Science Resource Materials Filter

When considering resources and materials for science, it is important to determine alignment (is it grade-level appropriate, is it found in Ohio's Academic Content Standards for Science and/or National Framework for K-12 Science Education?), accuracy/reliability, depth of knowledge, and is science practices encouraged? This filter provides a good starting point in the evaluation of resources and materials for use in the science classroom. Recommended resources and materials are in the 2/3 range for each of the listed criteria (A-I).

A. Alignment			
0	**1**	**2**	**3**
No evidence of alignment with state standards and/or national Framework for K-12 Science Education. The material is not at the appropriate grade level.	Aligns generally with the main concept, but not the specific descriptions within the state standards and/or national Framework for K-12 Science Education. The material is at the correct grade level.	Aligns with the main concept and some of the specific descriptions within the state standards and/or national Framework for K-12 Science Education for K-12 Science Education. The material is at the correct grade level.	Aligns with the main concept and the specific descriptions within the state standards and/or national Framework for K-12 Science Education. The material is at the correct grade level.
B. Depth of science content knowledge			
0	**1**	**2**	**3**
Little/no opportunity for depth of knowledge (e.g. too much breadth, insufficient time to allow depth).	Some opportunity for depth of knowledge (focuses on 3-4 concepts and supports science practices), may still need additional time and/or limiting breadth.	Some opportunity for depth of knowledge (focuses on 2 or 3 concepts and supports science practices), provides adequate time for exploration.	Focuses on one main concept and supports science practices. Adequate time is provided for exploration.
C. Accuracy			
0	**1**	**2**	**3**
Contains inaccurate science content.	Science content is accurate; however resources and/or links provided contain inaccurate science content.	Science content and resources/links provided are accurate, but is presented in a way that could promote a potential misconception.	Science content and resources/links are accurate. There are no potential misconceptions presented.
D. Reliability, validity, and authority			
0	**1**	**2**	**3**

Content presented is invalid or unreliable. Facts presented may be biased or slanted toward a particular view, population, or outcome. Contact information and sources are missing.	Content presented can be validated, is reliable and authoritative. Contact information and sources are present. Facts presented may be biased or slanted toward a particular view, population, or outcome.	Content presented can be validated, is reliable and authoritative. Contact information and sources are present and reputable. Bias is not present.	Content presented can be validated, is reliable and authoritative. Contact information and sources are present and reputable and recognized experts in the content area. Bias is not present.
E. Contextual learning and/or meaningful application			
0	**1**	**2**	**3**
Real-world and/or relevant context is absent.	Content is framed in a context that is relevant to students.	Content is framed in a context that is relevant to students and significant from a global perspective.	Content is framed in a context that is relevant to students and significant from a global perspective and students are required to communicate (data/findings/research) to an external audience.
F. Adaptability/limited use			
0	**1**	**2**	**3**
Materials have a limited range of use (e.g. can only be used one time by 10 students).	Materials can be adapted for a variety of settings and/or uses.	Materials can be adapted for a variety of settings and/or uses and provides guidance on how to adapt the materials.	Materials can be adapted for a variety of settings and/or uses and provides guidance, examples, and resources on how to adapt the materials.
G. Assessments			
0	**1**	**2**	**3**
Guidance for student assessment (formative and/or summative) is not provided.	Guidance for student assessment (formative and/or summative) is provided.	Guidance, tools, and resources for student assessment (formative and/or summative) are provided.	Guidance, tools, and resources for student assessment (formative and/or summative) are provided. Strategies based on the results of the assessments are provided to further increase student achievement.
H. Navigability and appearance			
0	**1**	**2**	**3**
Appearance and style are poor quality (e.g. numerous typos, grammatical errors, incorrect word usage). If web-	Appearance and style are average (e.g. a few typos, grammatical errors, incorrect word usage). If web-based:	Appearance and style are good quality (e.g. no typos, grammatical errors, or incorrect word usage). If web-based: interactive	Appearance and style are high quality (e.g. no typos, grammatical errors, or incorrect word usage, clear and professional in

based: limited/no interactive materials (static), difficult to find materials, links that do not work, graphics not displayed correctly.	limited/some interactive materials, most links work, can locate materials, graphics are supported.	materials are present, links work, materials are easy to locate, and graphics are high quality.	appearance). If web-based: high quality interactive materials for students and teachers are present, links work, materials are very easy to locate, and graphics are high quality.
I. Scientific practices			
0	**1**	**2**	**3**
Does not provide opportunities for student-led or student-designed investigations (e.g. provides lists of materials and exact procedures to conduct the experiment or investigation). Students are expected to answer a set of prepared questions.	Open-ended student questions about the investigation are included, but did not provide student-led or designed investigations (e.g. provides lists of materials and exact procedures to conduct the experiment or investigation). Suggestions for student reflection are provided.	Student-designed research questions are used to develop the investigative procedure and methodologies for the experiment. Guidance is provided to assist teachers in helping students formulate the questions and research procedures. Suggestions for student reflection are provided.	Student-designed research questions are used to develop the investigative procedure and methodologies for the experiment. Prior knowledge and skills are used in the investigative design. Guidance is provided to assist teachers in helping students formulate the questions and research procedures. Suggestions for student reflection are provided. Results and findings are formally communicated, critiqued, and defended.