

VISIT Rubric For Evaluating Lessons

Who uses this rubric?

- The following is a rubric for you to use when you are writing your evaluation of a lesson that might be used by teachers for their own professional development in VISIT, or that might be used by VISIT teachers in their classrooms with their students.

What is a “lesson”?

- A lesson typically will be something you can do in one to three hours’ work at the computer (or with your students in one or two class periods). If there are several lessons within a larger Investigation or curriculum, please fill out this form for each lesson you review.
- These lessons might be ones that the VISIT project is developing,
- These lessons may be ones that are already offered in VISIT webct courses,
- The lessons may have been developed elsewhere (e.g. Northwestern LATE Environment curriculum; MFTeach; ESRI lessons).

Who will read the evaluation you are writing?

- Other teachers in VISIT. Teachers will use your evaluations to learn how another teacher thinks about the lesson. Teachers might decide whether to take a certain lesson based on your critique.
- The authors of the lessons you are reviewing. Authors of lessons will use your evaluation to revise and improve the lesson.
- VISIT staff will use your evaluation to help decide whether to include the lesson in the VISIT professional development program for teachers.

I hope you will enjoy reviewing and evaluating lessons through using this rubric. Please suggest improvements to this rubric to bev@piedmontresearch.org.

Instructions:

- Please use this form to describe and evaluate an individual lesson. A lesson typically will be something you can do in one to three hours’ work at the computer (or with your students in one, two or three class periods). If there are several lessons within a larger Investigation or curriculum, please fill out this form for each lesson you review.
- Use the drop down menu in column 2 to rate each criterion. This should be on a continuum from 0 (Strongly Disagree) to 10 (Strongly Agree)

Strongly Disagree			Neutral				Strongly Agree			
0	1	2	3	4	5	6	7	8	9	10

- Use the right-most column of the table to explain your rating for each item. Just click in the box and begin typing your comments.
- Add any additional comments or items that you think should be included in the rubric at the end of this document.
- Please save this file under a new name when you fill it in. Include your last name in the file name. E.g. “hunterLATEln2.doc”
- Unless you have received other instructions, please attach your completed evaluation document to an email and send it to both bev@piedmontresearch.org and to anneeschtruth@netscape.net.

You may want to suggest additional reviewers for this lesson. Include that information in your email.

1. Reviewer Name:	Jack Hentz	
2. Date Reviewed:	January 2, 2002	
3. Please identify the resource you are evaluating (name of overall package or project, specific lesson title, author, source, how obtained, URL, etc).	Climate Graphs	
4. Did you try out this lesson with students? If yes, please tell something here about the class and students with whom you tried this.	No	
Quality of Lessons		
➤ Pedagogically sound and appropriate to inquiry processes	9	Good use of data and ArcView
➤ Provides scientific value and accuracy	10 Strongly Agree	Excellent use of climate data
➤ Appropriate grammar, spelling, quality of language used	8	Good language, needed units specified for rain and temperature
➤ Instructions are understandable	9	Good instructions
➤ High quality of visual representations (e.g. layout sensible; screen shots readable; appropriate graph)	9	Excellent use of screen shots
➤ Appropriate to curriculum, age level	8	Seems appropriate for 9th graders
➤ Technical soundness (i.e., the technology works as intended).	8	ArcView works as described.

The Investigation or lesson(s) is effective for a teacher's professional development.		
➤ Uses and expands her/his scientific knowledge	7	Good climate examples
➤ Expands his/her use of technology professionally and in the classroom	8	Excellent use of maps and data
➤ Expands his/her understanding and skills in spatial reasoning	9	Linked data well.
➤ Encourages collaboration with other teachers, scientists and technologists	8	Can discuss climate around the country.
➤ Identifies new ways for meeting standards	8	Uses maps and computers, and data tables
➤ Provides guided science inquiry lesson plans	8	Good step by step plans
➤ Appropriate for teacher use (convenience, efficient use of time, technically accessible, etc)	8	Seems appropriate.

The Investigation or lesson(s) is effective at the level of the students who use or might use the developed lesson		
➤ Learning meets standards Identify standards: Identify types of climate in US Relate temp to rainfall	9	Meets standards
➤ Participates in and learns about scientific inquiry processes	7	A lot of graph setup, but does help student to understand data.
➤ Develops or applies spatial reasoning in analysis of data	8	Relates elevation to temp and rainfall wel.
➤ Learns about science applications relevant to community issues	8	Can check out local weather and also around the country.
➤ Becomes familiar with appropriate technology applications	8	Forces student to use more of ArcView.

The Investigation Themes. Describe the **theme** or topic on which the investigation will be developed.

(Example of **themes**: water quality in rivers or lakes; hazardous materials in living environments; ozone or radon in urban areas; distribution of flora or fauna; ecological modeling)

Theme:

Climates around the US

➤ Is environmentally-related or socially important.	7	Could show temperature and pollution areas
➤ Uses empirical databases.	8	Good use of weather data
➤ Uses technology for visualization, manipulation of data; preparation of products; communication	8	Good use of maps and joining data.
➤ Inquiry-driven.	8	Keeps students moving step by step.
➤ Interesting to the teacher who develops and implements the lessons.	7	New method of presenting data
➤ Interesting to the student who uses the lessons and becomes actively involved.	7	Gives student a chance to explore around the US
➤ Interesting and relevant to the local community	6	Can zero in on local conditions, somewhat.

The Investigation Scenario. The investigation **scenario** is the particular real world environment under study. It defines the geographical footprint for the **Investigation**. Local **scenarios** are usually more desirable because they are more relevant to the teachers, students and people in the surrounding community.

Example of **scenarios**:

water quality in the local watershed; power shortage across a state; a city wide environmental problem; water resources across a state or region – location, adequacy, preservation

Scenario:

Compare the climate of Michigan to other parts of the US

➤ Illustrates the relevance of science for the teacher, the students and the community	7	Shows how weather data can be used.
➤ Provides a context where the grade appropriate science standard can be met	7	Meets standards.
➤ Provides a framework where a guided science inquiry can be presented, discussed and developed	7	Student can move forward on their own.

Types Of Data And Availability		
➤ Defines the data for an investigation.	8	Good example of weather data.
➤ Provides the data	9	Data provided.
➤ Teaches how to get the data.	6	Data already provided, but does show how to join data.
➤ Supports and teaches Geo-spatial Data Sets	7	Good use.
<p>Identify the types of data provided:</p> <p>Temperature and rainfall data.</p> <p>Elevation data.</p> <p>Map of US.</p>		

The Scientific and Technological Knowledge		
➤ Identifies the specific scientific knowledge base needed.	7	Need background on basic weather concepts.
➤ Identifies resource scientists and specialists.	7	Data from government weather source.
➤ Correlates the knowledge base with curricular standards.	7	Ties in knowledge with curriculum.
➤ Provides links to needed resources and a URL is provided for a glossary	3	Only a mention of the government weather source.
➤ The lesson or investigation resources help to formulate, understand, and/or use a Driving Question for inquiry.	7	Sets up questions for learning.
➤ It is clear what the driving question(s) are.	8	Clear questions.
<p>Driving Question:</p> <p>What is relationship between rain/temperature and elevation around the US.</p>		

Data Integration, Analysis and Interpretation		
➤ Defining Data Processing: The data are given, already processed, or procedure is given.	9	Data is ready to go.
➤ The analysis methods are appropriate to the purpose of the investigation and worth learning and doing	7	.Forces students to think about data.
➤ Suggested tools are highly appropriate and useful for the analysis and interpretation tasks	7	Good use of graphing tools.
Please identify tools used: ArcView and charts in particular.		
Tools for analysis: Teachers are provided with instruction in their use.	7	Good instructions. Need to specify units. I think worksheet #2 meant to say Yearly Precip. greater than 39.7
Tools for analysis are accessible to teacher	7	Used ArcView.
Tools for analysis are accessible to the students	7	Need computer lab with ArcView.
Expected analysis outcomes are defined clearly and completely.	7	Pretty clear outcomes, instructor can help explain.

Lesson Plans and Rubrics		
➤ Meet National And Local Curricular Objectives.	7	Seems to meet objectives.
➤ Provide identifying templates for lesson plans.	8	Good template.
➤ Provide identifying guidelines for creating assessment rubrics.	7	Can assess using the worksheets.
<p>Classroom and curriculum feasibility:</p> <p>Time 1-2 class periods.</p> <p>Materials ArcView, worksheets and textbook.</p> <p>Logistics Probably need a computer lab available.</p> <p>Management May need to guide slower students through setting up the graphs.</p> <p>Demands on teacher Helping to set up graphs.</p> <p>Student skill prerequisites Some knowledge of ArcView would help, background on weather basics.</p> <p>What are some other feasibility issues for this resource or lesson(s)?</p> <p>Could be used as a pre-test sort of assignment. Trouble if network or computer has problems.</p>		

Completing, Testing, Reporting and Continuing		
The lesson or investigation results in a product	8	Completed worksheets.
The outcome of the lesson or investigation is useful to a real audience.	7	Helps to explain basic concepts.
Results can be disseminated through science fairs, poster presentations, and publications.	7	Could print out graphs and make a report.
Project can be sustained through Grant Sources and Partnership opportunities at the Local, Regional and National Level	5	Not sure.

Additional Comments Not Covered:

Good assignment. It was fun to use the graphing tools to see how the data changes around the US.