

### Online Resource 3 - Rubric for assessing understanding from labreports

Rubric category	Insufficient	Sufficient	Excellent
<b>Introduction</b>	The research goal of the experiment is not provided.	The research goal of the experiment is not described in own words and/or an explanation on gene mapping is absent.	The introduction is described in own words and contains an explanation on gene mapping.
<b>Methods</b>	The Methods section is absent.	The method section refers to the lab protocol but does not contain any adjustments from the protocol and/or descriptions of the specific content of the mastermix.	Adjustments from the protocol and the specific content of the mastermix are provided.
<b>Results</b>	The results are absent or only contain pictures of the gel electrophoresis.	One or more of the following results are absent: <ul style="list-style-type: none"> <li>– Phenotypic description on the mutants</li> <li>– Genotypic description of own samples</li> <li>– Genotypic description on samples from fellow students</li> </ul>	The results contain the following: <ul style="list-style-type: none"> <li>– Phenotypic description on the mutants</li> <li>– Genotypic description of own samples</li> <li>– Genotypic description on the samples from fellow students</li> </ul>
<b>Conclusions</b>	The conclusion is absent or does not refer to the research goal.	The conclusion refers to the research goal but an explanation on the calculation of the recombination frequency is absent.	The calculation of the recombination frequency is given and used to explain the most likely location of the gene of interest.
<b>Discussion</b>	The discussion is absent or does not discuss any limitations.	Limitations such as the sample size and efficiency of PCR/gel electrophoresis are discussed.	Limitations are discussed and suggestions are made to use new markers for a more precise approximation of the exact location of the gene of interest.