Experimental Design Quiz 1

Part 1: Label the steps of the scientific method below (1-5) in the order that they occur. 1 represents what would happen first and 5 represents the last step.

_____Form a hypothesis
_____Analyze Data/ Draw a conclusion
_____Make an observation and pose a question
_____Make a prediction
_____Design an experiment

Part 2: Fill in the blank using the word bank provided. Words may be used once, more than once or not at all.

<table>
<thead>
<tr>
<th>Prediction</th>
<th>Scientific Theory</th>
<th>Experimental Group</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlled</td>
<td>Experiment</td>
<td>Independent Variable</td>
<td>Bias</td>
</tr>
<tr>
<td>Control Group</td>
<td>Quantitative</td>
<td>Dependent Variable</td>
<td>Hypothesis</td>
</tr>
</tbody>
</table>

A. When designing an experiment scientists make a statement that forecasts what would happen if the hypothesis were true this is called the____________________________. In order to determine this scientists design a(n) __________________________. If the experiment is ______________________________ it will have a(n) ________________________ or the group that provides a standard for comparison.

B. Also, the scientists will have another group called the ________________________ which has the changed factor or the ______________________________ applied to it. When collecting the data scientist will measure or count how the independent variable responds. The measured or counted variable is called the __________________________

C. During the experimentation the scientist will collect two types of data:
____________________________ or data that is measurable with instruments or ______________________________ which is gathered through your senses.

D. After all of the data collection, analysis and repeatedly testing scientists may be able to acquire a well-substantiated explanation of some aspect of the natural world called a ______________________________.