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Chemistry 11 Lab Investigation:

23A Molecular Model Building (Isomerism)

**Name: Block:**

**Group Members: Due Date:**

**Lab:** 23A Molecular Model Building (Isomerism), Heath Chemistry, pg 317

**Objective:**

**Task Outline & What to Hand In:**

* This cover page & self evaluation completed
* Data, Results & Calculations will include your completed diagrams from following Procedure #1-4
* Follow-up Questions #1, 2 and 3
* Conclusion: answers the objective of the experiment & explains why there is such a huge number of organic compounds.
* Presentation *(cover page included, word processed-if needed, calculations may be hand written neatly with correct significant figures, includes appropriate section headings, completed in order)*
* Safety *(this mark will be given by teacher during the lab)*

**Procedure Changes:**

1. Show the structural formula, ***not electron dot diagram***
2. Draw complete structural formula. There are several isomers for organic compounds. The number in brackets shows **how many you are required to draw to answer** this question.
   1. Butane *(2 isomers)*
   2. Pentane *(3 isomers)*
   3. Hexane *(5 isomers)*
   4. Cyclohexane *(1)*
   5. Methyl hexane *(show 2 isomers only)*
3. *Only 4 isomers required* **(note: butene has 1 double bond)**
4. *Only 3 isomers required* **(note: butyne has 1 triple bond)**

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| **Criteria** | **Student Self Evaluation** | **Teacher Assessment** |
| **Objective:** Clearly states the aim of the experiment and briefly outlines the related theory  **Procedure:** refers to handout/textbook page by correct citation and *note any changes to the method* *(as noted by your teacher)* | **/2** | **/2** |
| **Data, Results & Calculations:** *(hand written neatly)*  Provides results/observations (and diagrams where appropriate) that are presented in correctly annotated tables and/or graphs | **/4** | **/4** |
| **Analysis & Discussion:**  Correctly identifies and explains the theory relating to the experiment and supports this with accurate observations | **n/a** | **n/a** |
| **Evaluation:**  Identifies and defines the appropriateness of the experimental method (and presents a model for future experimental investigations where appropriate) | **n/a** | **n/a** |
| **Follow up Questions:** *(hand written neatly)*  Questions as per Heath Chemistry Lab Manual | **/3** | **/3** |
| **Conclusion:** *(hand written neatly)*  Identifies and defines important concepts and principles relevant to the experiment by relating back to the aim and hypothesis. | **/2** | **/2** |
| **Presentation:**  Practical report is presented in the correct format, is written fluently and provides appropriate and accurate referencing | **/3** | **/3** |
| **Safety:**  Demonstrates an organized and safe approach to experimental work | **/2** | **/2** |
| **Results Summary** | **/16** | **/16** |





