Year 10 Practical Report Scaffolding Document

Year 5 Sciences / AC Year 10

PRACTICAL REPORT TITLE:

_____

Aim: **States the purpose of the investigation.**

Explain how you would test the conservation of energy

_____

_____

_____

Hypothesis: **Make a scientific prediction about the relationship between two variables.**
Explain this prediction using your scientific understanding.
(Link to the factors affecting the conservation of energy)

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_____

Variables

<u>ALL</u> Independent Variables listed and explained: The variable that we control and change

<u>ALL</u> Dependent Variables listed and explained: The variables that are measured

<u>ALL</u> Constant Variables: Things that stay the same for the entire investigation

Independent: _____

Dependent: _____

Constant: _____

Apparatus: **<u>ALL</u> of the equipment that is used for the investigation (Add Diagram if you can)**

_____

_____

_____

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Method: **What you did (Past passive language). It must be detailed and appropriate.**

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Contribution: **Your individual role in the group**

_____

Results: **Data has been correctly collected, organised, transformed and presented In a table with heading and correct units.**

Add more rows and columns if necessary.

Initial Height 1: _____

(Type of ball)	**Test 1**	**Test 2**	**Test 3**	

Initial Height 2: _____

(Type of ball)	**Test 1**	**Test 2**	**Test 3**	

Initial Height 3: _____

(Type of ball)	**Test 1**	**Test 2**	**Test 3**	

Average Efficiency = (h2/h1)x100%

Initial Height:	**Ball Type 1:**	**Ball Type 2:**	**Ball Type 3:**

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Graphs: Create 2 graphs with correct labels and scale

1. **Drop height vs bouncing back height for each ball**
2. **Ball vs efficiency**

Discussion:

1. **Compare the efficiency of each ball for each of the drop heights. What factors have affected the bounce height of the balls and their efficiency?**
2. **Explain the energy transformations for a ball when it is dropped from a height and bounces back.**
3. **Explain why the bounce height never equals the drop height**
4. **Explain two improvements you could make to your method if you had to do the practical again. How would these improvements help the results?**
5. **Explain possible sources of error that may have occurred --- identify which errors are random and which are systematic. (Random errors are errors that are different for each measurement, systematic errors are errors that are the same across all measurements.).**

Conclusion: **State your overall conclusion linking it to your results and hypothesis. Discuss the the evidence you have in your results either for or against your hypothesis based on the results obtained.**

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