

**CRITICAL THINKING rubric – Fall 2018**

	<b>1</b> <b>significantly below expectations</b>	<b>2</b>	<b>3</b> <b>competence</b>	<b>4</b>	<b>5</b> <b>significantly exceeding expectations</b>
<b>Develop &amp; evaluate arguments</b>	<ul style="list-style-type: none"> <li>- does not understand components &amp; framework of argument</li> <li>- doesn't know what an argument is</li> </ul>		<ul style="list-style-type: none"> <li>- follows logic / understands framework &amp; can assemble components accurately</li> <li>- understand claim &amp; evidence</li> <li>- knows components</li> </ul>		<ul style="list-style-type: none"> <li>- builds effective/persuasive argument on evidence</li> <li>- make use of ideas in new way</li> <li>- new investigations</li> </ul>
<b>Analyze, synthesize &amp; evaluate ideas as part of the creative process</b>	<ul style="list-style-type: none"> <li>- rote memorization</li> <li>- passive regurgitation</li> </ul>		<ul style="list-style-type: none"> <li>- analyze &amp; evaluate ideas</li> <li>- understand reasoning</li> <li>- see relevance to self and other things</li> </ul>		<ul style="list-style-type: none"> <li>- make new / individual progress based on understanding of ideas</li> <li>- build out</li> <li>- devise further investigations</li> <li>- write additional compositions</li> </ul>
<b>Assess the validity of both qualitative &amp; quantitative evidence</b>	<ul style="list-style-type: none"> <li>- unquestioning</li> <li>- unreliable information / use of data</li> <li>- no consideration of the data sources</li> <li>- no or unreasonable conclusions</li> </ul>		<ul style="list-style-type: none"> <li>- uncritical use of accurate data</li> <li>- apply data to conclusions</li> </ul>		<ul style="list-style-type: none"> <li>- critically evaluating and using and synthesizing accurate data</li> <li>- draw reasonable conclusions</li> </ul>
<b>Apply diverse disciplinary approaches &amp;</b>	<ul style="list-style-type: none"> <li>- inability to see past their own perspective</li> <li>- inability to recognize other / diverse perspectives</li> <li>- does not apply different approaches to the problem - only apply one perspective</li> </ul>		<ul style="list-style-type: none"> <li>- recognizing other perspectives, but w/o systematic engagement / applications</li> </ul>		<ul style="list-style-type: none"> <li>- seeking out diverse interdisc. perspectives &amp; applying it w/in their work w/ purpose</li> <li>- effective analysis based on many perspectives</li> <li>- enriching their own work</li> <li>- community perspectives</li> </ul>
<b>Employ the scientific method</b>	<ul style="list-style-type: none"> <li>- cannot understand structural process &amp; problem solving</li> <li>- begin with conclusions and match data</li> <li>- works backwards</li> <li>- no controls</li> <li>- no clear measurements</li> <li>- vague hypothesis</li> <li>- cannot distinguish or identify different changing conditions</li> <li>- cannot analyze trends in data</li> <li>- deliberately change more than one condition</li> <li>- allows multiple conditions to change during the experiment</li> </ul>		<ul style="list-style-type: none"> <li>- can methodically employ logical systematic steps to problem solve</li> <li>- know what data supports a trend / the hypothesis</li> <li>- can understand and follow steps in a protocol</li> </ul>		<ul style="list-style-type: none"> <li>- patient persistent, flexible methodology to problem solving</li> <li>- everything in "competence" score, and can identify imperfections with measurements / techniques</li> <li>- can identify sources of error in experiment</li> <li>- can develop further experiments / improve a repeat experiment</li> </ul>

**2 = developing competence**

**4 = exceeding expectations**