D833 Science Framework Committee time allotment recommendations for K-12 core science curriculum

- Recommendation is based on the third draft revision of Minnesota State Standards in Science and represents the minimum time needed to meet standards.
- Per Minnesota state law, standards were fully implemented by the 2011-2012 school year.
- Implementation began with the 2009-2010 school year for our district.

	MDE Standards Requirements	D833 Suggested Framework				
Grade	Approximate # of benchmarks 2009 standards (draft)	Minutes per day	Minimum days per week	Full or partial year	To make note of…	
K	9	40 minutes	2 days	full year	Assumes a full day kindergarten program. Daily – monitor changes in weather/seasons.	During readers workshop, science articles/topics that align concurrently with standards being taught should be used; for example, big books and leveled readers.
1	12	40 minutes	3 days	full year	Use tools to make observations.	
2	14	40 minutes	3 days	full year	Observe/design/create a useful object.	
3	19	45 minutes	4 days	full year	Scientific method.	
4	20	45 minutes	5 days	full year	Technology/engineering pros & cons.	
5	22	45 minutes	5 days	full year	Investigation analysis. Minnesota ecosystems.	
6	25	45 minutes	5 days	full year	Physical science + Nature of Science and Engineering	
7	35	45 minutes	5 days	full year	Life science + Nature of Science and Engineering	
8	38	45 minutes	5 days	full year	Earth science + Nature of Science and Engineering	
9-12 Nature of Science & Engineering	30	To be taught concurrently with all content areas. Tested on MCA exam given at the end of Life Science course.				
9-12 Physical Science	21 (+30)	45 minutes	5 days	full year		
9-12 Life Science	32 (+30)	60 minutes	5 days	full year		
9-12 Chemistry	18 (+30)	60 minutes	5 days	full year	Benchmarks designed to be a continuation of physical science.	
9-12 Physics	25 (+30)	60 minutes	5 days	full year	Benchmarks designed to be a continuation of physical science.	
9-12 Earth & Space Science	19 (+30)	Currently no 9-12 courses are offered to address these benchmarks.				

Note that the revised standards have expanded to include technology and engineering. Content standards have been added for 9-12 chemistry and physics to correlate with 2015 graduation requirements. Content is expected to be spiraled grades K-5 with grades 6, 7, and 8 covering physical science, life science, and earth science respectively. History of science and engineering is evident at all grade levels.

Link to the Minnesota State Academic Standards in Science can be found below.

http://www.education.state.mn.us/MDE/EdExc/StanCurri/K-12AcademicStandards/Science/index.htm