

STEM Education Highlights from the Administration's 2009 Budget Proposal

On Monday, February 4, 2008, President Bush submitted his budget request for fiscal year 2009 (FY09). The below summary is divided into overviews of the funding requested for the Department of Education, the National Science Foundation (NSF), and other agencies. Following the summary are charts that list the funding levels described below, as well as the funding levels for other programs not mentioned below. The charts also include comparisons to funding levels from previous years.

DEPARTMENT OF EDUCATION

The budget proposal includes \$59.2 billion in discretionary funding for the U.S. Department of Education, the same as FY08 discretionary funding for the Department. There are shifts in program funding in the Administration's proposal which would eliminate 47 programs totaling \$3.3 billion. Some funding details on specific programs within the Department are available below.

Math and Science Partnerships

Within the Administration's budget for the Department of Education, \$178.9 million is requested for Math and Science Partnerships (not to be confused with the program of the same name at NSF); this represents flat funding from the recent omnibus allocation for FY08, and a decrease of \$3.2 million from the Administration's budget request from last year at this time.

Math Now

Due to the America COMPETES Act, this year's Math Now program combines what were previously two separate programs: "Math Now for Elementary Students," and "Math Now for Middle School Students." COMPETES also created "Math Skills," a similar math assistance program targeted at secondary school students. The Administration has requested \$95 million for the combined Math Now program, but did not request any funding for Math Skills (each program was authorized at \$95 million in COMPETES). The previously separate Math Now programs were not funded in FY08, though the Administration requested \$125 million for each.

Advanced Placement (AP) and International Baccalaureate (IB) Programs

Under the Administration's budget request, the AP and IB programs would receive \$70 million, up \$26.5 million over the FY08 funding for what was previously known as simply "Advanced Placement" under NCLB. Under the America COMPETES Act, the title was changed to "Advanced Placement (AP) and International Baccalaureate (IB) Programs."

Other

Two other programs authorized by the America COMPETES Act last year were zeroed out in the Administration's request. One was intended to provide funding for master's degrees for STEM education teachers, and the second was to put in place programs in STEM fields and critical foreign

languages that lead to bachelors degrees with concurrent teacher certification. These were each funded at a meager \$983,000 in the FY08 budget.

The Adjunct Teacher Corps program would receive \$10 million to bring STEM professionals into the classroom to augment instruction in secondary schools, all of which would be new funding, as the program was not funded in FY08. The Academic Competitiveness and SMART Grants programs would receive \$960 million, an increase of \$565 million over FY08 funding.

NATIONAL SCIENCE FOUNDATION (NSF)

The National Science Foundation budget is up \$822 million, or 14 percent, over the current 2008 level. This includes an increase of \$64.8 million for the NSF Education and Human Resources (EHR) budget. Funding details on specific divisions within EHR are available below.

Research on Learning in Formal and Informal Settings (DRL)

The DRL budget request is for an increase of \$12.5 million over current FY08 funding. Of this increase, \$8.5 million will go towards Discovery Research K-12 (DR-K12). These funds will go towards a new EHR investment, “Teacher Education in STEM: Enriching Knowledge and Practice.”

Under Graduate Education (DUE)

DUE is targeted for an increase of \$8.78 million, or 4.2 percent. The NSF Math and Science Partnership (MSP) program, the Robert Noyce Scholarship program, and the STEM Talent Expansion Program (STEP), among others, are housed in the DUE office. Increases in this year’s budget request are included for the Noyce Scholarship program and MSP. The Noyce Scholarship funding would increase by \$800,000 over FY08 to \$11.6 million, and MSP would increase by \$2.5 million to \$51 million. Funding for STEP would remain flat at \$29.7 million.

Graduate Education (DGE)

The request for DGE is \$30.6 million over current funding, for a total of \$190.7 million. Two million of the increase would go towards Graduate Teaching Fellows in K-12 Education (GK-12), while \$28.6 million of the increase would go to Graduate Research Fellowships (GRF). Integrative Graduate Education and Research Traineeships (IGERT) would be level-funded.

OTHER

In addition to these key areas of STEM education funding, there are sources in other federal agencies, including undergraduate and graduate fellowships at the Department of Energy (DOE) and NASA. There are also programs to strengthen the core knowledge of teachers through internships and professional development programs at agencies like DOE, NASA, NOAA, and others. The Office of Science at DOE, which coordinates some of these programs, would see a \$644.5 million increase over FY08 funding, from \$4,055.5 billion to \$4,700 billion. The coordinating body for DOE education programs, the Office of Workforce Development for Teachers and Scientists (WDTS), would see a \$5.6 million increase over FY08 funding, from \$8 million to \$13.6 million. More details are available in the following charts.

STEM EDUCATION HIGHLIGHTS

FROM THE ADMINISTRATION'S BUDGET PROPOSAL FOR FY2009

Selections from the Administration's FY09 Budget Request for the Department of Education

Agency	Relevant programs	Funding in millions					
		FY2007 Funding	FY2008 Funding (<i>omnibus bill</i>)	FY2008 President's Request	FY2009 President's Request	Amount of Request Over/Under FY08 Request	Amount of Request Over/Under FY08 Funding
Dept. of Education	Academic Competitiveness and SMART Grants	850.0	395.0	920.0	960.0	40.0	565.0
	Advanced Placement	37.0	43.5	122.2	0 [1]	-122.2	-43.5
	Advanced Placement and International Baccalaureate Programs	0.0	0.0	0.0	70.0 [1]	70.0	70.0

[1] Represents shift of funds from the NCLB "Advanced Placement" program to the America COMPETES version that received \$70M in the President's request (\$26.5M over FY08 funding for the regular program); the AP and IB program is in Title VI, Part II of the America COMPETES Act.

Department of Education continued on next page...

Selections from the Administration's FY09 Budget Request for the Department of Education (*cont'd*)

Agency	Relevant programs	Funding in millions					
		FY2007 Funding	FY2008 Funding (<i>omnibus bill</i>)	FY2008 President's Request	FY2009 President's Request	Amount of Request Over/Under FY08 Request	Amount of Request Over/Under FY08 Funding
Dept. of Education	COMPETES programs "for master's degrees in STEM or critical foreign language education" [2]	0.0	0.983	0.0	0.0	0.0	-1.0
	COMPETES programs for STEM or "critical foreign language" bachelor's degrees w/concurrent teacher certification. [2]	0.0	0.983	0.0	0.0	0.0	-1.0
	Math and Science Partnerships	182.2	178.9	182.1	178.9	-3.2	0.0
	Math Now [3]	0.0	0.0	250.0	95.0	-155.0	95.0
	Minority Science and Engineering improvement	8.7	8.6	8.7	8.6	-0.1	0.0

[2] Part of "Teachers for a competitive tomorrow" program in America COMPETES, located in Sec. 6113 and 6114.

[3] Prior to the America COMPETES Act, passed in August 2007, Math Now was separated into elementary and middle school versions of the program. America COMPETES merged the two in Sec. 6201. Because of this, last year's FY 08 President's request was allocated separately for elementary and middle school, at \$125M for each (for the above total of \$250M).

Selections from the Administration's FY09 Budget
Request for NSF, NASA and NOAA

Agency	Relevant programs	Funding in millions					
		FY2007 Funding	FY2008 Funding (<i>omnibus bill</i>)	FY2008 President's Request	FY2009 President's Request	Amount of Request Over/Under FY08 Request	Amount of Request Over/Under FY08 Funding
National Science Foundation (NSF)	NSF OVERALL	5,917.2	6,032.0	6,429.0	6,854.0	425.0	822.0
	Education and Human Resources (EHR) Directorate [1]	796.7	725.6	750.6	790.4	39.8	64.8
	Advanced Technological Education	50.6	51.6	51.6	51.6	0.0	0.0
	GK-12 (Graduate teaching fellowships in K-12)	44.6	47.0	47.0	49.0	2.0	2.0
	Math and Science Partnership (MSP)	46.0	48.5	46.0	51.0	5.0	2.5

[1] All NSF programs listed are within EHR, except EPSCoR (in the next table), which is within the Office of Integrative Activities (OIA) at NSF.

NSF, NASA and NOAA continued on next page...

Selections from the Administration's FY09 Budget Request for NSF, NASA and NOAA *(cont'd)*

Agency	Relevant programs	Funding in millions					
		FY2007 Funding	FY2008 Funding (<i>omnibus bill</i>)	FY2008 President's Request	FY2009 President's Request	Amount of Request Over/Under FY08 Request	Amount of Request Over/Under FY08 Funding
National Science Foundation (NSF)	NSF Academies for Young Scientists [1]	6.9	15.0	0.0	0 [2]	0.0	-15.0
	Robert Noyce Scholarship Program	10.3	10.8	10.0	11.6	1.6	0.8
	STEM Talent Expansion Program (STEP)	28.9	29.7	29.7	29.7	0.0	0.0
	Experimental Program to Stimulate Competitive Research (EPSCoR)	102.1	111.1	107.5	113.5	6.0	2.4
NASA	Education Programs	115.9	146.8	153.7	115.6 [3]	-38.1	-31.2
NOAA	Education Programs	30.4	37.9	20.4	16.5	-3.9	-21.4

[1] All NSF programs listed are within EHR, except EPSCoR, which is within the Office of Integrative Activities (OIA) at NSF.

[2] The NSF budget request explains that the NSF Academies for Young Scientists was a demonstration project, and that no additional funds were not being requested; it also notes that sixteen projects were started in past years and are still underway.

[3] The NASA budget request explains what appears to be a lower number for this year's funding request, stating: "Due to the change from reporting full-cost to direct, NASA's program budgets will appear to have declined."

Selections from the Administration's FY09 Budget
Request for the Department of Energy (DOE)

Agency	Relevant programs	Funding in millions					
		FY2007 Funding	FY2008 Funding (omnibus bill)	FY2008 President's Request	FY2009 President's Request	Amount of Request Over/Under FY08 Request	Amount of Request Over/Under FY08 Funding
Dept. of Energy	Office of Science	3,796.4	4,055.5	4,397.9	4,700.0	302.1	644.5
	Office of Workforce Development for Teachers and Scientists (WDTS) [1]	8.0	8.0	11.0	13.6	2.6	5.6

[1] Within the Office of Science, WDTS is the coordinating body for DOE education programs.