

# Ch 5 What are Igneous Rocks

## Section 1 Guided Reading

Scan Section 1 of your text. Use the checklist below as a guide.

- Read all headings and bold words.
- Read all tables and graphs.
- Look at all the pictures and read their captions.
- Think about what you already know about minerals.

Write **Two** things you will learn about igneous rocks in this chapter.

1. \_\_\_\_\_
2. \_\_\_\_\_

Use your text to define the following terms

3. silicate \_\_\_\_\_  
\_\_\_\_\_
4. igneous rock \_\_\_\_\_  
\_\_\_\_\_
5. lava \_\_\_\_\_  
\_\_\_\_\_
6. partial melting \_\_\_\_\_  
\_\_\_\_\_
7. Bowen's reaction series \_\_\_\_\_  
\_\_\_\_\_
8. Fractional crystallization \_\_\_\_\_  
\_\_\_\_\_
9. Fracture \_\_\_\_\_  
\_\_\_\_\_
10. basaltic: how much silica \_\_\_\_\_
11. andesitic: how much silica \_\_\_\_\_
12. rhyolitic: how much silica \_\_\_\_\_

## Composition and Origins of Magma

**Organize** information about the composition and formation of magma by completing the outline and the concept web below.

### I. Composition of magma

A. Magma is \_\_\_\_\_

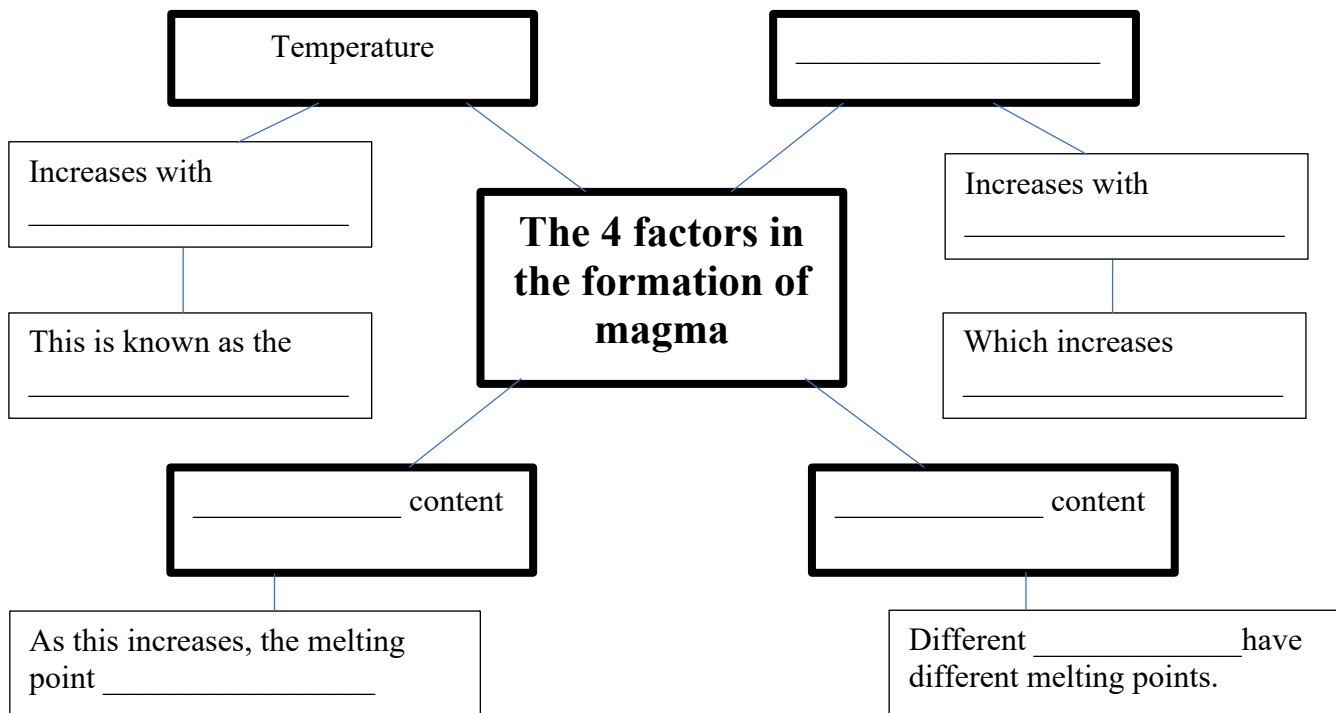
B. The most common elements in magma are \_\_\_\_\_.

1. The most abundant compound in magma is \_\_\_\_\_.

C. Magmas are classified as \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

2. Their classification depends on \_\_\_\_\_

### II.



## Partial Melting

**Summarize** *how partial melting is the opposite of fractional crystallization?*

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**Summarize** *how the composition of the melted material in magma changes as it melts and cools. Hint: Bowen's reaction series.*

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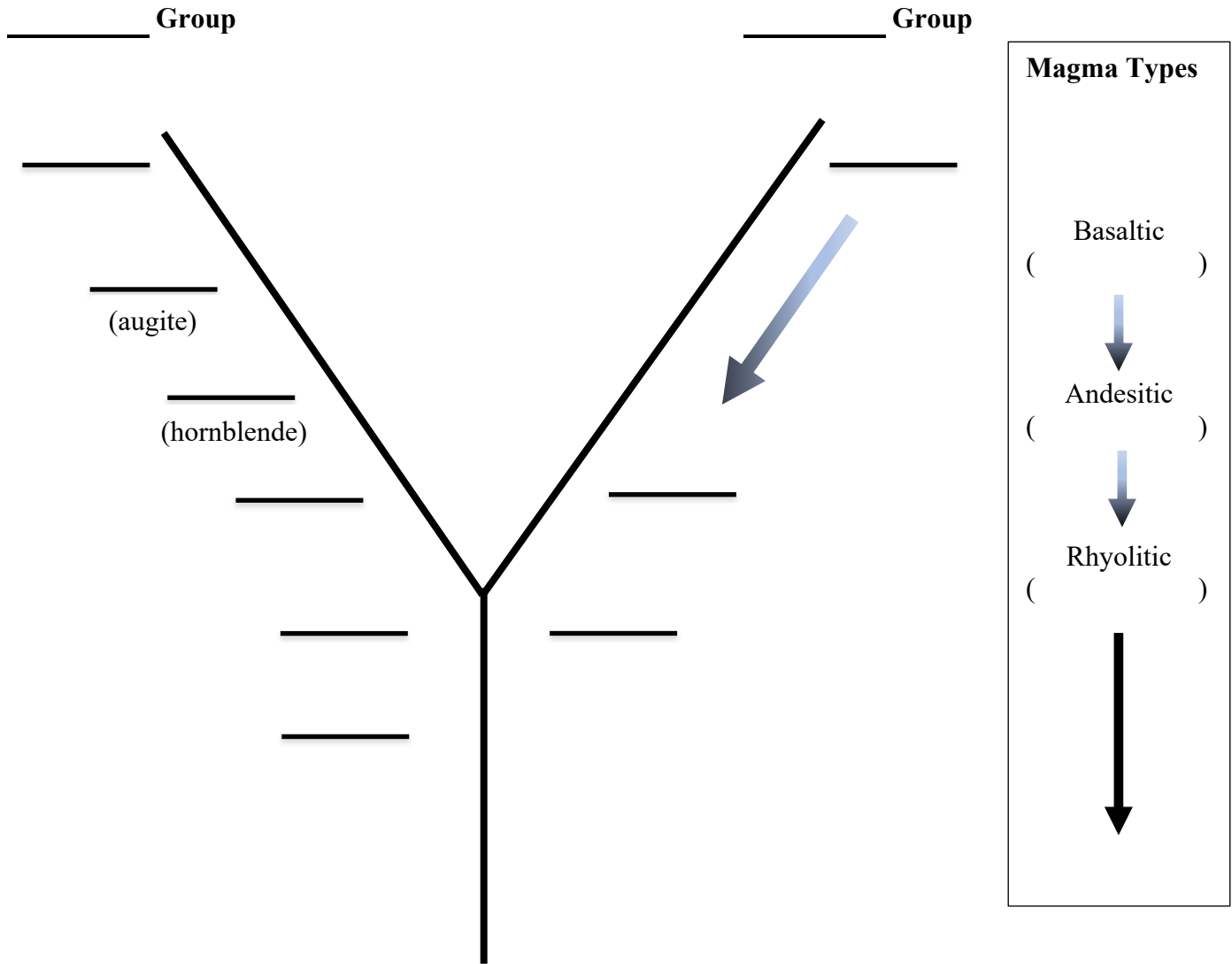
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**Bowen's Reaction Series**

Fill in the figure of Bowen's Reaction Series using Figure 4, page 114, as a reference.



**Synthesize:** Compare and contrast the changes that are represented in the left and right branches of Bowen's reaction series.

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