3.5 Compare and contrast intrusive and extrusive igneous rocks

3.6 Demonstrate how the rate of cooling affects an igneous rock’s texture

3.7 Classify igneous rocks according to texture and composition

**Ag Earth Science – Chapter 3.2 – Igneous Rocks**

**3.2 Vocabulary**

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| --- | --- | --- | --- |
| **Word** | **Definition** | **Paraphrase** | **Picture** |
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**I. Formation of Igneous Rocks**

 A. Igneous –

B. Intrusive Igneous Rocks –

 1. Example –

C. Extrusive Igneous Rocks –

 1. Example –

**II. Classification of Igneous Rocks**

A. Texture and composition are two characteristics used to classify igneous rocks.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Slow cooling = large crystals. Large crystals exhibit “course-grained” texture.

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Rapid cooling = small mineral grains. Small grains are said to have “fine-grained” texture.

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Lava spews on surface = may not be time for ions to arrange themselves into crystals. Random distributed ions = glassy texture.

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Large body of magma may take thousands of years to harden. Variety of temperature/cooling within large mass = large crystals and fine-grained minerals.

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Made almost entirely of light colored silicate minerals quartz and feldspar.

6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Rocks that contain many dark silicate minerals and plagioclase.

7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – In-between granite (light) and basaltic (dark) compositions.

8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Composed almost entirely of dark silicate minerals (peridotite).

