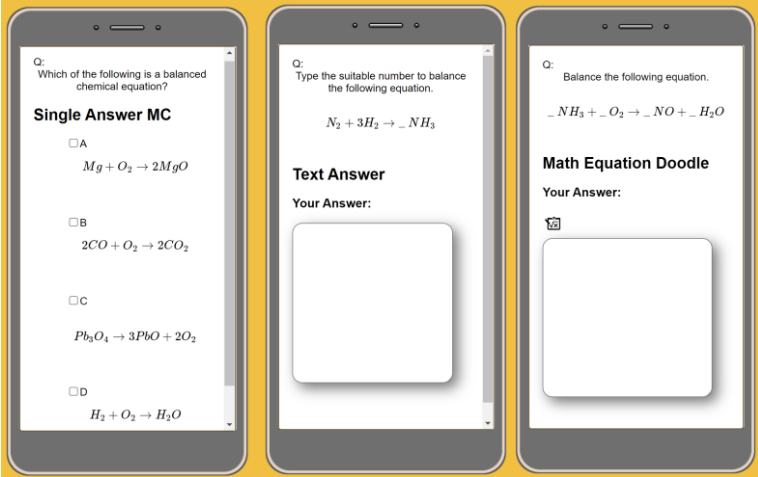


- Chemical symbols of elements, molecules and compounds
- Word equations for the reactions

#### Teacher's demonstration and explanation (30 mins)

Teacher teaches the following concepts.

- Chemical symbols involved in word equations learnt
- Word equations learnt to chemical equations
- Ways to balance an unbalanced equation

## Conclusion and Homework assignment (10 mins)

Teacher's Activity	Students' Activity
<p><b>Badaboom!</b> will be used to test their understanding on this lesson's new knowledge.</p>  <p>Q1. [Answer Type: Single Answer MC] Which of the following is a balanced chemical equation?</p> <p>A. <math>Mg + O_2 \rightarrow 2MgO</math>        B. <math>2CO + O_2 \rightarrow 2CO_2</math>        C. <math>Pb_3O_4 \rightarrow 3PbO + 2O_2</math>        D. <math>H_2 + O_2 \rightarrow H_2O</math></p> <p>Q2. [Answer Type: Single Answer MC] Which of the following is a NOT balanced chemical equation?</p> <p>A. <math>2CaCO_3 \rightarrow CaO + CO_2</math>        B. <math>CaO + H_2O \rightarrow Ca(OH)_2</math>        C. <math>Ca(OH)_2 + 2CO_2 \rightarrow Ca(HCO_3)_2</math>        D. <math>Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O</math></p> <p>Q3. [Answer Type: Text Answer] Type the suitable number to balance the following equation. <math>N_2 + 3H_2 \rightarrow \_NH_3</math></p> <p>Q4. [Answer Type: Math Equation Doodle] Balance the following equation. <math>\_H_2 + \_O_2 \rightarrow \_H_2O</math></p> <p>Q5. [Answer Type: Math Equation Doodle] Balance the following equation. <math>\_NH_3 + \_O_2 \rightarrow \_NO + \_H_2O</math></p>	 <p>Enter the game room by scanning the QR code and entering the game pin.</p> <p>Actively work out the solution and participate in <b>Badaboom!</b> gaming competition.</p> 

Teacher then concludes the lesson by recapping the concepts/objectives learnt in this lesson.

Assign homework to students.

**Total: 50 mins**