

# Fordham Institute Gives NGSS a Mediocre “C” Grade

The Thomas B. Fordham Institute is well known for its periodic evaluations of state education standards. Fordham’s latest effort is its [Final Evaluation of the Next Generation Science Standards](#) (June 13, 2013). Overall it is clear that the authors have a poor impression of NGSS, giving it a mediocre grade of “C.” As one reads through the report and its many criticisms of NGSS, however, it seems clear that the grade could easily be a “D” (or even “F”).

The report starts out with the statement: “We know this Fordham report will be controversial.” The authors rate the science standards in thirteen states as “clearly superior” to NGSS, and standards in sixteen states as “clearly inferior.” The report states that Fordham has “long favored high-quality, multistate, even ‘national’ academic standards, so long as they originate with, and are voluntary for, states.” *However, this report does not advise states to adopt NGSS.* Instead, the report suggests that states borrow from the standards of certain states whose standards are highly rated by Fordham: “We encourage states that are dissatisfied with their present K-12 science standards to look to places like South Carolina and the District of Columbia, both of which are thorough as to content ... and serious as to rigor...”

Fordham’s main complaints with NGSS may be summarized as follows:

1. Scientific *practices* (skills, hands-on learning) overwhelm the scientific *content* (information, knowledge). You can’t practice science until you possess basic knowledge.
2. The *progression* of topics is flawed. Standards in the higher grades often assume students know content that was incomplete or omitted in earlier grades.
3. *Key terms* are not defined adequately. (COPE has noted this as a problem as well.)
4. Much *fundamental content* is missing. This is true in all subject areas, but it is especially glaring in high school physics and chemistry.
5. NGSS *assessment boundaries* have the effect of excluding difficult or advanced concepts from statewide testing. Since schools teach what is tested, this will have the effect of minimizing or omitting important content.
6. The standards are often poorly written, difficult to navigate, and unclear in their meaning. Performance expectations are often vague, inappropriate, and impractical.

7. The standards avoid mathematical relationships and problem-solving calculations. The absence of basic math gives a false picture of modern science.

COPE agrees with all of the above criticisms expressed by Fordham. Unfortunately, Fordham fails to address numerous key issues that COPE's reports on NGSS have emphasized:

1. Fordham does not address the fact that NGSS asks fundamental *religious questions* and only provides answers that are materialistic and functionally atheistic in nature.
2. Fordham does not mention the fact that NGSS employs *methodological naturalism* but does not disclose or explain its use.
3. Fordham does not discuss the fact that NGSS fails to make important distinctions between *experimental and historical sciences*.
4. Fordham does not consider NGSS' omission of evidence for *teleology/design/purpose* in nature.
5. *Biological evolution* is one of the few topics whose coverage is praised by Fordham. Of course NGSS treats the subject materialistically, with no mention of evidence that is in conflict with a materialistic view of the origin and development of life.
6. Fordham fails to mention the impropriety of indoctrinating impressionable young minds with a materialistic and functionally atheistic worldview. Scientific research shows that children typically form their worldviews by the age of 13.
7. Fordham fails to address the constitutionality of NGSS, which completely ignores the religious (atheistic) effect of the standards.
8. Fordham correctly states that the standard on *climate change* is "too much, too sudden, too complicated, and too advanced...." The obvious political bias in favor of manmade global warming is not noted by Fordham, however.

COPE commends the Fordham report for uncovering a number of flaws in the NGSS standards. The report gives the overall impression that only a few states (those with exceptionally weak science standards) could benefit from adoption of NGSS. Numerous states have science standards that are "clearly superior" to NGSS. State school boards and legislatures that read the Fordham and COPE reports should have serious reservations about adopting NGSS.