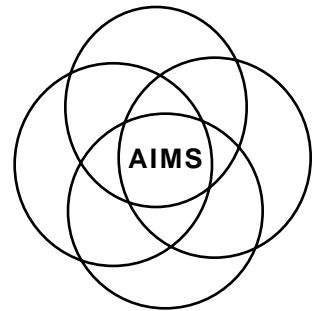


Michigan's
Science
Standards and Benchmarks
and
Suggested *AIMS* Activities



Grades 3-5



Compiled by
Michigan AIMS Facilitators

December 1998

For more information concerning this correlation contact:

The AIMS Education Foundation
888-733-2467
[http:// www.aimsedu.org](http://www.aimsedu.org)

or

Cherie Cornick
Wayne Co. Alliance for Mathematics & Science
26141 Schoolcraft
Redford, MI 48239
313-535-4000

Contributions to this correlation were made by the following
Michigan AIMS Trainers

Cherie Cornick
Monica Hartman
Pamela Jones
Patricia Luttmann
Syndee Malek
Shirley McGinnis
Thomas Noyes
Betty Parker
Pattee Rupert
Beverly Tillman

Michigan Science Content Standards and Working Draft Benchmarks and Correlated AIMS Activities

Key to abbreviations and typeface:

Italics indicate the source of the activity. 5.02 means volume 5, number 2 of the AIMS Magazine or Newsletter.

I. Construct New Scientific and Personal Knowledge - Elem 3-4

Content Standard 1:

All students will ask questions that help them learn about the world; design and conduct investigations using appropriate methodology and technology; learn from books and other sources of information; communicate their findings using appropriate technology and reconstruct previous learned knowledge.

How do scientists ask questions that help them learn about the world?

I.1.E.1

- C1 Generate reasonable questions about the world, based on observation.
- Warming up to Worms6.06
 - Path Finders*Electrical Connections*
 - Topping Off Mount Saint Helen8.08
 - High Flying Flags.....13.01
 - What's My Line.....10.05
 - Floor Samples.....*Field Detectives*

How do scientists figure out answers to their questions by investigating the world?

I.1.E.2

- C2 Develop solutions to unfamiliar problems through reasoning, observation, and/or experiment.
- Defying Gravity*Mostly Magnets*
 - Hands on the Giant6.07
 - Mealworms Under Glass.....*Magnificent Microworld Adventures*
 - Night Crawlers*Magnificent Microworld Adventures*
 - Jumping Jacks*Magnificent Microworld Adventures*
 - Sea Stars*Magnificent Microworld Adventures*
 - Focus on Scopes*Magnificent Microworld Adventures*
 - The Enormous E*Magnificent Microworld Adventures*
 - A World of Discovery (song).....9.10
 - Lenses & Lady Bugs.....9.08
 - Charting the Ocean Depths.....9.02
 - Great Cookie Mix Up.....13.01
 - All Wrapped Up.....11.07

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I.1.E.3

C3

Manipulate simple mechanical devices and explain how they work.

Make a Switch	<i>Electrical Connections</i>
Circuit Quiz Board	<i>Electrical Connections</i>
Hot Air Balloons	2.07
Magic String	10.06
Water Wheels	10.06
Magniviewer	9.10
Bridging the Gap.....	10.09
Push 'n Pull Puppets.....	<i>Under Construction</i>
Pull it Eggs.....	<i>Under Construction</i>
A First -Class Lever	<i>Popping with Power(1996)</i>

I.1.E.4

C4

Use simple measurement devices to make metric measurement.

Metric Scavenger Hunt	<i>Math + Science: A Solution</i>
Make your own Measuring Cup	<i>Water Precious Water</i>
All Bottled up	<i>Water Precious Water</i>
Oranges for the Most Part	9.10
By Golly, By Gum	5.10
By Golly, By Gum, By Time	5.10
Big Banana Peel	<i>Math+Science: a Solution</i>
Weight Watchers.....	<i>Math+Science: a Solution</i>
Are You a Square?	<i>Hardhatting in a Geo World</i>
Can You Believe It?	2.08
Volumes of Fun	<i>Hardhatting in a Geo World & 6.05</i>
Looking for a Liter	10.09
Tints and Temps.....	<i>Popping With Power(1996)</i>
Why Be a Hot Head.....	<i>Popping With Power(1996)</i>
Hot Stuff	<i>Math+Science: a Solution</i>
White Rain.....	<i>Our Wonderful World World</i>
How High? How Far?.....	13.02
Hot Pockets.....	13.02
All wrapped Up	11.07

How do scientists learn about the world from books and other sources of information?

I.1.E.5

C5

Develop strategies and skills for information gathering and problem solving.

Leaf Facts	<i>Primarily Plants</i>
Worm Fact Sheets.....	<i>Middle Series 2 Binder</i>
Static Electricity	<i>Electrical Connections</i>
History of a Tree	<i>Budding Botanist</i>
Tree Cookies	<i>Our Wonderful World</i>
Food Chain information page	<i>Critters</i>
Animal Antics	<i>Critters</i>
How High? How Far?.....	13.02
Collecting Data.....	12.09
Sweet Retreat.....	11.07

How do scientists communicate their findings to other scientists and the rest of society?

I.1.E.6

C6 Construct charts and graphs and prepare summaries of observations.

Most activities.....	All Books & Magazines
What's My Line	10.05
Water in Apples.....	4.01
CAT Scan	7.07
How High? How Far?.....	13.02
Hurricane!.....	13.02
All Wrapped Up.....	11.07

II. Reflect on the Nature, Adequacy and Connections Across Scientific Knowledge - Elem 3-4

Content Standard 1:

All students will analyze claims for their scientific merit and explain how scientists decide what constitutes scientific knowledge; how science is related to other ways of knowing; how science and technology affect our society; and how people of diverse cultures have contributed to and influenced developments in science.

How do scientists decided what to believe?

II.1.E.1

R1 Develop an awareness of the need for evidence in making decisions scientifically.

Mapping the Ocean Floor	<i>Down to Earth</i>
Super Sleuth	<i>Math+Science: a Solution</i>
How High? How Far?.....	13.02
Good Looking.....	<i>Field Detectives</i>
Telltale Clues.....	<i>Field Detectives</i>

How is science related to other ways of knowing?

II.1.E.2

R2 Describe the relationship of science to other forms of creative expression such as language arts and fine arts.

My Tree is a Friend.....	<i>Primarily Plants</i>
Leaf Printing	<i>Budding Botanist</i>
Paper a Pressing Issue	9.06
Singing Songs of Science	<i>Tape/CD</i>

How do science and technology affect our society?

II.1.E.3

R3 Describe ways in which technology is used in everyday life.

When I was Ten	<i>Electrical Connections</i>
A Little Cup Will Do It	<i>Water Precious Water</i>
Lighten Up	<i>Popping With Power</i>

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II.1.E.4

R4 Develop an awareness of the impact of human activity on the environment.

Help Save the Birds	<i>Water Precious Water</i>
Missing Moths	<i>Critters</i>
Teddy Bears Fight Pollution	<i>2.03</i>
What's in the Air	<i>Our Wonderful World</i>
Bitter Litter	<i>Overhead & Underfoot</i>
Compacted Playground.....	<i>Field Detectives</i>

How have people of diverse cultures contributed to and influenced developments in science?

II.1.E.5

R5 Develop an awareness of contributions made to science by people of diverse backgrounds.

Antony van Leewenhoek.....	<i>Magnificent Microworld Adventures</i>
Robert Hooke	<i>Magnificent Microworld Adventures</i>
Benjamin Banneker	<i>Historical Connections II</i>

III. Use Scientific Knowledge from the Life Sciences in Real - World Contexts - Elementary 3-4

CELLS

Content Standard 1:

All students will apply an understanding of cells to the functions of multicellular organisms; and explain how cells grow, develop and reproduce.

What are cells?

III.1.E.1

LC1 Describe cells as living systems.

Life in Glass Houses	9.10
Onion Rings.....	<i>Magnificent Microworld Adventures</i>
Model of a Cell	<i>Budding Botanist</i>
Cheek to Cheek.....	<i>Magnificent Microworld Adventures</i>
The Green Machine.....	<i>Magnificent Microworld Adventures</i>

ORGANIZATION OF LIVING THINGS

Content Standard 2:

All students will use classification systems to describe groups of living things; compare and contrast differences in the life cycles of living things; investigate and explain how living things obtain and use energy; and analyze how parts of living things are adapted to carry out specific functions.

How are groups of living things classified?

III.2.E.1

LO1 Compare and classify familiar organisms on the basis of observable physical characteristics.

Leaf Facts, Leaves	<i>Budding Botanist</i>
Animal Antics	<i>Critters</i>
Wings & Webs	<i>Critters</i>
Picturing a Dichotomy	9.08
Animals of a Sort	10.07
Back Talk	10.09
Beetle Mania.....	11.02

III.2.E.2

LO2 Describe vertebrates in terms of observable body parts and characteristics.

Microbat or Mega Bat?	<i>Bats Incredible</i>
Animal Antics	<i>Critters</i>
Unique U	<i>Math +Science: A Solution</i>
Picturing a Dichotomy	9.08
Fingerprinting	<i>Jawbreakers and Heart Thumpers</i>
Animals of a Sort	10.07
Back Talk	10.09

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How do life cycles of living things differ?

III.2.E.3

LO3 Describe life cycles of familiar organisms.

Warming up to Worms	6.06
My Mealworm	<i>Critters</i>
Mealworms on stage	<i>Critters</i>
A Time of Their Own	9.03
Butterfly Cycle (Song)	9.03
Flip Book of Life Cycle	
Dirt Dwellers	10.09
Meal Worms Under Glass	<i>Magnificent Microworld Adventures</i>
Its in the Bag.....	<i>Primarily Plants</i>
Just a Little Sprout.....	6.08

How do living things obtain and use energy?

III.2.E.4

LO4 Compare and contrast food, energy, and environmental needs of similar organisms.

Which Soil Works Best?	<i>Primarily Plants</i>
Plants and Water	<i>Primarily Plants</i>
What Do Plants Need to Grow?	<i>Primarily Plants</i>
What Temperature is Best?	<i>Primarily Plants</i>
Plants and Sunlight	<i>Primarily Plants</i>
The Pickle Jar Aquarium.....	<i>Magnificent Microworld Adventures</i>
Fishing for Clues.....	<i>Field Detectives</i>
Pyramid Pile Up.....	<i>Field Detectives</i>
Running on Empty.....	<i>Field Detectives</i>
Compacted Playground.....	<i>Field Detectives</i>
It's Bean a Great Place to Live.....	<i>Field Detectives</i>

How are the parts of living things adapted to carry out specific functions?

III.2.E.5

LO5 Describe functions of selected seed plant parts.

Tree Cookies	<i>Our Wonderful World</i>
Stem study	<i>Primarily Plants</i>
Root study	<i>Primarily Plants</i>
Twig Story	<i>Budding Botanist</i>
Seed Within	<i>Primarily Plants</i>
Down Under	<i>Budding Botanist</i>
Observing Bulbs	<i>Primarily Plants</i>
Herb & Woody	<i>Budding Botanist</i>
Plant Food	10.07
Plant Parts Food Rap	10.07

HEREDITY

Content Standard 3:

All students will investigate and explain how characteristics of living things are passed on through generations; explain why organisms within a species are different from one another; and explain how new traits can be established by changing or manipulating genes.

How are characteristics of living things passed on through generations?

III.3.E.1

LH1

Give evidence that characteristics are passed from parents to young.

Extension of *Traits Combo*6.10

Identify personal traits, check for same traits in parents & grandparents.

Picturing a Dichotomy9.08

Leaves. *Budding Botanist*

EVOLUTION

Content Standard 4:

All students will explain how scientists construct and scientifically test theories concerning the origin of life and evolution of species; compare ways that living organisms are adapted (suited) to survive and reproduce in their environments; and analyze how species change through time.

How do scientists trace the origin and development of species?

III.4.E.1

LE1

Explain how fossils provide evidence about the nature of ancient life.

In what ways are living things adapted (suited) to survive in their environments?

III.4.E.2

LE2

Explain how physical and/or behavioral characteristics of organisms help them to survive in their environments.

Hide and Seek *Critters*

Missing Moths *Critters*

Cactus *Budding Botanist*

A New Plant Discovery *Budding Botanist*

Table Manners *Critters*

Bear Feet 11.05

Calico Fields 12.01

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ECOSYSTEMS

Content Standard 5:

All students will explain how parts of an ecosystem are related and how they interact; explain how energy is distributed to living things in an ecosystem; investigate and explain how communities of living things change over a period of time; describe how materials cycle through an ecosystem and get reused in the environment and analyze how humans and the environment interact.

How are parts of an ecosystem related and how do they interact?

III.5.E.1

LEC1 Identify familiar organisms as part of a food chain or food web & describe their feeding relationships within.

Predator & Prey	<i>Our Wonderful World</i>
Food Chain of the Pond (song).....	8.05
Food Chains & Webs	9.09
Catch Me If You Can	<i>Critters</i>
What's the Net Worth?	10.03
Nocturnal Hunter	4.05
Pizza Parts and Web Wheels	<i>Field Detectives</i>
Producing a Producer	<i>Field Detectives</i>
Pyramid Pile Up	<i>Field Detectives</i>
Life in the Food Chain	<i>Field Detectives</i>

III.5.E.2

LEC2 Explain common patterns of interdependence and interrelationships of living things.

Noses for Nectar	<i>Bats Incredible</i>
Life in the Food Chain.....	<i>Field Detectives</i>
Buffet Lunch	<i>Field Detectives</i>
From Leaf to Soil	<i>Field Detectives</i>
Tree House	<i>Field Detectives</i>
Fallen Leaf.....	11.03

How is energy distributed to living things in an ecosystem?

III.5.E.3

LEC3 Describe the basic requirements for all living things to maintain their existence.

Help Save the Birds	<i>Water Precious Water</i>
A Special Plot	10.01
Homing in on Habitats (song).....	10.01
Dirt Dwellers	<i>Field Detectives</i>

How do communities of living things change over time?

III.5.E.4

- LEC4 Design systems that encourage growing of particular plants or animals.
- The Earthworm *Critters*
 - Make a Terrarium2.08
 - Two Liter Aquarium..... *Primary Series 2 Binder*
 - Home Away From Home *Field Detectives*
 - Design Your Own Shelter..... *Field Detectives*

How do humans and the environment interact?

III.5.E.5

- LEC5 Describe positive and negative effects of humans on the environment.
- Help Save the Birds *Water Precious Water*
 - Paper - A Pressing Issue9.06
 - Little Sprouts *Water Precious Water*
 - Cape of Good Hope9.07
 - What's the Net Worth?10.03
 - Mini Water Treatment Simulation..... *Water Precious Water*

IV. Use Scientific Knowledge From the Physical Sciences in Real-World Contexts - Elem 3-4

MATTER AND ENERGY

Content Standard 1:

All students will measure and describe the things around us; explain what the world around us is made of ; identify and describe forms of energy; and explain how electricity and magnetism interact with matter.

How do we describe the things around us?

IV.1.E.1

- PME1 Classify common objects and substances according to observable attributes: color, size, shape, smell, hardness, texture, flexibility, length, weight, buoyancy, states of matter, magnetic properties.
- Sea-Shells are Special5.08
 - Button Button*Pieces and Patterns*
 - Are you a Square? *Hardhatting in a Geo World*
 - Picturing a Dichotomy9.08
 - Jelly Bellys*Pieces and Patterns*
 - Sherlock Combs the Yard*Overhead & Underfoot*
 - M & M Math*Primarily Bears*
 - (M & M) What's in the Bag?*Math+Science: A Solution*
 - It Floats, It Sinks *Floater & Sinkers*
 - Stick To It.....*Mostly Magnets*
 - Pet Rock.....*Overhead and Underfoot*

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How do we describe the things around us?

IV.1.E.2

PME2 Measure weight, dimensions, and temperature of appropriate objects and materials.

Metric Scavenger Hunt.....	<i>Math+Science: A Solution</i>
Now That's Using Your Head	2.03
By Golly, By Gum	5.10
By Golly, By Gum, By Time	5.10
What Temperature is Best?	<i>Primarily Plants</i>
Heat and Color	<i>Primarily Physics</i>
Big Banana Peel.....	<i>Math+Science: A Solution</i>
Weight Watchers	<i>Math+Science: A Solution</i>
Are you a Square?	<i>Hardhatting in a Geo World</i>
Can You Believe It?	2.08
Volumes of Fun	<i>Hardhatting in a Geo World & 6.05</i>
Massing Around with Bats	10.03
How High? How Far?.....	13.02
All Wrapped Up.....	11.07

What is the world around us made of?

IV.1.E.3

PME3 Identify properties of materials which make them useful.

What will a Magnet Attract?	<i>Mostly Magnets</i>
Conductor or Insulator?	<i>Electrical Connections</i>
Sorting Challenge	<i>Mostly Magnets</i>
Water Activities	<i>Pieces and Patterns</i>
Why Be a Hot Head.....	<i>Popping With Power(1996)</i>
All wrapped Up	11.07

What is energy?

IV.1.E.4

PME4 Identify forms of energy associated with common phenomena.

What is Energy?	<i>Primarily Physics</i>
You Are My Sunshine	<i>Spring into Math & Science</i>
All Wrapped Up.....	11.07

How do electricity and magnetism interact with matter?

IV.1.E.5

PME5 Describe the interaction of magnetic materials with other magnetic materials and non-magnetic materials.

What will a Magnet Attract?	<i>Mostly Magnets</i>
Fish & Clips	<i>Mostly Magnets</i>
Holding Power	<i>Mostly Magnets</i>
Defying Gravity	<i>Mostly Magnets</i>
Magnetic Tug of War	<i>Mostly Magnets</i>
Make a Compass.....	<i>Mostly Magnets</i>
Come About.....	11.04

IV.1.E.6

PME6 Describe the interaction of charged materials with other charged or uncharged materials.

Static Electricity	<i>Electrical Connections</i>
Static Strokes	<i>Electrical Connections</i>
Different Strokes	<i>Electrical Connections</i>
Circuit Quiz Boards.....	<i>Electrical Connections</i>
All Charged Up.....	12.02

IV.1.E.7

PME7 Describe possible electrical hazards to be avoided at home and at school.
Balance Your Charges.....6.03

CHANGES IN MATTER

Content Standard 2:

All students will investigate, describe and analyze ways in which matter changes; describe how living things and human technology change matter and transform energy; explain how visible changes in matter are related to atoms and molecules; and how changes in matter are related to changes in energy.

How does matter change?

IV.2.E.1

PCM1 Describe common physical changes in matter (size, shape, melting, freezing, dissolving) and the heat energy that accompanies some changes.

Crazy Colloid	6.01
Let's make Ice Cream	6.06
Melt a Cube, Keep a Cube	<i>Primarily Physics</i>
Snow Job	10.04
What Makes Rain?	<i>Primarily Earth</i>
A Disappearing Act	<i>Primarily Earth</i>
Water to Ice to Water	<i>Primarily Earth</i>
Don't Flip Your Lid.....	13.01
Icy Conditions	12.08
Archimedes	5.09
Frosty Forms.....	12.06

IV.2.E.2

PCM2 Prepare mixtures and separate them into their component parts.

Sandy Magnet.....	Off the Wall Science
Help Save the Birds	Water Precious Water
That Sorted Soil	6.10
Soil Samplers	6.09
Money Laundering.....	12.09
Flipping Over Ice Cream.....	12.09
Messing With Mixtures.....	12.07
Change Matters.....	11.08

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How do living things (and human technology) change matter and transform energy?

IV.2.E.3

PCM3 Construct simple objects that fulfill a technological purpose.

Defying Gravity	<i>Electrical Connections</i>
Make a Switch.....	<i>Electrical Connections</i>
Circuit Quiz Board	<i>Electrical Connections</i>
Make a Flashlight	<i>Off the Wall Science</i>
Butter & Margarine Candles.....	<i>Off the Wall Science</i>
Why Wheels	13.02
Catapults.....	11.09

MOTIONS OF OBJECTS

Content Standard 3:

All students will describe how things around us move and explain why things move as they do; demonstrate and explain how we control the motions of objects; and relate motion to energy and energy conversions.

How do things move around us?

IV.3.E.1

PMO1 Describe or compare motions of common objects in terms of speed and direction.

Wind Rollers	<i>Popping with Power</i>
Be a Rotor Promotor	<i>The Sky's the Limit</i>
Unbelievable Flying Objects	<i>The Sky's the Limit</i>
It's the Last Straw	<i>The Sky's the Limit</i>
Hot Air Balloons	2.07
Rally Around the Room	<i>Pieces & Patterns</i>
Science on the Slide	10.03
Sizing Up Sails	10.03
Inclined to Work	12.09
Time Trials	11.02

Why do things move as they do?

IV.3.E.2

PMO2 Describe that forces (pushes or pulls) are needed to speed up, slow down, stop, or change the direction of a moving object.

Wing on a String.....	<i>The Sky's the Limit</i>
One Straw Kite	3.08
Sledding Through the Air	2.08
Rally Round the Room	<i>Pieces & Patterns</i>
Puff Mobiles	<i>Popping with Power</i>
Hungry Hounds	<i>Mostly Magnets</i>
Science on the Slide	10.03

Working Out the Wiggles	10.04
Slip, Sliding Away.....	13.03
Blow Up.....	13.01
Why Wheels.....	13.02
Whack the Stack.....	11.07
Tug Teams	11.07
Pushes and Pulls.....	11.07
The Beat of the Drum	11.04

How can we control the motions of objects?

IV.3.E.3

PMO3 Use simple machines to make work easier.

One Good Turn Deserves Another	<i>Machine Shop</i>
Gearing Up Gears	<i>Machine Shop</i>
Winding Wheels	8.06
All's Well that Works Well	9.08
Sizing Up Sails	10.03
Water Wheels	10.06
A First Class Job	10.08
Why Wheels.....	13.02
Inclined to Work.....	12.08
Give Me a Lift.....	12.04

WAVES AND VIBRATIONS

How can we describe sound?

Content Standard 4:

All students will describe sounds and sound waves; explain shadows, colors, and other light phenomena; measure and describe vibrations and waves; and explain how waves and vibrations transfer energy.

IV.3.E.1

PWV1 Describe sounds in terms of their properties (pitch, loudness).

Sound Energy	<i>Primarily Physics</i>
Sound is Vibration	<i>Primarily Physics</i>
Voice Box	<i>Primarily Physics</i>
The Sounds of Music	<i>Primarily Physics</i>
How to Construct Musical Instruments.....	<i>Primarily Physics</i>

IV.3.E.2

PWV2 Explain how sounds are made.

Sound Energy	<i>Primarily Physics</i>
Sound is Vibration	<i>Primarily Physics</i>
Slinky Sound	<i>Primarily Physics</i>
Sounding off like a Lion.....	<i>Primarily Physics</i>
The Beat of the Drum.....	11.04

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How can we describe light?

IV.3.E.3

PWV3 Describe light from a light source in terms of its properties.

Light Sources	<i>Primarily Physics</i>
Just Passing Through	<i>Primarily Physics</i>
Mirrors Reflect	<i>Primarily Physics</i>
Prism Power	<i>Primarily Physics</i>
Light Energy	<i>Primarily Physics</i>
Slides of Refraction.....	13.03

IV.3.E.5

PWV5 Explain how shadows are made.

Just Passing Through	<i>Primarily Physics</i>
Me & My shadow	<i>Pieces and Patterns</i>
Sizing Up Shadows	<i>Through the Eyes of Explorers</i>
Smart Shadows	<i>Historical Connections</i>
Sun Made Shadows	5.07
Sunny Side Up	<i>Overhead and Underfoot</i>

V. Use Scientific Knowledge from the Earth and Space Sciences in Real World Contexts - Elementary 3-4

GEOSPHERE

Content Strand 1:

All students will describe the earth's surface; describe and explain how the earth's features change over time; and analyze effects of technology on the earth's surface and resources.

What is the earth's surface like?

V.1.E.1

EG1 Describe major features of the earth's surface.

Surf and Sand	<i>Finding Your Bearings</i>
The Earth's Features	<i>Primarily Earth</i>

V.1.E.2

EG2 Recognize and describe different types of earth materials.

What makes soil	<i>Overhead & Underfoot</i>
Soil Samplers	6.09
That Sorted Soil	6.10
Rock and Rule	<i>Overhead & Underfoot</i>
Rock Groups	9.07 and <i>Primarily Earth</i>
Rocks and More Rocks	<i>Primarily Earth</i>
Soil Study	<i>Primarily Earth</i>

Sandpile	<i>Primarily Earth</i>
Layers of the Earth.....	13.01
Solidifying Sand	13.04
Sand Scan.....	12.05
A Warrant for Water	<i>Field Detectives</i>

How do the earth's features change over time?

V.1.E.3

EG3	Explain how rocks and fossils are used to understand the history of the earth.
	Peanut Butter and Jelly Geology
	5.04

V.1.E.4

EG4	Describe natural changes in the earth's surface.
	Rain Away-Don't Rain Away
	<i>Water Precious Water</i>
	Trickle Down Theory
	9.03
	Sand Dunes and Snow Drifts
	9.05
	Erosion Song
	9.05
	Agent Erosion
	10.03
	Rock Groups
	<i>Primarily Earth</i>
	Rocks and More Rocks
	<i>Primarily Earth</i>
	Soil Study
	<i>Primarily Earth</i>
	Sandpile
	<i>Primarily Earth</i>

What effect has technology had on the earth's surface and resources?

V.1.E.5

EG5	Describe uses of materials taken from the earth.
	The Earth Has What We Need!
	<i>Primarily Earth</i>
	We Use Rocks and Minerals
	<i>Primarily Earth</i>

V.1.E.6

EG6	Demonstrate means to recycle manufactured materials and a disposition toward recycling.
	Let's Recycle
	5.02
	Recycling Song
	7.07
	We Use Rocks and Minerals
	<i>Primarily Earth</i>

HYDROSPHERE

Content Standard 2:

All students will demonstrate where water is found on earth; describe the characteristics of water and how water moves; analyze the interaction of human activities with the hydrosphere.

Where is water found on the earth and what are its characteristics?

V.2.E.1

EH1 Describe how water exists on earth in three states.

Were You Aware?	<i>Water, Precious Water</i>
Mini Water Cycle	<i>Water, Precious Water</i>
Surf and Sand Count	<i>Finding your Bearings</i>
Water in Apples	<i>Jaw Breakers & Heart Thumpers</i>
Where is Water?	<i>Primarily Earth</i>
Layers of Our Atmosphere.....	<i>12.09</i>

How does water move?

V.2.E.2

EH2 Trace the path that rain water follows after it falls.

Moving Water	<i>Water, Precious Water</i>
Moving Raindrops	<i>Water, Precious Water</i>
Moving Molecules	<i>Water, Precious Water</i>
Dry Idea.....	<i>Middle Series 2 Binder</i>
Puddle Pushers	<i>9.06</i>
Water Cycle Song.....	<i>9.07</i>
What Makes Rain?	<i>Primarily Earth</i>
A Disappearing Act	<i>Primarily Earth</i>
Water to Ice to Water	<i>Primarily Earth</i>

How do human activities interact with the hydrosphere?

V.2.E.3

EH3 Identify sources of drinking water.

Taste Testers	<i>Water Precious Water</i>
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V.2.E.4

EH4 Describe uses of water.

Help Save the Birds.....	<i>Water Precious Water</i>
A Little Cup Will Do It	<i>Water Precious Water</i>

ATMOSPHERE AND WEATHER

Content Standard 3:

All students will investigate and describe what makes up weather and how it changes from day to day, from season to season and over long periods of time; explain what causes different kinds of weather; and analyze the relationships between human activities and the atmosphere.

What makes up weather and how does it change from day to day, from season to season and over long periods of time?

V.3.E.1

EAW1 Describe the atmosphere.

Inverted Tumbler in an Aquarium	<i>Off the wall Science</i>
A Close Look at Air	<i>Primarily Earth</i>
Air is There	<i>Primarily Earth</i>
The Wind Blows	<i>10.08 and Primarily Earth</i>
Space for a Balloon.....	<i>13.02</i>
Tub Temps.....	<i>12.09</i>
Layers of Our Atmosphere.....	<i>12.08</i>

V.3.E.2

EAW2 Describe weather conditions and climates.

In a Fog	<i>8.06</i>
Nature's Sound & Light Show.....	<i>Electrical Connections</i>
April Showers Bring May Flowers	<i>3.10</i>
The Wind Blows	<i>10.08 and Primarily Earth</i>
Which Way?	<i>Primarily Earth</i>
Cloudy Weather	<i>Primarily Earth</i>
Watching the Weather	<i>Primarily Earth</i>
Air Temperature	<i>Primarily Earth</i>
Hurricane!.....	<i>13.02</i>
Worldwide Highs.....	<i>11.05</i>

V.3.E.3

EAW3 Describe seasonal changes in weather.

Pasta Parallels	<i>9.06</i>
Lots of Temperature Plots	<i>13.04</i>

What are the relationships between human activity and the atmosphere?

V.3.E.4

EAW4 Explain appropriate safety precautions during severe weather.

Hurricane.....	<i>13.02</i>
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SOLAR SYSTEM, GALAXY AND UNIVERSE

Content Standard 4:

All students will compare and contrast our planet and sun to other planets and star systems; describe and explain how objects in the solar system move; explain scientific theories as to the origin of the solar system; and explain how we learn about the universe.

How does our planet and sun compare to other planets and star systems?

V.4.E.1

ES1 Describe the sun, moon, and earth.

Can you Planet?	<i>Out of This World</i>
Planetary Facts	<i>Out of This World</i>
Size it up	<i>Out of This World</i>
<i>Apparent Sizes</i>	11.04

How do objects in the solar system move?

V.4.E.2

ES2 Describe the motions of the earth and moon around the sun.

Sun Watchers	<i>Pieces and Patterns</i>
A Handy Time Piece	9.04
Wrap Around the Clock	8.03
Me and My Shadow	<i>Pieces and Patterns</i>
Pasta Parallels	9.06
The Moon Shines Bright.....	<i>Out of This World</i>