

Revised Science Standards and Model Curriculum FAQs

1. Why are the Revised Science Standards and Model Curriculum found in one document?
 - The model curriculum contains the science practices and the engineering and technology components of science. These cannot be taught in isolation and are considered to be part of the standards document.
2. What does the model curriculum include?
 - The model curriculum includes content elaboration; expectations for learning with associated cognitive demands; visions into practice which provide examples for the classroom; instructional strategies and resources; common misconceptions, and diverse learner strategies. The model curriculum embeds scientific practices, engineering and technology, and skills with science content.
3. When should I begin using the revised standards?
 - Implementation can be transitional, but must be in place prior to the assessment implementation (2014-15). Students will be assessed using the revised science standards and model curriculum in the 2014-15 academic year.
 - Take a look at the Comparative Analysis document to see the shared concepts (between the 2002 and 2010 standards) for each grade. Then examine the shared concepts within the standards and model curriculum document to see how the expectations, rigor, and depth may have changed. This is something that can be done right now (since the concepts are the same). Next, begin to look at the concepts that are no longer a focus and the concepts that may be new to that grade level.
4. Why should I use Ohio's Revised Science Standards and Model Curriculum instead of just waiting for the Next Generation Science Standards (NGSS) to be adopted by Ohio?
 - Ohio must review the completed NGSS document to determine if adoption will be recommended. As a Lead State in the NGSS development, Ohio agreed to seriously consider adoption, but this requires a careful review of the final work.
 - The NGSS document is scheduled to be completed by the end of 2012. It will take time for ODE to carefully review the document and offer recommendations to the State School Board. Even if the State School Board opts to adopt the NGSS, there will be a transition period for implementation of the NGSS and time will be needed to develop assessments that align with NGSS. This will not be in place by 2014-15.

- The 2014-15 assessments will be aligned to Ohio's 2010 revised Science Standards and Model Curriculum.

5. Are the revised science education standards aligned to national work?

- The revised standards are closely aligned with the current National Science Education Standards, Project 2061, and recommendations from professional organizations such as National Science Teachers Association.
- The revised standards are closely aligned with the science standards of countries that consistently and significantly outperform the United States on international assessments of student performance in science.
- The revised standards are closely aligned with, "A Framework for K-12 Science Education" which is the basis for the development of the Next Generation Science Standards (NGSS).

6. What can be done in the short term?

- Become familiar with the revised standards and model curriculum documents.
- Try using some of the strategies, resources, or classroom examples found in the model curriculum that aligns with what is currently being taught.
- Integrate science practices with content from Pre-K through high school.
- Develop students' ability to use science practices (problem-solving, data collection and analysis, inquiry, investigation, etc.) and apply science to the real-world.
- Use resources that connect the science in the classroom to the outside world, adding relevance to what is being taught. Introduce technological and engineering design and science processes as ways to model and apply science.
- Develop lessons that allow the student to design and implement investigations (not just following procedural instructions), using the learning cycle (the 5Es) which is part of the Standards Based Education model on the ODE Science page.

7. What tools are recommended to help in the transition to the revised science education standards?

- A Comparative Analysis document that outlines the changes at each grade level, for science concepts between the 2002 and 2010 science standards.
- A Science Resource and Materials Filter that helps school districts, schools, or teachers choose high quality science resources for their classrooms.
- The classroom examples sections within the model curriculum can help give teachers project ideas and develop ways to incorporate the science practices into the science content.
- A "Blank" Science Eye of Integration that is designed to assist teams of teachers in developing meaningful projects or investigations that include other disciplines and universal (21st Century) skills. A completed Eye of Integration for 7th grade is provided as an example.