

A green curved line representing a hill. On the hill, there are five black silhouettes of people in various walking or standing poses, moving from left to right.

Indiana Department of Education

Glenda Ritz, NBCT

Indiana Superintendent of Public Instruction

MEMORANDUM

TO: Indiana State Board of Education Members

FROM: Jeremy Eltz, Indiana Department of Education

DATE: 4/6/2016

SUBJECT: 2016 Science Standards Adoption

Esteemed members of the State Board of Education:

For your approval, the Indiana Department of Education has provided the newly revised 2016 Science Standards for the State of Indiana. The science standards revision process began well over a year ago and has concluded with the proposed final draft included in this package. The process used was modeled after the standards revision process implemented in 2014 for Mathematics and English Language Arts Standards. Additionally, the resources and supporting documentation for the science standards is similar to that of Math and ELA in order to remain consistent for Indiana's teachers. When Indiana adopted new science standards in 2010, we lead the country with the inclusion of Engineering and Technology Standards. Indiana will continue to lead and prepare students for the 21st century workforce by including Computer Science standards K-8.

The Indiana Department of Education formed committees of teachers and professors in April of 2015 to review the 2010 standards. Committees were composed of a wide demographic of experts and geographically represented the entire state. These committees met virtually providing comments and suggestions in spreadsheets. Suggestions and comments were reviewed by a leadership team composed of master teachers, education and content professors, and then were vetted against the most up to date research in science education, the *Framework for K12 Science Education*.

The standards have been reviewed through multiple statewide public comment periods. Comments from the public were again considered by the leadership team, vetted against research, and where needed, revisions were made. Most importantly, the public comments provided the Department guidance about resources and implementation. The Department intends to provide a variety of supports for classroom teachers to implement the 2016 standards, including regional professional development, resource guides, correlation documents, and collaborations with organizations to provide additional support, such as with IUPUI and Nextech for Computer Science professional development. Examples of resources have been provided for review. Upon adoption, IDOE specialists will continue resource development anticipating all resources to be prepared by mid-May.

Attached:
2016 Science Standards
Timeline
Reviewers and Demographics
Correlation Guide Example
Vertical Articulation
Webpage Example (Contains the Resource Guide)
Summer Professional Development

2016 Science Standards Review/Revision/Adoption Timeline

Objective	Details	Date of Completion
Review of current national standards.	Participate in national review of Next Generation Science Standards and form teacher committees - Indiana participated in 2 cycles of review in 2012	2012
	Review process other states use for science standards adoption and modification of the Next Generation Science Standards - Currently 14 states have adopted NGSS and several other states have used NGSS with modifications, including Massachusetts, Arkansas, North Carolina	Ongoing
	Perform a correlational analysis of Indiana's 2010 standards and the NGSS	Jan-15
Define Review Groups	Grade band groups: K-2, 3-5, 6-8, Life Science, Chemistry, Physics, Earth and Space, Environmental, Adv. Science, Process Standards	Jan-15
	Stakeholder Groups: Public and Private School Teachers, K-12 Administrators, Higher Education (Both Scientists and Teacher Educators), Business and Industry, Parent and Community	Jan-15
	Management Structure: Work groups, Steering Committee, Team Leaders, College and Career Ready Committee, Overall Project Coordinator	Jan-15
Set-up Online Review Platform	Create Learning Connection Community and post the documents for review	January and February 2015
	Develop webinar explaining the process and how to use the Learning Connection Groups	Feb-15
	Develop application process for individuals who want to participate	
State Board of Education	Present standards review process to the State Board for their approval and feedback. Provide continuous updates on the process throughout as needed or requested.	Feb-15
HASTI Presentation: Standards Review Kick-off	Provide Attendees with the correlation documents and solicit feedback	12-Feb-15
	Introduce the Standards Review Process and the groups needed	12-Feb-15
	Demonstrate the online groups	12-Feb-15
Applications	Review applications from participants and areas of expertise	Feb-15

For more information or questions, please contact:
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Develop Review Groups	Identify underrepresented areas (grade bands, content, areas of the state, stakeholder groups)	March 2015
	Webinar reviewing the process for each group and expected deliverables	March 2015
First round of revision	Expert groups will provide guidance on revisions, insertions, deletions. These groups will be guided by content and developmental experts with the latest research from the Framework for K12 Science Education, hold on-going webinars for each group to work through their revisions.	April-June 2015
Draft Development	Compile all reviewer feedback and drafts into one first round draft set of standards. Create site/survey for public comment.	July 2015
State Board of Education	Update on standards review process	August 5th
First round of public comment	Post standards to website for public comment	August 2015
	Compile usable comments and suggestions for each work group for next round of revision	August 2015
	Provide working groups with hard copies of public comment	August 2015
Second round of revision	Provide webinar explaining comments for revisions	September 2015
	Hold on-going webinars for each group to work through their revisions.	September 2015
	Continue work with content experts on revisions	September 2015
	Post standards to website for public comment	October 2015
Second round of public comment	Compile usable comments and suggestions for each work group for final revisions	October 2015
Final round of revision	Provide webinar explaining comments for revisions	November 2015
	Continue work with content experts on revisions	November 2015
Committee Leader Meeting and Review	Review the standards and public comment and determine revisions required	December 2015
Resource determination and collaboration	Teams will begin creation and identification of resources, collaboration with organizations to provide teacher support	January-May 2016
State Board of Education	Standards will be presented to the State Board of Education for approval	April 2016
IDOE-Summer and Fall PD	Specialists at the IDOE will provide professional development throughout the summer and fall in every region of the state	June – December 2016