

DRAFT – Science Curriculum K-4

Overview:

The science committee has been working on a draft of the science curriculum all year. Instead of trying to cover all the standards in the 2006 NH Science Framework, we looked at the “big ideas”. These big ideas are topics that should be covered during the year by grade level. They are not the **only** topics to be covered, but rather the common topics by grade level.

Science should not be approached as a collection of isolated abilities and bits of information, but as a rich fabric of mutually supported ideas and skills that must develop overtime. From primary school to high school what students learn should build on what they learned before, makes sense in terms of what else they are learning, and prepare them for what they will learn next. This framework looks at how kids perceive and interact with the world. One of the major changes from the earlier framework can be seen the structure of the new frameworks reflecting the developmental stages of children. The new Frameworks for Science Literacy includes Grade Span Expectations (GSEs) that break down the content into specific grade spans (K-2, 3-4, 5-6, 7-8, 9-12). Each span lists proficiencies which indicate what all students should know and be able to do by the end of that grade span. In the new edition, Science is divided into three content domains (Earth Space Science, Life Science, and Physical Science) and one Science Process Skills domain. Science Process Skills (SPS) is a new addition to the Frameworks. It reflects the need to make sure that in the early years students develop specific skill sets that will help them be successful infuture science experiences. The last section of the skills strand, SPS4, looks at goals for Information and Computer Technology standards in Science. This was included to help districts meet the needs of all students and to meet the new ICT requirements for K-8 and 9-12 digital portfolios.

<http://www.education.nh.gov/instruction/curriculum/science/documents/framework.pdf> *Philosophy of Frameworks, Department of Ed*

Feedback:

Is it too much? Is it attainable? Is it assessable?

We are aware that there are many changes to the current curriculum. We still need to look at science process skills across the grade levels. We welcome your feedback on these big ideas and look forward to working in grade level meetings to build consensus around the big ideas. If you would like to give the committee written feedback, please email or send to your grade level representative or Danielle Bolduc.

Timeline for the Science Committee:

The Common Core for science is not available and there is no definite timeline for completion. NECAP will be in place till 2014. To find out more about the common core, <http://www.corestandards.org/>

2011-2012 – Draft – work on science process skills(k-12), pulling resources together, and building lessons in grade level teams.

2012-2013 – implementation – try it out

2013-2014 –Finalize Final Draft

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Science Domain		K	1	2	3	4
Physical	PS 1		Composition and properties of matter (PS1)		Chemistry and Matter PS1	
	PS 2	Energy (PS2.3)	PS2.1			Energy, light, sound and Electricity (PS2)
	PS 3	Motion of an object (PS3)			Motion, Force and Magnetism PS3	
	PS 4			Design Technology and Simple machines PS4		Transportation and manufacturing in NH (PS4)
Earth	ESS 1		Earth Materials and Weather observations ESS1	ESS1.4	Water (water cycle) and Using tools to observe Weather ESS1.1 +1.7	Rocks, minerals, fossils ESS1.2 + .3 +.5 +.6 Volcanoes, earthquakes
	ESS 2	Earth, sun, moon and their relationship to the Seasons ESS2	Comparison of Earth, Sun and Moon ESS2	ESS2		
	ESS 3	Natural and man-made materials		Earth, sun, moon, stars ESS3,ESS3 in Grade 3 +4s sections		
	ESS 4	The 3Rs (reduce, recycle, reuse) ESS4	Natural and man-made environments (meadow vs. city) 3Rs-(reduce, reuse, recycle) ESS4			Local/Global Environmental Change Issues -recycling, how tech. has changed the environment, Pros and cons to using diff. types of energy (alt. forms vs. fossil fuels)

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Life	LS 1		Categorizing living/nonliving, Life cycle, Plant and animal survival(Monarchs, chicks and frogs) (LS1)	Examining the evolution, natural selection and extinction of organisms over time.	Animals LS 1	Plants LS1
	LS 2		Habitats-LS2		LS2	LS2
	LS 3			Looking at the behavior, appearance and habitats of plants and animals past and present. LS3	LS3	LS3
	LS 4	Senses and Human Identity LS4			LS4.1	LS4.1 Health? (nurse) Diet, exercise, puberty LS4.2 + .3
	LS 5	Tools and Tech. LS5	Tools and Tech. LS5	Tools and Tech. LS5	Tools and Tech LS5.1 +.2	Tools and Tech LS5.1 +.2 LS5.2.2 + LS5.3
Tools		Rulers, balances	Rulers, scales, balances, thermometers	Scales, balances, rulers, thermometers	Scales, balances, rulers, weather tools: thermometers, rain gauge, etc	Magnifiers, microscopes, rulers