## Design Tool 8.2: Lesson Design Checklist

*Directions:* Use this checklist to help you stay on track and consider what to include as you design your STEM lesson.

### Before You Design the Lesson

- Be thoroughly familiar with the content material you will cover in your lesson.
- Research the topic carefully, including looking at other examples of lessons on this topic.
- Assume that others will read your lesson. Include enough detail that even a novice teacher can understand the lesson and implement it.

### As You Design the Lesson

- Include most or all of the components of the engineering design process. Note that these do not need to follow a particular order, and you may use a step more than once.
- List the estimated amount of time needed to complete each section.
- Use the term *team* rather than *group* when referring to students who work together.
- Write teamwork ideas and instruction directly into your lesson.
- Engage student interest in the challenge. Use a creative way to introduce the lesson.
- Make the lesson student-centered, hands-on, and engaging.
- Make explicit connections between math and science.
- Identify how technology is used or created in the lesson and possible consequences of technology.
- Make authentic connections with other subjects, where appropriate.
- Take account of student diversity in your lesson design.
- Include visuals in your lesson if these would clarify content.
- If you use PowerPoint or another slideshow presentation program, put a minimal amount of text on each slide.
- Credit your sources, including web sources.
- Check to see if your lesson meets STEM specifications (Design Tool 5.1).

## After You Design the Lesson

- Ask other teachers to read your lesson for clarity.
- Field-test the lesson and work out the bugs. Ask other teachers to field-test as well and make suggestions. Adjust the lesson before distributing it for use.