



# Teaching Grade 10 Science Using an Inquiry Approach

## *Household Chemical Analysis Marking Rubric*

CRITERIA	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Chemical Identity	<ul style="list-style-type: none"> <li>• 2 chemicals have not been properly identified</li> <li>• several errors exist in the chemical names</li> <li>• several errors exist in the chemical formulas</li> </ul>	<ul style="list-style-type: none"> <li>• 1 chemical has not been properly identified</li> <li>• few errors exist in the chemical names</li> <li>• few errors exist in the chemical formulas</li> </ul>	<ul style="list-style-type: none"> <li>• all chemicals have been properly identified</li> <li>• very few errors exist in the chemical names</li> <li>• very few errors exist in the chemical formulas</li> </ul>	<ul style="list-style-type: none"> <li>• all chemicals have been properly identified</li> <li>• all chemicals have been properly named</li> <li>• all chemical formulas are correct</li> </ul>
Chemical Tests	<ul style="list-style-type: none"> <li>• procedure is vague, irrelevant and poorly outlined</li> <li>• results reflect poor clarity and poor detail</li> <li>• results are poorly matched to the procedure</li> <li>• reaction type has been vaguely or improperly identified</li> </ul>	<ul style="list-style-type: none"> <li>• procedure is clear, reasonable and satisfactorily outlined</li> <li>• results reflect satisfactory clarity and satisfactory detail</li> <li>• results are satisfactorily matched to the procedure</li> <li>• reaction type has been satisfactorily identified</li> </ul>	<ul style="list-style-type: none"> <li>• procedure is clear, relevant and outlined well</li> <li>• results reflect good clarity and good detail</li> <li>• results are well matched to the procedure</li> <li>• reaction type has been properly identified</li> </ul>	<ul style="list-style-type: none"> <li>• procedure is explicit, concise and proficiently outlined</li> <li>• results reflect excellent clarity and excellent detail</li> <li>• results are excellently matched to the procedure</li> <li>• reaction type has been clearly and properly identified</li> </ul>

CRITERIA	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Verification of Chemical Identity	<ul style="list-style-type: none"> <li>• explanation is vague, irrelevant and poorly detailed</li> <li>• conclusions are poorly matched to the procedure</li> </ul>	<ul style="list-style-type: none"> <li>• explanation is clear, reasonable and satisfactorily detailed</li> <li>• conclusions are satisfactorily matched to the procedure</li> </ul>	<ul style="list-style-type: none"> <li>• explanation is clear, relevant and detailed well</li> <li>• conclusions are well matched to the procedure</li> </ul>	<ul style="list-style-type: none"> <li>• explanation is explicit, concise and proficiently detailed</li> <li>• conclusions are excellently matched to the procedure</li> </ul>
Chemical Reaction / Process	<ul style="list-style-type: none"> <li>• chemical formulas contain numerous errors</li> <li>• chemical states are mostly missing and/or mostly wrong</li> <li>• the reaction is not properly balanced</li> <li>• the reaction agrees with results</li> </ul>	<ul style="list-style-type: none"> <li>• chemical formulas contain several errors</li> <li>• a few chemical states are missing and/or there are several errors</li> <li>• an attempt to properly balance the reaction is apparent</li> <li>• the reaction agrees with results</li> </ul>	<ul style="list-style-type: none"> <li>• chemical formulas contain few errors</li> <li>• chemical states are present with a few errors</li> <li>• the reaction is almost properly balanced</li> <li>• the reaction agrees with results</li> </ul>	<ul style="list-style-type: none"> <li>• chemical formulas contain no errors</li> <li>• chemical states are present with no errors</li> <li>• the reaction is properly balanced</li> <li>• the reaction agrees with results</li> </ul>
Investigated Reaction Type	<ul style="list-style-type: none"> <li>• reaction type has been vaguely or improperly identified</li> </ul>	<ul style="list-style-type: none"> <li>• reaction type has been satisfactorily identified</li> </ul>	<ul style="list-style-type: none"> <li>• reaction type has been properly identified</li> </ul>	<ul style="list-style-type: none"> <li>• reaction type has been clearly and properly identified</li> </ul>
Verification of Investigated Reaction Type	<ul style="list-style-type: none"> <li>• explanation is vague, irrelevant and poorly detailed</li> <li>• conclusions are poorly matched to the procedure</li> </ul>	<ul style="list-style-type: none"> <li>• explanation is clear, reasonable and satisfactorily detailed</li> <li>• conclusions are satisfactorily matched to the procedure</li> </ul>	<ul style="list-style-type: none"> <li>• explanation is clear, relevant and detailed well</li> <li>• conclusions are well matched to the procedure</li> </ul>	<ul style="list-style-type: none"> <li>• explanation is explicit, concise and proficiently detailed</li> <li>• conclusions are excellently matched to the procedure</li> </ul>