
STAGE 4—TAKE ACTION

In stage 4, students apply new knowledge acquired to the problem scenario. Students determine the uncertainty and ambiguity associated with their results and recommend further research to be conducted or identify additional questions. The research group prepares to present their findings orally or in writing. This stage is a way for your students to assess their knowledge (authentic assessment).

Once students have agreed on the results and drawn their conclusions, they take action by presenting their findings orally or in writing. Depending on the time available, three different approaches could be taken, as described below:

- **Final Discussion**—This can be an informal roundtable discussion where teams discuss what information is important to present to the client, how the study was conducted, and how they would formulate a response.
- **Written Report**—The team prepares a written technical report to the client that includes the following information in the order given:
 - **Title Page**
 - **Summary**—Describes the objective and scope of the work and presents the main conclusions.
 - **Introduction**—Provides some background. It defines the problem, describes who requested the research, who conducted the research, the scope of the project (and limits in scope), and outlines the report’s contents.
 - **Methods and Materials**—Describes study sites and field and laboratory methods.
 - **Results and Discussion**—Provides raw data and analyzes data.
 - **Conclusions and Recommendations**—Provides conclusions and recommendations.
- **Technical Exchange**—If more than one research problem is studied during a quarter, each technical team can present the results of its study in an oral technical exchange. Participants might prepare posters and viewgraphs to present their results. See Figure 5.12 for an example of how data might be presented in a viewgraph and Table 5.6 for a sample scoring guide for a poster.



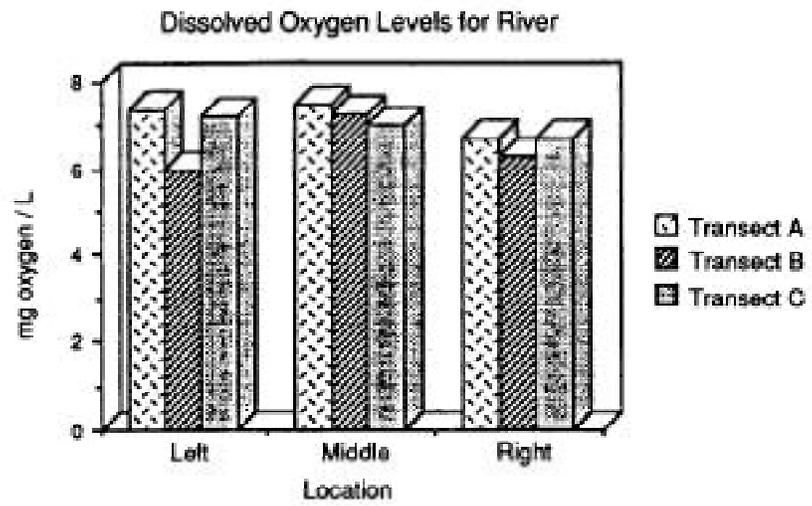
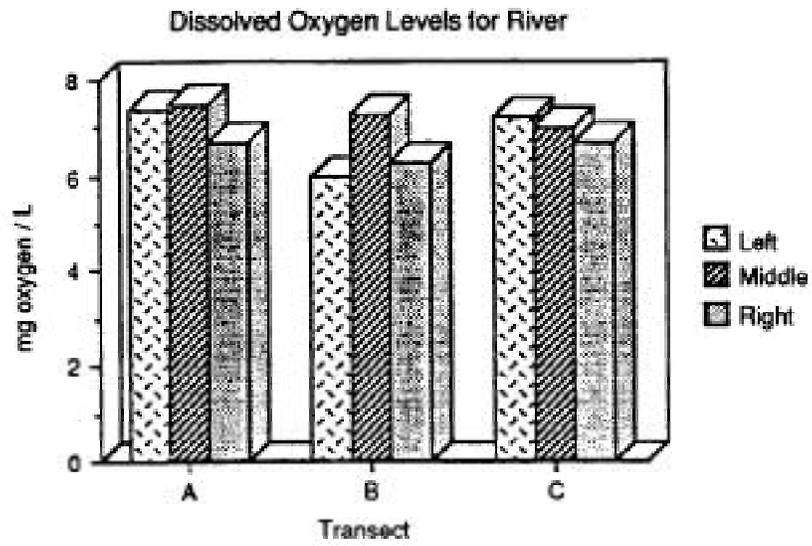


Figure 5.12. Sample Bar Graphs



Table 5.6. Poster Scoring Guide

	1	2	3	Score and Weight
Appearance				
Color (appropriate to project)	No color variety	Color not always appropriate	Color appropriate	___ X ___ = ___
Legibility	Not legible/words too small	Words not easily seen	Easily legible	___ X ___ = ___
Quality of construction	Messy, rough cuts, etc.	Not totally clean; smears, glue, etc.	Neat and clean	___ X ___ = ___
Medium	No variation	Some variation	Good variation	___ X ___ = ___
Organization	No clear organization or design	Some organization or design	Clear organization, design	___ X ___ = ___
Content				
Title/definition of topic	Title inappropriate or not obvious	Title does not identify content	Title identifies content	___ X ___ = ___
Quality of information	Information incomplete, inaccurate, or not concise	Information not entirely accurate, complete, or concise	Information accurate, complete, concise	___ X ___ = ___
Quality of information	Does not follow specifications	Specifications inconsistently followed	Follows specification consistently	___ X ___ = ___
Appropriateness of information	Inappropriate, below grade level	Appropriate, at grade level	Appropriate, above grade level	___ X ___ = ___
Spelling and Grammar	Many spelling and grammar errors	Some spelling and grammar errors	No spelling and grammar errors	___ X ___ = ___
Attribution	Plagiarism	Inconsistent attribution	Appropriate attribution	___ X ___ = ___
Originality	No original work		Original or enhanced original work	___ X ___ = ___
Bibliographical Information				
Number/variety of sources	Number/variety of sources less than required	Number/variety of sources meet requirement	Number/variety of sources exceeds requirement	___ X ___ = ___
Format	Does not follow format	Inconsistent use of format	Consistent, error-free format	___ X ___ = ___
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