





Physical Geology Assignment 1: Minerals

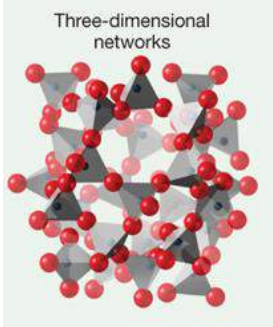

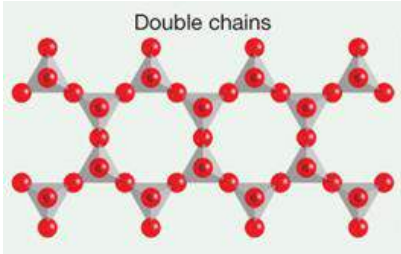

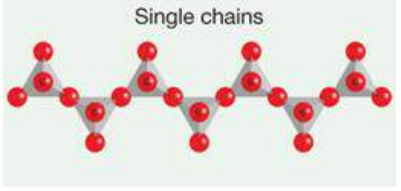

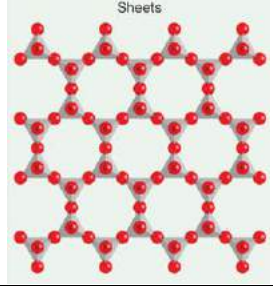

Identify each of the following minerals and the mineral group to which it belongs. Note the physical properties and consult the accompanying mineral identification key. Mineral groups are the silicates, carbonates, oxides, sulfides, sulfates, halides, and native elements.

Questions	Physical Properties	Image
1. Mineral Name? Mineral group?	Luster: nonmetallic Hardness: 4 Streak: white Cleavage: four directions	
2. Mineral Name? Mineral group?	Luster: nonmetallic Hardness: 3 Streak: red Cleavage: not prominent Ore of iron	
3. Mineral Name? Mineral group?	Luster: metallic Hardness: 2.5 Specific gravity: 7.6 Cleavage: cubic Ore of lead	
4. Mineral Name? Mineral group?	Luster: nonmetallic Hardness: 6 Specific gravity: 2.6 Cleavage: two directions at nearly right angles A common mineral in granite	
5. Mineral Name? Mineral group?	Luster: nonmetallic Hardness: 5-6 Specific gravity: 3.2 Cleavage: two directions at 60 degrees and 120 degrees Common in certain igneous rocks like andesite	

<p>6. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: metallic Hardness: 1 Specific gravity: 2.2 Feel: greasy</p> <p>Used in pencil lead</p>	
<p>7. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic Hardness: 3 Cleavage: three directions at 75 degrees (rhombohedral) Property: effervesces in HCl</p> <p>Common mineral in limestone</p>	
<p>8. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic: fibrous, silky Hardness: 2 (easily scratches with fingernail) Cleavage: 3 directions</p> <p>Used in plaster</p>	
<p>9. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: metallic Hardness: 6 Specific gravity: 5.2 Form: cubic crystals</p> <p>Also known as fool's gold</p>	
<p>10. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic Hardness: 6-7 Crystal structure composed of isolated silica-oxygen tetrahedral</p> <p>Major mineral in Earth's mantle</p>	

<p>11. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic Hardness: 2.5 Cleavage: three directions at 90 degrees</p> <p>Salty taste</p>	
<p>12. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic Hardness: 2.5 Specific gravity: 9 Cleavage: none</p> <p>Sometimes tarnished to brown or green</p>	
<p>13. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: metallic Hardness: 6 Specific gravity: 5.2 Streak: black</p> <p>Ore of iron Magnetic</p>	 <p>© geology.com</p>
<p>14. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic, adamantine Hardness: 10</p>	
<p>15. Mineral Name?</p> <p>Mineral group?</p>	<p>Luster: nonmetallic, glassy Hardness: 6.5-7.5 Fracture: conchoidal</p> <p>Common mineral in a metamorphic rock called schist</p>	 <p>www.gemstones.com</p>

The following five minerals (16-20) include olivine, augite (pyroxene group), hornblende (amphibole group), biotite (mica group), and quartz. Match each of these minerals to the correct internal arrangement of silicon-oxygen tetrahedra.

<p>16. Mineral Name?</p> <p>Mineral group?</p>	<p>Three-dimensional networks</p> 	
<p>17. Mineral Name?</p> <p>Mineral group?</p>	<p>Double chains</p> 	
<p>18. Mineral Name?</p> <p>Mineral group?</p>	<p>Single chains</p> 	
<p>19. Mineral Name?</p> <p>Mineral group?</p>	<p>Sheets</p> 	
<p>20. Mineral Name?</p> <p>Mineral group?</p>	<p>Single tetrahedron</p> 