You Tube Problem Creation

Name: ____________________________

a reverse engineering homework assignment - balancing chemical equations

Overview: Videos related to chemical reactions are used in class & actions in the videos are reverse engineered. The objective of this assignment is to write a homework-style material chemical equation balancing problem based on & inspired by part or all of the video.

Deliverables: The project should be typed & formatted in a professional manner.

Use the template provided to format your:
1. a video,
2. an unbalanced chemical equation,
3. a solution & step-by-step explanation.

Grading: The reflective summary communicates effectively the concepts covered in the problem. The problem statement is complete & appropriately difficult. The problem solution is complete, correct, & appreciate difficult. The situation in the video sufficiently integrated into the problem statement (for example, what value or values were estimated from the video). You can find an example of a grading rubric at below.

Peer Evaluation: Responses will be collected on Google forms to evaluate each student’s & teammates’ efforts & participation into the assignment.

Balance the following chemical equation:

\[ \_\_\_ \text{C}_3\text{H}_8 + \_\_\_ \text{O}_2 \rightarrow \_\_\_ \text{H}_2\text{O} + \_\_\_ \text{CO}_2 \]

The chemical equations translated:

The reactants of propane combined with oxygen creates the products, water and carbon dioxide.

The video:
Propane Experiment

The problem solution describing the 4 step process:
1. Write out the chemical equation
2. List the elements

3. Count the atoms for each element

4. Balance!
$C_3H_8 + 5O_2 \rightarrow 4H_2O + 3CO_2$

C = 3
H = 8
O = 10
YouTube Problem Creation Rubric

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Evaluate your understanding of the following expectations.
If there is anything you’d like me to know, write it on the back!

<table>
<thead>
<tr>
<th>Developing?</th>
<th>Expectations</th>
<th>Got It!</th>
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<tbody>
<tr>
<td></td>
<td>The student can correctly <strong>TRANSLATE</strong> a chemical equation &amp; use vocabulary.</td>
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<td>The student can <strong>FIND A VIDEO</strong> that relates to one or more of the items in their chemical equation.</td>
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<td>The student can correctly <strong>CREATE</strong> a step-by-step solution that accurately solves the chemical equation.</td>
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<td>The student can correctly <strong>EXPLAIN</strong> the 4 step process for balancing a chemical equation.</td>
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<td>The student can <strong>REFLECT</strong> on their own participation in the assignment.</td>
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<td>The student can <strong>REFLECT</strong> on their peers’ participation in the assignment.</td>
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<td>The student can <strong>SUBMIT</strong> the assignment on time.</td>
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