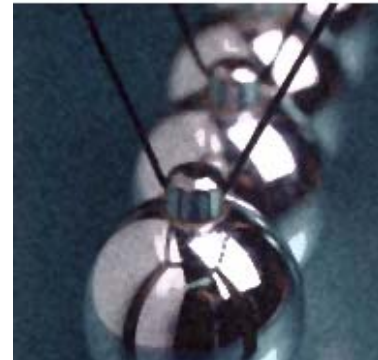


Science Curriculum

Ada Merritt K-8 Center

Academic Year 2008-2009



Miami-Dade County Public Schools Curriculum and Instruction (Science)

What is the Pacing Guide?

Document created by the Division of Science Education staff and classroom science teachers.

What is its Purpose?

To align the science curriculum within each school as well as within the district.

This document:

- addresses the science benchmarks
- utilized in conjunction with other district and state materials (e.g. Florida Sunshine State Standards (FSSS)).





Fifth Grade Science Pacing Guide for DCPS **2008-2009**

1st Nine weeks (August 20, 2008 to October 23, 2008)

Strand C - Force and Motion

Strand A - Matter

Strand B - Energy

2nd Nine weeks (October 27, 2008 to January 15, 2009)

Strand B - Energy

Strand D - Processes that Shape the Earth

Strand G - How Living Things Interact with Their Environment

3rd Nine weeks (January 20, 2009 to March 26, 2009)

Strand E - Earth and Space

Strand G - How Living Things Interact with Their Environment

Strand F - Processes of Life

FCAT TESTING

4th Nine weeks (March 30, 2009 to June 4, 2009)

Strand H – The Nature of Science (Science Fair Projects)

Strand A

Strand F

Strand G

Human Growth and Development



Ada Merritt K-8 Center

Inquiry Based Transdisciplinary Units



Who we are	Where we are in place and time	How we express ourselves	How the world works	How we organize ourselves	How we share our planet
------------	--------------------------------	--------------------------	---------------------	---------------------------	-------------------------

GRADES

K	GETTING TO KNOW YOU AUG 18 – SEPT 26 I	WHICH WAY DO WE GO? SEPT 29 – NOV 7 II	SHARING CULTURES NOV 10 – DEC 19 III	SUNSHINE, MOONLIGHT JAN 5 – FEB 13 IV	GIVE A HAND, LEND A HAND FEB 17 – APRIL 13 V	FROM START TO FINISH APRIL 13 – MAY 22 VI
1 ST	WE ALL BELONG! AUG 18 – SEPT 26 I	BLAST FROM THE PAST JAN 26 – MARCH 6 IV	TALKING DRUMS SEPT 29 – NOV 28 II	WEATHER MATTERS! DEC 1 – JAN 23 III	LET'S GET TO WORK APR 27 – MAY 29 VI	WHERE THE WILD THINGS LIVE MARCH 9 – APR 24 V
2 ND	UNITED WE STAND AUG 18 – OCT 3 I	FROM PLACE TO PLACE NOV 17 – JAN 9 III	IMAGINE THAT! JAN 2 – FEB 27 IV	LOST IN SPACE APRIL 29 – JUNE 4 VI	WHO IS IN CHARGE? OCT 6 – NOV 14 II	FOR THE LOVE OF THE EARTH MARCH 2 – APR 28 V
3 RD	GOOD FOR YOU! AUG 18 – SEPT 26 I	REFLECTIONS APR 20 – MAY 29 VI	WRITE ON NOV 17 – JAN 9 III	DOWN TO EARTH JAN 12 – FEB 20 IV	MAKING HISTORY SEPT 29 – NOV 14 II	HOME SWEET BIOMES FEB 23 – APR 17 V
4 TH	BECOMING US NOV 17 – JAN 9 III	ROOTS AUG 20 – OCT 3 I	NEWS FLASH! JAN 12 – FEB 20 IV	TO INFINITY AND BEYOND OCT 6 – NOV 14 II	DOLLARS AND SENSE FEB 23 – APR 13 V	WE'VE GOT THE POWER APRIL 13 – MAY 22 VI
5 TH	PYP EXHIBITION MAY 15 VI	IN SEARCH OF FREEDOM FEB 23 – MARCH 26 V	I THINK, THEREFORE I AM NOV 17 – JAN 16 III	ROLL WITH THE PUNCHES JAN 19 – FEB 20 IV	WE THE PEOPLE OCT 6 – NOV 14 II	THE FUTURE IS IN OUR HANDS AUG 18 – SEPT 26 I



Fifth Grade PYP Units

Theme	Sharing the Planet	How We Organize Ourselves	How We Express Ourselves	How the World Works	Where We Are in Place and Time	Who We Are
Unit Title	Our Future in Your Hands	We the People	I Think, Therefore I Am	Roll with the Punches	In Search of Freedom	Decisions, Decisions
Central Idea:	Our beliefs and the way we treat the Earth impact our future (natural resources and ecosystems)	The values and events that create a society shape its future (history and development of this country)	Throughout history human beings have pondered the meaning of life.	There are physical forces that determine how the world works	Throughout history people have struggled to end injustice and find freedom.	Global societies established human rights and responsibilities to meet our needs.
Proposed Duration:	August/September	October/November	November/January	January/February	February/March	March/May



How do we make sure the standards are covered?

- All the benchmarks have been correlated with the PYP units.





Fifth Grade Unit

- **Theme:** Sharing the Planet
- **Unit Title:** Our Future in Your Hands
- **Central Idea:** Our Beliefs and the way we treat the Earth impact our future (natural resources and ecosystems).
- **Proposed Duration:**
(August/September)





Topics: *Developing Alternative Energy Sources* (Science Pacing Guide p.8)
Effects of Changes in an Environment (Science Pacing Guide p.8)
Diagramming the Process of Photosynthesis (Science Pacing Guide p.9)
Decay and Decomposition in an Ecosystem (Science Pacing Guide p.9,10)
Fifth Grade



B.2.2.3 Knows that the limited supply of usable energy sources (e.g., fuels such as coal or oil) places great significance on the development of renewable energy sources. (Assessed as SC.G.2.2.1)

D.2.2.1 Knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life. CS

G.1.2.2 Knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment. **AA**

H.1.2.3, H.3.2.2

G.1.2.3 Knows that green plants use carbon dioxide, water, and sunlight energy to turn minerals and nutrients into food for growth, maintenance, and reproduction. **AA**

H.1.2.5

G.1.2.4 Knows that some organisms decompose dead plants and animals into simple minerals and nutrients for use by living things and thereby recycle matter. CS

G.1.2.6 Knows that organisms are growing, dying, and decaying and that new organisms are being produced from the materials of dead organisms. CS

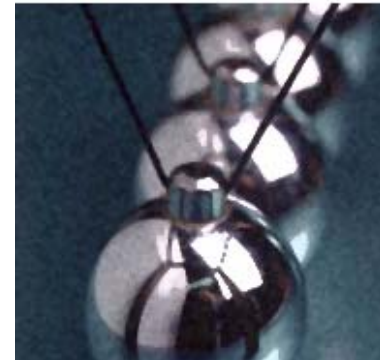
G.1.2.7 Knows that variations in light, water, temperature, and soil content are largely responsible for the existence of different kinds of organisms and population densities in an ecosystem. CS

H.1.2.1, H.1.2.2, H.1.2.3, H.1.2.4, H.2.2.1, H.3.2.2, H.3.2.4



Fifth Grade PYP Unit

- **Theme:** How We Organize Ourselves
- **Unit Title:** We the People
- **Central Idea:** The values and events that create a society shape its future (history and development of this country).
- **Proposed Duration:**
(October/November)





Unit Title: We the People

Fifth Grade



Strand D: Processes that Shape the Earth

Topic: *Changes in the Earth's Crust p.11-12* *Slow Changes vs. Rapid Changes*

D.1.2.4 Knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features. **AA**

D.1.2.1 The student knows that larger rocks can be broken down into smaller rocks, which in turn can be broken down to combine with organic material to form soil. **AA**

D.1.2.5 Knows that some changes in the Earth's surface are due to slow processes and some changes are due to rapid processes. (Assessed as SC.D.1.2.4)

H.1.2.1, H.1.2.2, H.1.2.3, H.1.2.4, H.1.2.5, H.2.2.1, H.3.2.2, H.3.2.4

Topic: *Factors that Effect the Water Cycle p.12-13*

D.1.2.3 Knows that the water cycle is influenced by temperature, pressure, and the topography of the land. **CS**

H.1.2.5

Unit Title: We the People
5th Grade

Strand E: Earth and Space

Topic: *Tilt of the Earth Affects Seasons and Climate p.14*

E.1.2.1 Knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available. **AA**

H.1.2.5

Topic: *Identify Phases p.14-15*

E.1.2.2 Knows that the combination of the Earth's movement and the Moon's own orbit around the Earth results in the appearance of cyclical phases of the Moon. **CS**

H.1.2.5

Topic: *Planetary Positions/ Galaxies p.15*

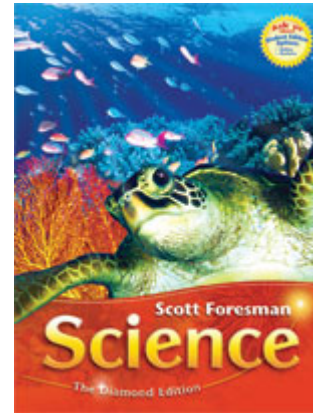
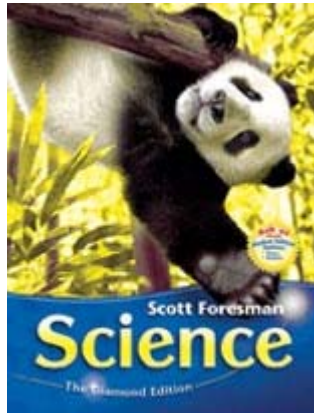
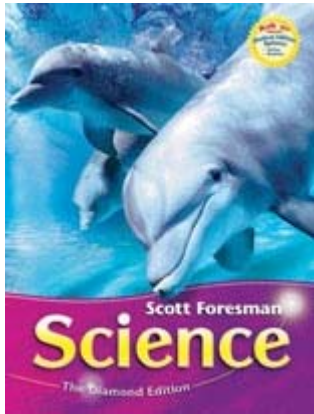
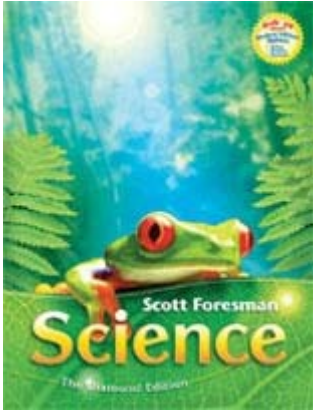
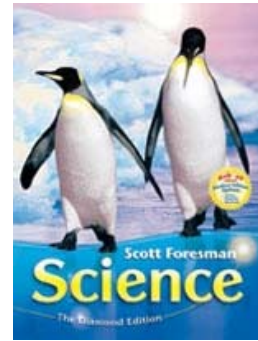
E.1.2.5 Understands the arrangement of planets in our Solar System. **CS**

E.2.2.1 Knows that, in addition to the Sun, there are many other stars that are far away. **CS**

H.1.2.5



Scott Foresman Science



Professional Development for Teachers

FOSS (Full Option Scope Science)

Representative. This program was developed at Lawrence Hall of Science, University of California at Berkeley

Science Scott Foresman Training offered by the District

Continuous planning throughout the whole year



Fieldtrips

Grade Level	Location of the field trip	School Year
Kindergarten	Space Place Planetarium at Booker T. Washington High School, Miami, FL (tentative)	2008- 2009
First	Parrot Jungle Metro Zoo	2007-2008 2008-2009
Second	Museum of Science	2007-2008
Third	Metro Zoo	2008-2009
Fourth	Museum of Science & Discovery in Ft. Lauderdale	2008-2009
Fifth	Museum of Science & Discovery in Ft. Lauderdale	2008-2009



Resources

- Science videos
- Science books
- Technology
 - BrainPop
 - FCAT Explorer



Elementary Science, Mathematics, Engineering, & Invention Fair Special Awards

School Year 2007-2008

NOAA Future Scientist Award

Jose Heijn Ada Merritt K-8 Center (3rd grader)

Marine Science Award

Robbyn Gimenez Ada Merritt K-8 Center

School Year 2006-2007

Overall First Place Trophy

Nicole Popkin



Science Scores Statewide Comparison from 2003 to 2008

Grade	Year	Number of Students	Average Mean Scale Score	Percent of Students by Achievement Level ²					Achievement Level Three and Above ²
				1	2	3	4	5	
5	2003	191,470	285	38	34	22	4	1	28
5	2004	195,700	286	37	34	24	4	1	29
5	2005	180,453	296	29	38	27	5	1	33
5	2006	195,877	299	29	36	27	6	2	35
5	2007	191,789	306	25	33	31	8	2	42
5	2008	194,991	310	23	33	32	9	3	43





Ada Merritt K-8 Center (Science Scores 2008)

Percentage of Students by Achievement Level

Year	Students Tested	Mean Scale Score	1	2	3	4	5	Levels 3 & above
2008	61	346	3	30	44	15	8	67

Questions & Discussion

