12.108 Lab 9: Neso- Soro- and Cyclosilicates

What is the major structural difference between the three groups of silicates in this lab?

Draw an example of each.

<table>
<thead>
<tr>
<th>Minerals</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Olivine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composition:</td>
<td>Crystal System:</td>
<td></td>
</tr>
<tr>
<td>Color:</td>
<td>Occurence</td>
<td></td>
</tr>
<tr>
<td>Habit:</td>
<td></td>
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<tr>
<td>Luster:</td>
<td>Diagnostic Features:</td>
<td></td>
</tr>
<tr>
<td>Cleavage:</td>
<td></td>
<td></td>
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<tr>
<td>G:</td>
<td></td>
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</tr>
<tr>
<td>H:</td>
<td></td>
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</tr>
</tbody>
</table>

| **Garnet**       |              |              |
| Composition:     | Crystal System: |
| Color:           | Occurence     |
| Habit:           |              |
| Luster:          | Diagnostic Features: |
| Cleavage:        |              |
| G:               |              |
| H:               |              |
**Zircon**

Composition: Crystal System:
Color: Occurrence
Habit: 
Luster: 
Cleavage: Diagnostic Features:
G: 
H: 

**Al₂SiO₅ Polymorphs (Kyanite, Andalusite, and Sillimanite)**

**Kyanite**

Composition: Crystal System:
Color: Occurrence
Habit: 
Luster: 
Cleavage: Diagnostic Features:
G: 
H: 

**Andalusite**

Composition: Crystal System:
Color: Occurrence
Habit: 
Luster: 
Cleavage: Diagnostic Features:
G: 
H: 

**Sillimanite**

Composition: Crystal System:
Color: Occurrence
Habit: 
Luster: 
Cleavage: Diagnostic Features:
G: 
H:
**Topaz**

Composition:  
Color:  
Habit:  
Luster:  
Cleavage:  
$G$:  
$H$:  

**Staurolite**

Composition:  
Color:  
Habit:  
Luster:  
Cleavage:  
$G$:  
$H$:  

**Epitote**

Composition:  
Color:  
Habit:  
Luster:  
Cleavage:  
$G$:  
$H$:  

**Vesuvianite**

Composition:  
Color:  
Habit:  
Luster:  
Cleavage:  
$G$:  
$H$:  

Crystal System:  
Occurence  

Diagnostic Features:
**Beryl**

Composition: 
Color: 
Habit: 
Luster: 
Cleavage: 
G: 
H: 

**Cordierite**

Composition: 
Color: 
Habit: 
Luster: 
Cleavage: 
G: 
H: 

**Tourmaline**

Composition: 
Color: 
Habit: 
Luster: 
Cleavage: 
G: 
H: