

Foundations of Technology 2010-2011 End of Year Data Report

Report Date: **7/25/2011**
 School: ████████ High School
 Teacher: ████████
 State: **MD**
 School Pretest: **106**
 School Posttest: **188**

State Pretest: **11,787**
 State Posttest: **13,447**



All Pretest: **12,596**
 All Posttest: **14,293**

The demographic data presented on this page is based on student input provided on the pretest.

Gender						
Gender	Your Class		Your State		All Schools	
	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>
Female	58	54.7%	5753	48.8%	5897	46.8%
Male	47	44.3%	5970	50.6%	6630	52.6%
No Response	1	0.9%	64	0.5%	69	0.5%
Total	106	100.0%	11,787	100%	12,596	100.0%

Grade						
Grade	Your Class		Your State		All Schools	
	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>
9th Grade	33	31.1%	6656	56.5%	7282	57.8%
10th Grade	45	42.5%	3106	26.4%	3199	25.4%
11th Grade	17	16.0%	1367	11.6%	1409	11.2%
12th Grade	11	10.4%	650	5.5%	691	5.5%
No Response	0	0.0%	8	0.1%	15	0.1%
Total	106	100.0%	11,787	100%	12,596	100.0%

Number of technology classes taken in middle school?						
Classes	Your Class		Your State		All Schools	
	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>
1 course	84	79.2%	8261	70.1%	8658	68.7%
2 courses	0	0.0%	569	4.8%	682	5.4%
3 courses	0	0.0%	139	1.2%	205	1.6%
Not offered	20	18.9%	2730	23.2%	2946	23.4%
No Response	2	1.9%	88	0.7%	105	0.8%
Total	106	100.0%	11,787	100.0%	12,596	100.0%

Race/Ethnicity						
	Your Class		Your State		All Schools	
	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>	<i>Total</i>	<i>Percent</i>
African American	1	0.9%	3805	32.3%	3869	30.7%
Asian	3	2.8%	333	2.8%	391	3.1%
Caucasian/White	90	84.9%	5346	45.4%	5892	46.8%
Hispanic or Latino	3	2.8%	980	8.3%	1037	8.2%
Native American	1	0.9%	127	1.1%	138	1.1%
Two or more races	7	6.6%	1158	9.8%	1225	9.7%
No Response	1	0.9%	38	0.3%	44	0.3%
Total	106	100.0%	11,787	100.0%	12,596	100.0%

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How likely are you to pursue engineering as a career?						
	Your Class		Your State		All Schools	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Very Likely	7.5%	7.4%	7.6%	8.3%	8.1%	8.7%
Likely	4.7%	7.4%	15.0%	14.6%	15.8%	15.2%
Somewhat Likely	31.1%	23.4%	30.7%	29.9%	31.0%	30.3%
Not likely	55.7%	61.7%	45.7%	46.5%	44.2%	45.0%
No Response	0.9%	0.0%	1.0%	0.8%	1.0%	0.7%
Total	100%	100%	100.0%	100.0%	100.0%	100.0%

How relevant are mathematics concepts to this course?						
	Your Class		Your State		All Schools	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Very Important	15.1%	33.0%	31.0%	25.9%	31.7%	26.5%
Important	59.4%	41.5%	41.4%	36.8%	41.2%	36.8%
Somewhat Important	22.6%	22.3%	24.3%	29.9%	23.7%	29.4%
Not Important	1.9%	3.2%	2.8%	7.0%	2.8%	6.9%
No Response	0.9%	0.0%	0.6%	0.4%	0.6%	0.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

How relevant are science concepts to this course?						
	Your Class		Your State		All Schools	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Very Important	18.9%	13.8%	26.8%	21.6%	26.8%	21.7%
Important	51.9%	43.6%	43.9%	41.4%	43.8%	41.6%
Somewhat Important	25.5%	40.4%	24.7%	30.1%	24.8%	29.8%
Not Important	2.8%	2.1%	3.7%	6.4%	3.8%	6.5%
No Response	0.9%	0.0%	0.8%	0.5%	0.9%	0.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Data summary by unit of study									
	Your Class		Your State		All Schools		Percentage of Change		
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Your	State	All
Overall (55 questions)	51.3%	63.1%	38.9%	47.2%	38.9%	46.9%	23.0%	21.4%	20.8%
Unit 1 (7 questions)	57.5%	70.2%	41.1%	49.9%	41.0%	49.5%	22.0%	21.3%	20.5%
Unit 2 (6 questions)	41.2%	50.5%	32.6%	39.3%	32.6%	39.0%	22.7%	20.4%	19.7%
Unit 3 (7 questions)	51.8%	65.7%	45.8%	51.1%	45.7%	50.9%	26.9%	11.7%	11.3%
Unit 4 (7 questions)	52.4%	67.2%	40.2%	50.7%	40.1%	50.2%	28.1%	26.0%	25.3%
Unit 5 (9 questions)	44.7%	57.3%	32.9%	39.5%	33.0%	39.5%	28.4%	20.0%	19.5%
Unit 6 (6 questions)	61.6%	72.0%	44.9%	54.1%	44.9%	53.9%	16.8%	20.7%	19.9%
Unit 7 (6 questions)	52.0%	59.0%	38.9%	46.8%	39.0%	46.7%	13.4%	20.5%	19.8%
Unit 8 (7 questions)	51.3%	63.5%	36.2%	48.0%	36.1%	47.7%	23.7%	32.7%	32.0%

Overall data summary table						
	Your Class		Your State		All Schools	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Total Points: 55						
Mean Score	28.2	34.7	21.4	25.9	21.4	25.8
Percentage	51.3%	63.1%	38.9%	47.2%	38.9%	46.9%
St. Dev	8.52	7.17	8.02	9.25	8.01	9.26
KR21 Reliability	0.83	0.77	0.81	0.86	0.81	0.86
Ave. Time (minutes)	21.60	23.29	21.17	23.95	21.12	23.66

Note: No data is available to report when "#DIV/0!" appears.

Foundations of Technology 2010-2011 End of Year Data Report



School: [REDACTED]

Teacher: [REDACTED]

State: MD

Report Date: 7/25/2011

Standards for Technological Literacy Benchmarks		Number of Questions	Your Class		Your State		All Schools	
			Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
		55	51.3%	63.1%	38.9%	47.2%	38.9%	46.9%
1j	The nature and development of technological knowledge and processes are functions of the setting.	2	50.5%	51.6%	35.3%	41.6%	35.5%	41.8%
2x	Systems, which are the building blocks of technology, are embedded within larger technological, social, and environmental systems.	2	44.8%	60.1%	42.5%	48.9%	42.2%	48.1%
3j	Technological progress promotes the advancement of science and mathematics.	1	74.5%	70.2%	59.5%	66.3%	59.6%	66.0%
6j	A number of different factors, such as advertising, the strength of the economy, the goals of a company, and the latest fads contribute to shaping the design of and demand for various technologies.	3	42.8%	52.1%	36.4%	42.5%	36.3%	42.2%
7g	Most technological development has been evolutionary, the result of a series of refinements to a basic invention.	3	58.8%	72.0%	40.2%	50.6%	40.1%	50.3%
7j	Early in the history of technology, the development of many tools and machines was based not on scientific knowledge but on technological know-how.	2	47.2%	63.8%	38.5%	45.9%	38.4%	45.5%
7k	The Iron Age was defined by the use of iron and steel as the primary materials for tools.	1	48.1%	68.1%	38.4%	45.6%	38.1%	45.1%
7n	The Industrial Revolution saw the development of continuous manufacturing, sophisticated transportation and communication systems, advanced construction practices, and improved education and leisure time.	2	43.9%	48.9%	33.9%	38.5%	33.7%	38.1%
8g	Requirements for a design are made up of criteria and constraints.	1	50.0%	64.9%	37.6%	46.2%	37.9%	45.9%
8h	The design process includes defining a problem, brainstorming, researching and generating ideas, identifying criteria and specifying constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refining the design, creating or making it, and communicating processes and results.	2	45.8%	61.2%	32.8%	41.7%	32.7%	41.2%
9i	Established design principles are used to evaluate existing designs, to collect data, and to guide the design process.	2	40.6%	52.7%	16.6%	36.7%	16.7%	36.3%
10i	Research and development is a specific problem-solving approach that is used intensively in business and industry to prepare devices and systems for the marketplace.	2	58.5%	72.3%	42.0%	51.4%	41.9%	51.0%
11n	Identify criteria and constraints and determine how these will affect the design process.	1	71.7%	75.5%	50.4%	62.4%	50.3%	61.9%
11o	Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of the final product.	3	56.0%	74.8%	48.8%	55.1%	48.7%	54.9%
12j	Use computers and calculators in various applications.	1	67.0%	77.7%	49.9%	60.1%	49.9%	59.7%
12l	Document processes and procedures and communicate them to different audiences using appropriate oral and written techniques.	1	50.0%	48.9%	34.0%	41.3%	34.1%	41.2%
12m	Diagnose a system that is malfunctioning and use tools, materials, machines, and knowledge to repair it.	1	59.4%	73.4%	52.5%	60.3%	52.8%	60.0%
12n	Troubleshoot, analyze, and maintain systems to ensure safe and proper function and precision.	1	44.3%	53.2%	28.5%	36.7%	28.4%	36.2%

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		Number of Questions	Your Class		Your State		All Schools	
			Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Standards for Technological Literacy Benchmarks		55	51.3%	63.1%	38.9%	47.2%	38.9%	46.9%
12o	Operate systems so that they function in the way they were designed.	1	89.6%	93.6%	71.8%	78.7%	71.6%	78.1%
12p	Use computers and calculators to access, retrieve, organize, process, maintain, interpret, and evaluate data and information in order to communicate.	1	67.0%	81.9%	60.6%	72.9%	60.4%	72.5%
13j	Collect information and evaluate its quality.	1	59.4%	66.0%	38.9%	47.8%	38.8%	47.7%
14i	Telemedicine reflects the convergence of technological advances in a number of fields, including medicine, telecommunications, virtual presence, computer engineering, informatics, artificial intelligence, robotics, materials science, and perceptual psychology.	1	38.7%	42.6%	28.2%	36.6%	28.2%	36.6%
15k	Agriculture includes a combination of businesses that use a wide array of products and systems to produce, process, and distribute food, fiber, fuel, chemical, and other useful products.	2	61.8%	63.8%	41.4%	50.9%	41.4%	50.6%
16j	Energy cannot be created nor destroyed; however, it can be converted from one form to another.	2	43.4%	72.3%	27.9%	41.1%	28.3%	41.2%
16k	Energy can be grouped into major forms: thermal, radiant, electrical, mechanical, chemical, nuclear, and others.	1	56.6%	64.9%	41.2%	48.2%	41.3%	48.2%
17l	Information and communication technologies include the inputs, processes, and outputs associated with sending and receiving information.	2	39.2%	50.5%	37.3%	45.8%	37.1%	45.4%
17m	Information and communication systems allow information to be transferred from human to human, human to machine, machine to human, and machine to machine.	1	53.8%	77.7%	33.0%	47.8%	32.9%	47.4%
18j	Transportation plays a vital role in the operation of other technologies, such as manufacturing, construction, communication, health and safety, and agriculture.	2	35.4%	37.8%	29.7%	34.2%	29.8%	34.3%
19m	Materials have different qualities and may be classified as natural, synthetic, or mixed.	2	62.7%	67.6%	43.1%	53.4%	43.3%	53.2%
20j	Infrastructure is the underlying base or basic framework of a system.	1	29.2%	44.7%	28.1%	27.5%	28.3%	27.6%
20k	Structures are constructed using a variety of processes and procedures.	4	40.8%	64.1%	31.1%	38.0%	31.3%	38.0%
Graphing Algebra	Use mathematical models to represent and understand quantitative relationships	2	42.5%	56.4%	33.6%	38.5%	33.6%	38.4%
	Create and use representations to organize, record, and communicate mathematical ideas	1	95.3%	96.8%	74.4%	82.9%	74.4%	82.5%

Note: No data is available to report when "#DIV/0!" appears.