

**Table. 5.2. Review Rubric for Teachable Units**

Overall criteria for evaluating a teachable unit: This table contains all the elements of a teachable unit. It will engage a diversity of students in experiencing and learning the nature of science, and it will provide regular feedback to both students and instructors about learning.

Criteria	Levels of Completion		
	Comprehensive	Intermediate	Cursory or Absent
<p><b>Learning Goals and Outcomes</b></p> <p>Goals—What students will know, understand, or be able to do</p> <p>Outcomes—What performances or behaviors will indicate accomplishment of the goals</p>	<p><b>Overall: Students will experience the nature of science in this unit and know what is expected of them.</b></p> <p>It is clear what students will know, understand, and be able to do after they have completed this unit.</p> <p>It is clear what knowledge (concepts, topics, theories, facts, and terminology) students are expected to learn and what behaviors and performances typify understanding.</p>	<p>The goals are challenging, interesting, and appropriate for the intended students.</p> <p>The goals are clear, but they do not entirely represent the nature of science. For example, the goals may be all “content” or “knowledge” based. Similarly, the intended outcomes are not sufficiently explicit or varied. For example, it may not be clear how students will demonstrate “analysis” skills. Overall, students need more information to know what is expected of them.</p> <p>The prior knowledge that students are expected to have is somewhat inaccurate; this unit may therefore be too challenging or simple.</p>	<p>The goals do not represent the nature of science, or they are otherwise inadequate. For example, they may be too vague, ambiguous, broad, ambitious, detailed, or focused.</p> <p>There are no descriptions of expected student performances or behaviors; students will not know what is expected of them.</p>

**Table. 5.2. Review Rubric for Teachable Units (continued)**

Criteria	Levels of Completion		
	Comprehensive	Intermediate	Cursory or Absent
<p><b>Diversity</b> How all students will be included in learning</p>	<p><b>Overall: All students will be included in learning.</b></p> <p>It is clear that the unit is designed to enable students to construct their own learning in the context of their own minds, to foster student responsibility for learning, and to engage diverse students.</p> <p>It is clear that the unit addresses multiple aspects of student diversity, such as cognitive, racial/ethnic/cultural, gender, and ability.</p> <p>Varied teaching methods are used to address different learning goals and engage a diversity of students.</p> <p>A diversity of content, examples, or metaphors are used, which are not offensive.</p>	<p>The unit offers some opportunity for students to construct their own learning, but could include more diverse or effective teaching methods.</p> <p>The unit could use more examples that reflect student diversity in cultural background, gender, learning skills, or physical abilities.</p> <p>The unit includes diverse teaching methods, but otherwise does not address diversity in students.</p>	<p>The unit is teacher-centered and does not foster student responsibility for learning.</p> <p>The unit does not address diversity or includes potentially off-putting examples.</p>

Table. 5.2. Review Rubric for Teachable Units (continued)

Criteria	Levels of Completion		
	Comprehensive	Intermediate	Cursory or Absent
<p><b>Teaching Plan</b> What the instructor and students will do</p>	<p><b>Overall: Instructors will understand the schedule of events.</b></p> <p>The plan includes a clear schedule of events for activities and assessments for both the instructor and the students.</p> <p>The sequence of events is logical and aligned with goals.</p> <p>Detailed instructions are provided so that another instructor could easily implement the unit, including guiding questions, tips, and supporting materials.</p> <p>Detailed instructions are provided for students.</p>	<p>The schedule of activities is described broadly, but more detailed instructions are needed for another instructor to implement.</p> <p>The order of events is somewhat logical, but more information is needed to be useful to other instructors.</p> <p>Some minor factual information is inaccurate and should be corrected.</p>	<p>The schedule of activities is vague, not logical, or omitted.</p> <p>Detailed instructions are not included for instructors or students.</p> <p>There are so many inaccuracies in factual information that this unit should not be taught.</p>