**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Geology Lab: Rock Identification**

**This lab will be broken down into 4 parts over 4 days. Make sure you bring this sheet each day in order to get full credit. Each part is worth 25 points for a total of 100 points possible.**

In this part of the lab, you will identify 5 igneous rocks using a reference chart located on the lab table. You have approximately 5 minutes at each station A-E. You may visit each station in any order. For each unknown igneous rock, identify the key physical characteristics and then identify the rock based on these observations.

***Sample A:***

|  |  |
| --- | --- |
| **Characteristic** |  |
| **Color** | **□ light colored** | **□ dark colored** |
| **Density** | **□ low density** | **□ high density** |
| **Texture** | **□ Coarse Grained** | **□ Fine Grained** | **□ Glassy Grained** |

**In a complete sentence, state why this rock would be classified as an igneous rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Igneous Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample B:***

|  |  |
| --- | --- |
| **Characteristic** |  |
| **Color** | **□ light colored** | **□ dark colored** |
| **Density** | **□ low density** | **□ high density** |
| **Texture** | **□ Coarse Grained** | **□ Fine Grained** | **□ Glassy Grained** |

**In a complete sentence, state why this rock would be classified as an igneous rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Igneous Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample C:***

|  |  |
| --- | --- |
| **Characteristic** |  |
| **Color** | **□ light colored** | **□ dark colored** |
| **Density** | **□ low density** | **□ high density** |
| **Texture** | **□ Coarse Grained** | **□ Fine Grained** | **□ Glassy Grained** |

**In a complete sentence, state why this rock would be classified as an igneous rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Igneous Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample D:***

|  |  |
| --- | --- |
| **Characteristic** |  |
| **Color** | **□ light colored** | **□ dark colored** |
| **Density** | **□ low density** | **□ high density** |
| **Texture** | **□ Coarse Grained** | **□ Fine Grained** | **□ Glassy Grained** |

**In a complete sentence, state why this rock would be classified as an igneous rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Igneous Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample E:***

|  |  |
| --- | --- |
| **Characteristic** |  |
| **Color** | **□ light colored** | **□ dark colored** |
| **Density** | **□ low density** | **□ high density** |
| **Texture** | **□ Coarse Grained** | **□ Fine Grained** | **□ Glassy Grained** |

**In a complete sentence, state why this rock would be classified as an igneous rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Igneous Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions:** Visits stations A-E to identify the key characteristics of each unknown sedimentary rock, and then using the reference charts on the lab table, identify each rock based on your observations. You have approximately 5 minutes at each station.

***Sample A:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** | **Question** |
| **□** | **□** | **Clasts** | **Can you see clasts in this sample?****If yes, are the clasts all the same size?****□Yes □No****If yes, are the clasts angular or rounded?****□Angular □Rounded** |
| **□** | **□** | **Strata** | **Can you see clearly defined layers in this sample** |
| **□** | **□** | **Fossils** | **Can you see fossils in this sample?** |

**Using a complete sentence, state why this rock would be classified as a sedimentary rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Sedimentary Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample B:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** | **Question** |
| **□** | **□** | **Clasts** | **Can you see clasts in this sample?****If yes, are the clasts all the same size?****□Yes □No****If yes, are the clasts angular or rounded?****□Angular □Rounded** |
| **□** | **□** | **Strata** | **Can you see clearly defined layers in this sample** |
| **□** | **□** | **Fossils** | **Can you see fossils in this sample?** |

**Using a complete sentence, state why this rock would be classified as a sedimentary rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Sedimentary Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample C:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** | **Question** |
| **□** | **□** | **Clasts** | **Can you see clasts in this sample?****If yes, are the clasts all the same size?****□Yes □No****If yes, are the clasts angular or rounded?****□Angular □Rounded** |
| **□** | **□** | **Strata** | **Can you see clearly defined layers in this sample** |
| **□** | **□** | **Fossils** | **Can you see fossils in this sample?** |

**Using a complete sentence, state why this rock would be classified as a sedimentary rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Sedimentary Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample D:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** | **Question** |
| **□** | **□** | **Clasts** | **Can you see clasts in this sample?****If yes, are the clasts all the same size?****□Yes □No****If yes, are the clasts angular or rounded?****□Angular □Rounded** |
| **□** | **□** | **Strata** | **Can you see clearly defined layers in this sample** |
| **□** | **□** | **Fossils** | **Can you see fossils in this sample?** |

**Using a complete sentence, state why this rock would be classified as a sedimentary rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Sedimentary Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample E:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** | **Question** |
| **□** | **□** | **Clasts** | **Can you see clasts in this sample?****If yes, are the clasts all the same size?****□Yes □No****If yes, are the clasts angular or rounded?****□Angular □Rounded** |
| **□** | **□** | **Strata** | **Can you see clearly defined layers in this sample** |
| **□** | **□** | **Fossils** | **Can you see fossils in this sample?** |

**Using a complete sentence, state why this rock would be classified as a sedimentary rock**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Sedimentary Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions:** Visits stations A-E to identify the key characteristics of each unknown metamorphic rock, and then using the reference charts on the lab table, identify each rock based on your observations. You have approximately 5 minutes at each station.

***Sample A***

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** |
| **□** | **□** | **Is this metamorphic rock foliated?** |
| **□** | **□** | **Does this metamorphic rock have a distorted structure?** |
| **□** | **□** | **Are there any key metamorphic identifier minerals?****□Garnet****□Mica** |

**Using a complete sentence, state why this rock would be classified as a metamorphic rock.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Metamorphic Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample B***

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** |
| **□** | **□** | **Is this metamorphic rock foliated?** |
| **□** | **□** | **Does this metamorphic rock have a distorted structure?** |
| **□** | **□** | **Are there any key metamorphic identifier minerals?****□Garnet****□Mica** |

**Using a complete sentence, state why this rock would be classified as a metamorphic rock.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Metamorphic Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample C***

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** |
| **□** | **□** | **Is this metamorphic rock foliated?** |
| **□** | **□** | **Does this metamorphic rock have a distorted structure?** |
| **□** | **□** | **Are there any key metamorphic identifier minerals?****□Garnet****□Mica** |

**Using a complete sentence, state why this rock would be classified as a metamorphic rock.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Metamorphic Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample D***

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** |
| **□** | **□** | **Is this metamorphic rock foliated?** |
| **□** | **□** | **Does this metamorphic rock have a distorted structure?** |
| **□** | **□** | **Are there any key metamorphic identifier minerals?****□Garnet****□Mica** |

**Using a complete sentence, state why this rock would be classified as a metamorphic rock.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Metamorphic Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample E***

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Key Identifying Feature** |
| **□** | **□** | **Is this metamorphic rock foliated?** |
| **□** | **□** | **Does this metamorphic rock have a distorted structure?** |
| **□** | **□** | **Are there any key metamorphic identifier minerals?****□Garnet****□Mica** |

**Using a complete sentence, state why this rock would be classified as a metamorphic rock.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Based on your observations, the name of this Metamorphic Rock is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions:** You will use what you have learned in the previous 3 labs and the reference charts to identify 5 rocks. Please place a check in the appropriate box to indicate whether the sample is classified as an igneous, sedimentary, or metamorphic rock. Then explain why you classified the sample as you have in a complete sentence. You have 5 minutes to evaluate each sample at each of the stations. You may visit the stations in any order.

***Sample A:***

 **□ □ □**

 **Igneous Sedimentary Metamorphic**

**Explain your reasoning: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample B:***

 **□ □ □**

 **Igneous Sedimentary Metamorphic**

**Explain your reasoning: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample C:***

 **□ □ □**

 **Igneous Sedimentary Metamorphic**

**Explain your reasoning: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample D:***

 **□ □ □**

 **Igneous Sedimentary Metamorphic**

**Explain your reasoning: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Sample E:***

 **□ □ □**

 **Igneous Sedimentary Metamorphic**

**Explain your reasoning: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**