

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. "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 and to anneeschtruth@netscape.net.

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

1. Reviewer Name:	Pat Hodgson	
2. Date Reviewed:	11/29/01	
3. Please identify the resource you are evaluating (name of overall package or project, specific lesson title, author, source, how obtained, URL, etc).	<p>"Don't Be Afraid of the TIGER!" Judith M. Painter mpainter@qx.net Fayette County Schools. The lesson was downloaded from the WebCT Course Content area and the data sets from http://webct.emich.edu:8900/SCRIPT/IntroductiontoGIS/scripts/serve_home</p>	
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?	The lesson demonstrate the ease of using TIGER files to familiarize user with data pertinent to local areas and studies of local issue projects, e.g., city and county development issues.	
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	10 Strongly Agree	
➤ 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	Not all of the graphics printed; however, the graphics that did print are integrated very well into the content area of the instructions.
➤ Appropriate to curriculum, age level	7	Lesson may need to be adapted for lower grades and student proficiency in downloading, creating and saving files in folders.
➤ Technical soundness (i.e., the technology works as intended).	8	The lesson was successful for me as I have a high speed access at school; however, at home, I may have had trouble. Also, MAC users may require more "fixes."
➤ Cartographic soundness (e.g. the maps include basic requirements and accuracy).	10 Strongly Agree	

The Investigation or lesson(s) is effective for a teacher's professional development.		
➤ Uses and expands teacher's scientific knowledge	10 Strongly Agree	Very useful for teacher who needs additional practice in downloading and using zip files. VERY precise instructions provided.
➤ Expands teacher's use of technology professionally and in the classroom	10 Strongly Agree	
➤ Expands teacher's understanding and skills in spatial reasoning	7	Great potential offered as teacher delves into analysis of data through query building.
➤ Encourages collaboration with other teachers, scientists and technologists	7	Great potential for teachers to collaborate; however, no specific collaboration is encouraged.
➤ Identifies new ways for meeting standards	10 Strongly Agree	
➤ Provides guided science, social science, or mathematical inquiry lesson plans	10 Strongly Agree	

➤ Appropriate for teacher use (convenience, efficient use of time, technically accessible, etc)	10 Strongly Agree	
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The Investigation or lesson(s) is effective for the students who use or might use the lesson.		
➤ Learning meets standards Identify standards: Information Literacy Standards	10 Strongly Agree	
➤ Participates in and learns about inquiry processes	10 Strongly Agree	
➤ Develops or applies spatial reasoning in analysis of data	10 Strongly Agree	
➤ Learns about applications of knowledge relevant to community issues	10 Strongly Agree	
➤ Becomes familiar with appropriate technology applications	10 Strongly Agree	

<p>The Investigation Themes. Describe the theme or topic on which the investigation will be developed.</p> <p>(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)</p> <p>Theme: Alternate Street Names, Census Block Demographics (1990), County (1995) boundaries, Key Geographic Locations, Land and Water Outlines, Landmark Areas, Landmark Points, Line Features, Landmark, Line Features, Railroads, Line Features, Streams, Line Features, Utility Lines.</p>

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➤ Is environmentally-related or socially important.	10 Strongly Agree	
➤ Uses data that is organized and based on real-world observations (e.g. population data, measurements of temperature, elevations data).	10 Strongly Agree	
➤ Uses technology for visualization, manipulation of data; preparation of products; communication	10 Strongly Agree	
➤ Inquiry-driven pedagogy.	10 Strongly Agree	
➤ Interesting to the teacher who develops and implements the lessons.	10 Strongly Agree	
➤ Interesting to the student who uses the lessons and becomes actively involved.	10 Strongly Agree	
➤ Interesting and relevant to the local community	10 Strongly Agree	

<p>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.</p> <p>Example of scenarios:</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>Population/Demographic Patterns in Pitkin County as related to community services: Schools, Hospitals, Law Enforcement This scenario has not been developed, but the TIGER files will provide the data sets and ArcVoyager/ArcView will provide the structure.</p>		
➤ Scenario Illustrates the relevance of science for the teacher, the students and the community	10 Strongly Agree	
➤ This scenario provides a context where a guided science inquiry can be presented, discussed and developed	10 Strongly Agree	

<p>Data: sources, availability, understandability</p>		
➤ Defines the data for an investigation.	10 Strongly Agree	
➤ Provides the data	10 Strongly Agree	
➤ Teaches how to get the data.	10 Strongly Agree	

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➤ Supports and teaches Geo-spatial Data Sets	10 Strongly Agree	
➤ 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.	10 Strongly Agree	Demonstrates how to access, save and integrate the data in ArcVoyager and/or ArcView.
<p>Identify the types of data provided:</p> <p>ESRI's ArcData OnLine (ADOL)</p> <p>Local county information</p> <p>Physical Attributes</p>		

The Scientific, Social or Technological Knowledge		
➤ Identifies the specific knowledge base needed.	10 Strongly Agree	
➤ Identifies resource scientists, social scientists, practitioners, and specialists.	7	Links provided for additional information
➤ Correlates the knowledge base with curricular standards.	10 Strongly Agree	
➤ Provides links to needed resources and a URL is provided for a glossary	9	A PowerPoint presentation was provided for further assistance and demonstration.
➤ The lesson or investigation resources help to formulate, understand, and/or use a Driving Question for inquiry.	10 Strongly Agree	
➤ It is clear what the driving question(s) are.	1 Strongly Disagree	
<p>Driving Questions:</p> <p>How have the schools, hospital, police and sheriff's departments been impacted by the increase in development of tourist facilities and the construction of the four-lane highway into Aspen? (Students would be divided into teams to brainstorm each area and provide responses to the group BEFORE the data are gathered, downloaded, used and analyzed.)</p>		

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Data Integration, Analysis and Interpretation		
➤ Defining Data Processing: The data are given, already processed, or procedure is given.	10 Strongly Agree	
➤ The analysis methods are appropriate to the purpose of the investigation and worth learning and doing	5	.User is encouraged to develop individual projects. The lesson is more process oriented than product oriented.
➤ Suggested tools are highly appropriate and useful for the analysis and interpretation tasks	8	Menu tools are clearly defined and labeled in graphics on the worksheet.
Please identify tools used: Adding Themes, Changing Features, Opening Tables, Joining Tables		
Tools for analysis: Teachers are provided with instruction in their use.	5	There is more utilization of data and tools than interpretation in this lesson.
Tools for analysis are accessible to teacher	7	User is encouraged to use queries in the VIEW section to analyze data.
Tools for analysis are accessible to the students	7	Query use is recommende; however, query building is not a part of the lesson.
Expected analysis outcomes are defined clearly and completely.	5	Analysis outcomes are not part of the lesson.

Lesson Plans and Rubrics		
➤ Meet National And Local Curricular Objectives.	10 Strongly Agree	
➤ Provide lesson plans.	10 Strongly Agree	

<p>➤ Provide rubrics or other instruments for assessing student learning.</p>	<p>1 Strongly Disagree</p>	<p>There were no official rubrics attached to this lesson.</p>
<p>Classroom and curriculum feasibility:</p> <p>Time Two one hour blocks</p> <p>Materials Software: ArcView or ArcVoyager, WinZip or Stuffit, Netscape or Internet Explorer, ESRI Data: Data files from ArcView or ArcVoyager, Handouts: copies of Obtaining Data 1, Unpacking Data 2, Utilizing Data 3.</p> <p>Logistics Students divided into work groups to study critical question and report to class. (This process could be accomplished in an earlier class. Interviews with local politicians (city council, county commissioners) could be arranged. Brainstorming sessions to increase knowledge base of local community issues.</p> <p>Management Clearly defined objectives are essential as this is a multi-part lesson.</p> <p>Demands on teacher Organization, time management, flexibility, proficiency in downloading data, extracting, filing, retrieving and utilizing information. Familiarity with browsers and Internet searches. Proficiency in ArcView or ArcVoyager. Familiarity with local city and county information.</p> <p>Student skill prerequisites Familiarity in browser use, file management, extraction of data files and beginning use of ArcView or ArcVoyager.</p> <p>What are some other feasibility issues for this resource or lesson(s)?</p> <p>Access to MSOffice Suite, Internet access, (preferably high speed access), site license to ArcView/ArcVoyger</p>		

Completing, Testing, Reporting and Continuing		
The lesson or investigation results in a product	6	Joining data tables provided significant information that could be analyzed
The outcome of the lesson or investigation is useful to a real audience.	10 Strongly Agree	
Results can be disseminated through science fairs, poster presentations, and publications.	10 Strongly Agree	
Project can be sustained through Grant Sources and Partnership opportunities at the Local, Regional and National Level	10 Strongly Agree	

Additional Comments Not Covered:

Query building appears to be an essential aspect of both ArcVoyager and ArcView and would be critical skill to teach in this unit. Analysis is the only weak link; however, the designer of the lesson intended users to access, extract, use and manipulate data. The successful retrieval of the TIGER data sets and their use in ArcView/ArcVoyager demonstrates success with the lesson.