

## 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](mailto: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. "hunterLATElsn2.doc"
- Unless you have received other instructions, please attach your completed evaluation document to an email and send it to both [bev@piedmontresearch.org](mailto:bev@piedmontresearch.org) and to [anneeschtruth@netscape.net](mailto:anneeschtruth@netscape.net).

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

1. Reviewer Name:	Cris DeWolf	
2. Date Reviewed:	3-16-02	
3. Please identify the resource you are evaluating (name of overall package or project, specific lesson title, author, source, how obtained, URL, etc).	Blown Away by: Tom Baker, KanCRN Downloaded from: <a href="http://gis.esri.com/industries/k-12/arclessons/search_results.cfm">http://gis.esri.com/industries/k-12/arclessons/search_results.cfm</a>	
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	
5. Synopsis. Briefly, what is this lesson about?	This lesson uses ArcView GIS to correlate the seasonal position of the jet stream with location and intensity of tornadic activity in the United States.	
6. Overall recommendation to VISIT program. Taking into account all factors below, I recommend that this lesson be included in the VISIT program as a resource for teachers.	10 Strongly Agree With the following kinds of modifications or improvements:	
Quality of Lessons		
➤ Pedagogically sound and appropriate to inquiry processes	8	
➤ The scientific or social content is valuable and accurate.	10 Strongly Agree	
➤ Appropriate grammar, spelling, quality of language used	10 Strongly Agree	
➤ Instructions are understandable	10 Strongly Agree	

➤ High quality of visual representations (e.g. layout sensible; screen shots readable; appropriate graph)	8	
➤ Appropriate to curriculum, age level	9	
➤ Technical soundness (i.e., the technology works as intended).	10 Strongly Agree	
➤ Cartographic soundness (e.g. the maps include basic requirements and accuracy).	9	

The <b>Investigation or lesson(s)</b> is effective for a <b>teacher's</b> professional development.		
➤ Uses and expands teacher's scientific knowledge	7	
➤ Expands teacher's use of technology professionally and in the classroom	10 Strongly Agree	
➤ Expands teacher's understanding and skills in spatial reasoning	10 Strongly Agree	
➤ Encourages collaboration with other teachers, scientists and technologists	6	
➤ Identifies new ways for meeting standards	3	
➤ Provides guided science, social science, or mathematical inquiry lesson plans	9	

➤ Appropriate for teacher use (convenience, efficient use of time, technically accessible, etc)	9	
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The <b>Investigation or lesson(s)</b> is effective for the <b>students</b> who use or might use the lesson.		
➤ Learning meets standards Identify standards:	5	Specific standards were not identified in the lesson plan.
➤ Participates in and learns about inquiry processes	8	
➤ Develops or applies spatial reasoning in analysis of data	10 Strongly Agree	
➤ Learns about applications of knowledge relevant to community issues	6	
➤ Becomes familiar with appropriate technology applications	10 Strongly Agree	

<p><b>The Investigation Themes.</b> Describe the <b>theme</b> or topic on which the investigation will be developed.</p> <p>(Example of <b>themes</b>: water quality in rivers or lakes; hazardous materials in living environments; ozone or radon in urban areas; distribution of flora or fauna; ecological modeling)</p> <p>Theme: weather</p>		
➤ Is environmentally-related or socially important.	7	

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➤ Uses data that is organized and based on real-world observations (e.g. population data, measurements of temperature, elevations data).	9	
➤ Uses technology for visualization, manipulation of data; preparation of products; communication	9	
➤ Inquiry-driven pedagogy.	7	
➤ Interesting to the teacher who develops and implements the lessons.	8	
➤ Interesting to the student who uses the lessons and becomes actively involved.	5	Cannot comment. Did not have students attempt the lesson.
➤ Interesting and relevant to the local community	7	

<p><b>The Investigation Scenario.</b> The investigation <b>scenario</b> is the particular real world environment under study. It defines the geographical footprint for the <b>Investigation</b>. Local <b>scenarios</b> are usually more desirable because they are more relevant to the teachers, students and people in the surrounding community.</p> <p>Example of <b>scenarios</b>:</p> <p style="padding-left: 40px;">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</p> <p>What is the Scenario:</p> <p>National weather trends that may have local impact</p>		
➤ Scenario Illustrates the relevance of science for the teacher, the students and the community	8	
➤ This scenario provides a context where a guided science inquiry can be presented, discussed and developed	8	

<p><b>Data: sources, availability, understandability</b></p>		
➤ Defines the data for an investigation.	8	
➤ Provides the data	9	
➤ Teaches how to get the data.	9	

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➤ Supports and teaches Geo-spatial Data Sets	8	
➤ Provides metadata for the data in the lesson(s). Includes definitions of terms, sources of the data, dates, etc. in a form students can access and understand.	9	
<p>Identify the types of data provided:</p> <p>esridata</p> <p>US Jet stream digital and print material from <a href="http://www.nws.noaa.gov">http://www.nws.noaa.gov</a></p>		

<b>The Scientific, Social or Technological Knowledge</b>		
➤ Identifies the specific knowledge base needed.	6	
➤ Identifies resource scientists, social scientists, practitioners, and specialists.	1 Strongly Disagree	
➤ Correlates the knowledge base with curricular standards.	1 Strongly Disagree	
➤ Provides links to needed resources and a URL is provided for a glossary	8	
➤ The lesson or investigation resources help to formulate, understand, and/or use a Driving Question for inquiry.	9	
➤ It is clear what the driving question(s) are.	10 Strongly Agree	
<p>Driving Questions:</p> <p>What relationship do you see between the Fujita values of tornado intensity during January, May, and August? What trends or patterns exist in the data?</p> <p>What role does seasonal variation in the US jet stream have on tornado development? How does this role reflect the original scientific theory proposed above?</p>		

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<b>Data Integration, Analysis and Interpretation</b>		
➤ Defining Data Processing: The data are given, already processed, or procedure is given.	9	
➤ The analysis methods are appropriate to the purpose of the investigation and worth learning and doing	6	
➤ Suggested tools are highly appropriate and useful for the analysis and interpretation tasks	8	
Please identify tools used:  ArcView		
Tools for analysis: Teachers are provided with instruction in their use.	1 Strongly Disagree	
Tools for analysis are accessible to teacher	9	
Tools for analysis are accessible to the students	9	
Expected analysis outcomes are defined clearly and completely.	9	

<b>Lesson Plans and Rubrics</b>		
➤ Meet National And Local Curricular Objectives.	6	Specific objectives from National and State of Michigan benchmarks are not identified in the lesson plan.
➤ Provide lesson plans.	9	

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<p>➤ Provide rubrics or other instruments for assessing student learning.</p>	<p>2</p>	
<p>Classroom and curriculum feasibility:</p> <p>Time ~50 minutes</p> <p>Materials ArcView</p> <p>Logistics Need computer lab</p> <p>Management</p> <p>Demands on teacher knowledge of ArcView</p> <p>Student skill prerequisites minimal: this is an introductory lesson</p> <p>What are some other feasibility issues for this resource or lesson(s)?</p>		

<p><b>Completing, Testing, Reporting and Continuing</b></p>		
<p>The lesson or investigation results in a product</p>	<p>1 Strongly Disagree</p>	

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The outcome of the lesson or investigation is useful to a real audience.	8	
Results can be disseminated through science fairs, poster presentations, and publications.	1 Strongly Disagree	
Project can be sustained through Grant Sources and Partnership opportunities at the Local, Regional and National Level	6	

Additional Comments Not Covered:

This rubric does not allow for "neutrality on specific line items!"