

FLOYD COUNTY SCHOOLS' CURRICULUM RESOURCES

"Building a Better Future for Every Child - Every Day!"

Summer 2012

Subject Content: SCIENCE	Grade <u>2nd</u>
Indicates the Cur	riculum Map
Weeks 1 – 3	Weeks 4 – 6
Unit/Topic BIOLOGICAL SCIENCE Basic Needs of Organisms Living, Nonliving, and Once Living	Unit/Topic BIOLOGICAL SCIENCE Basic Structures and Related Functions of plants and animals Plant and Animal Life Cycles
CORE CONTENT 4.1	CORE CONTENT 4.1
SC-EP-3.4.1 Students will explain the basic needs of organisms. Organisms have basic needs. For example, animals need air, water and food; plants need air, water, nutrients and light. Organisms can survive only in environments in which their needs can be met. DOK 2 SC-EP-3.4.2 Students will understand that things in the environment are classified as living, nonliving, and once living. Living things differ from nonliving things. Organisms are classified into	SC-EP-3.4.3 Students will describe the basic structures and related functions of plant and animals that contribute to growth, reproduction, and survival. Each plant or animal has observable structures that serve different functions in growth, survival, and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. These observable structures should be explored to sort, classify, compare, and describe organisms. DOK 2
groups by using various characteristics (e.g., body coverings, body structures).	SC-EP-3.4.4 Students will describe a variety of plant and animal life cycles to understand patterns of the growth, development, reproduction and death of an organism. Plants and animals have life cycles that include the beginning of life, growth and development, reproduction and death. The details of a life cycle are different for different organisms. Observations of different life cycles should be made in order to identify patterns and recognize similarities and differences.

	CURRICULUM				
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Identify	Identify	Identify	Identify	Identify	Identify
Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics
Living Things have needs and change as they grow. • Identify living and nonliving things.	Identify and Describe the Basic Needs of Animals Animals' needs depend on their size and type. Observe the needs of animals.	*Continuation of Week 2 as needed Identify and Describe Plant Needs • Plant needs depend on their size and type. • There are factors that influence the growth of living things.	Basics Structures and Functions of Plants and Animals	Describe a variety of Plant and Animal Life Cycles (Growth, Development, Reproduction, & Death of an Organism)	Describe a variety of Plant and Animal Life Cycles (Growth, Development, Reproduction, & Death of an Organism) Observe Various Life Cycles to Identify Patterns and Recognize Similarities & Differences
I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:
I can explain the basic needs of organisms.	I can explain the basic needs of organisms.	I can explain the basic needs of organisms.	I can name and describe different types of animals.	\rightarrow	\rightarrow
I can describe how organisms can survive in environments in which their needs can be met. I can classify how things in the environment can be living, nonliving, and once living.	I can describe how organisms can survive in environments in which their needs can be met. I can classify how things in the environment can be living, nonliving, and once living. I can characterize organisms into groups (e.g., body coverings, body structures).	I can describe how organisms can survive in environments in which their needs can be met. I can classify how things in the environment can be living, nonliving, and once living. I can characterize organisms into groups (e.g., body coverings, body structures).	I can investigate adaptations that enable animals to grow, reproduce, and survive. I can investigate adaptations that enable plants to grow, reproduce, and survive. I can explain the parts of a flower.		

Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	I can identify different parts of an animal that help it adapt to its environment. I can compare a variety of plant and animal life cycles. Critical Vocabulary	Critical Vocabulary	Critical Vocabulary
Living Nonliving Once living Environment Basic Needs Organisms Survival Describe Classify	Living Nonliving Once Living Environment Basic Needs Organisms Survival Describe Classify Invertebrates Vertebrates Warm-blooded Cold-blooded Body Coverings Body Structures	Living Nonliving Once Living Environment Basic Needs Organisms Survival Describe Classify Invertebrates Vertebrates Warm-blooded Cold-blooded Body Coverings Body Structures	Life Cycle Reproduce Oxygen Nutrients Shelter Death Similarities Differences Observe Describe Classify	>	>
Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities
Venn Diagram Children will create a Venn	Animal Classification Classification Sorting Project:	Sweet Potato Journal (suggested one month	Sweet Potato Journal Cont.	Sweet Potato Journal Cont.	Sweet Potato Journal Cont.

Diagram, labeling the left	Students will classify magazine	project)	Leveled Readers		Life Cycle Activities
circle Living, the right circle	photos according to including			Life Cycles	.,
Nonliving, and the overlapping	what its body covering is and		Collage Sequence	Activities	Venn Diagram
part Once Living.	where it lives. (mammal, bird,		Activity	Activity	Plants & Animals
	amphibian, reptile, fish)		Various Media	Compare various	
			Activities	organisms by their	
			7.00.710.00	traits	
Balanced Assessment:	Balanced Assessment:	Balanced Assessment:	Balanced	Balanced	Balanced
Formative	Formative	Formative	Assessment:	Assessment:	Assessment:
			Formative	Formative	Formative
Oral Response	Oral Response	Science Journal			
Science Journal	Science Journal	Oral Response	Science Journal	Science Journal	Science journal
Open Response	Open Response	Open Response	Open Response		
			Slap the Board		
			(Vocabulary Activity)		
Summative	Summative	Summative	Summative	Summative	Summative
Venn Diagram	Classification Sorting Project	Written Assessment over Content Covered for First 3 Weeks	Sequence Activity	Create a Life Cycle (Animals)	Create a Life Cycle (Plants) Create a Book O f
					Various Life Cycles
Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts.)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts.)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts.)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts.)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts.)	Written Assessment over Content Covered for Weeks 4 - 6
					Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts.)
Resources Needed					

Poster board	Animal Sorting Cards	Sweet Potato			
Magazines	Poster board	Jar	www.discoveryeduca	www.lessonpathway	www.lessonpathway
Scissors	Magazines	Water	tion.com	<u>s.com</u>	<u>s.com</u>
Glue	Scissors	Science Journal	science journal	science journal	science journal
Markers	Glue	www.lessonpathways.co	www.lessonpathways		
www.discoveryeducation.com	www.discoveryeducation.com	<u>m</u>	<u>.com</u>		
www.lessonpathways.com	www.lessonpathways.com	www.discoveryeducation			

Weeks 7-9	Weeks 10-12
Unit/Topic	Unit/Topic
UNIFYING CONCEPTS	UNIFYING CONCEPTS - INTERDEPENDENCE
ENERGY TRANSFORMATIONS	BIOLOGICAL SCIENCE – STRUCTURE AND TRANSFORMATION OF MATTER
Relationships of Plant and Animals in an Ecosystem	Cause and Effect Relationships Existing Between
Evidence of the Sun Providing Light and Heat to the Earth	Organisms and Their Environments
	Fossils as Evidence of Organisms that Lived Long Ago
CORE CONTENT 4.1	CORE CONTENT 4.1
SC-EP-4.6.1	SC-EP-4.7.1
Students will describe basic relationships of plants and animals in an	Students will describe the cause and effect relationships existing between
ecosystem (food chains).	organisms and their environments.
Plants make their own food. All animals depend on plants. Some animals	The world has many different environments. Organisms require an
eat plants for food. Other animals eat animals that eat the plants. Basic	environment in which their needs can be met. When the environment
relationships and connections between organisms in food chains can be	changes some plants and animals survive and reproduce and others die or
used to discover patterns within ecosystems.	move to new locations.
DOK 2	DOK 2
SC-EP-4.6.2	SC-EP-3.5.1
Students will describe evidence of the sun providing light and heat to the	Students will describe fossils as evidence of organisms that lived long ago,
Earth. Simple observations and investigations begin to reveal that the Sun provides the light and heat necessary to maintain the temperature of Earth.	some of which may be similar to others that are alive today.
Based on those experiences, the conclusion can be drawn that the Sun's	Fossils found in Earth materials provide evidence about organisms that lived
light and heat are necessary to sustain life on Earth.	long ago and the nature of the environment at that time. Representations
DOK 2	of fossils provide the basis for describing and drawing conclusions about the
332	organisms and basic environments represented by them.
	DOK 3

	CURRICULUM			CURRICULUM	
Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Identify	Identify	Identify	Identify	Identify	Identify
Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics
I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:
I can describe a food	\rightarrow	\rightarrow	I can describe	\rightarrow	\rightarrow
chain.	same	same	relationships between	same	same
			organisms and their		
I can explain an			environments.		
example of a food					
chain.			I can explain how some		
			kinds of fossils are		
I can explain an			made.		
example of a food web.					
			I can describe what		
I can describe ways in			fossils are and where		
which plants and			they are found.		
animals help each					
other.			I can explain how		
			scientists collect and		
I can identify animals			reconstruct fossils.		
by what they eat.					
I can explain how the			I can discuss what		
sun provides heat and			scientists learn from		
light to the Earth.			fossils.		
Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary
	2			5.1.1.53.1.1.540.00.10.1 y	
Suggested	Suggested	Suggested	Suggested	Suggested	Suggested

Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities
Balanced Assessment: Formative					
Summative	Summative	Summative	Summative	Summative	Summative
Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)
Resources Needed					

Weeks 13-15	Weeks 16-18
Unit/Topic	Unit/Topic
EARTH/SPACE SCIENCE	EARTH/SPACE SCIENCE
THE EARTH AND THE UNIVERSE	THE EARTH AND THE UNIVERSE
Earth Materials	Weather Patterns and Weather Data to Make Predictions
	Sun and Moon: Location and Properties

	CORE CONTENT 4.1			CORE CONTENT 4.1	
SC-EP-2.3.1 Students will describe earth materials (solid rocks, soils, water and gases of the atmosphere) using their properties. Earth materials include solid rocks and soils, water and the gases of the atmosphere. Minerals that make up rocks have properties of color, luster and hardness. Soils have properties of color, texture, the capacity to retain water and the ability to support plant growth. Water on Earth and in the atmosphere can be a solid, liquid or gas.			SC-EP-2.3.2 Students will describe pat make simple predictions b Weather changes from day described using observation temperature, wind direction predictions can be made b	ased on those patterns dis y to day and over seasons ons and measurable quant on, wind speed and precip	scovered. Weather can be ities such as itation. Simple
			SC-EP-2.3.3 Students will describe the movements of objects in the Objects in the sky have promovements that can be objected and models show movements.	properties, locations and he sky (Sun, moon). operties, locations and rea oserved and described. Ob	Il or apparent servational data,
	CURRICULUM		CURRICULUM		
Week 13	Week 14	Week 15	Week 16	Week 17	Week 18
Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics
I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:
I can describe properties of rocks, soils, water, and gases.	→ same	→ same	I can describe weather patterns and make predictions based on those patterns.	→ same	→ same

_	T .	T .		T	
I can examine properties of minerals that make up rocks.			I can measure and record the weather. I can illustrate the differences in the four seasons. I can describe movements of the sun and moon.		
Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary
Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities
Balanced Assessment:	Balanced Assessment:	Balanced Assessment:	Balanced Assessment:	Balanced Assessment:	Balanced Assessment:
Formative	Formative	Formative	Formative	Formative	Formative
Summative	Summative	Summative	Summative	Summative	Summative
Common (PLC Teams	Common (PLC Teams	Common (PLC Teams will	Common (PLC Teams	Common (PLC Teams	Common (PLC Teams
will design the	will design the	design the common	will design the common	will design the	will design the common

i.e., grade level, and/or depts.)	i.e., grade level, and/or depts.)	assessments, i.e., grade level, and/or depts.)	assessments, i.e., grade level, and/or depts.)	common assessments, i.e., grade level, and/or depts.)	assessments, i.e., grade level, and/or depts.)
Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed

Weeks 19-21	Weeks 22-24
Unit/Topic	Unit/Topic
Classify Material Objects by their Properties	Movement and Phases of the Moon
Movement and Patterns of the Sun in the Sky (Shadows, Position Relative to the Horizon)	Travel of Light
CORE CONTENT 4.1	CORE CONTENT 4.1
SC-EP-1.1.1	SC-EP-2.3.5
Students will classify material objects by their properties providing	Students will understand that the moon moves across the sky on a daily basis
evidence to support their classifications.	much like the Sun. The observable shape of the moon can be described as it
	changes from day to day in a cycle that lasts about a month.
Objects are made of one or more materials such as paper, wood, and	SC-EP-4.6.4
metal. Objects can be described by the properties of the materials from which they are made. Those properties and measurements of the objects	Students will describe light as traveling in a straight line until it strikes an
can be used to separate or classify objects or materials.	object. Light can be observed and described as it travels in a straight line until
DOK 3	it strikes an object.
	DOK 2
SC-EP-2.3.4	
Students will describe the movement of the sun in the sky using evidence	
of interactions of the sun with the earth (e.g., shadows, position of sun	
relative to horizon) to identify patterns of movement.	
Changes in movement of objects in the sky have patterns that can be	
observed and described. The Sun appears to move across the sky in the	
same way every day, but the Sun's apparent path changes slowly over	
seasons. Recognizing relationships between movements of objects and	
resulting phenomena, such as shadows, provides information that can be used to make predictions and draw conclusions about those movements.	
used to make predictions and draw conclusions about those movements.	

	DOK 2					
CURRICULUM			CURRICULUM			
Week 19	Week 20	Week 21	Week 22	Week 24		
Identify	Identify	Identify	Identify	Identify	Identify	
Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	
I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	
I can classify objects by	\rightarrow	\rightarrow	I can tell how long the	\rightarrow	\rightarrow	
their properties.	same	same	moon takes to travel	same	same	
			around the earth.			
I can use a variety of			I can observe and			
tools to classify objects.			describe how light			
I can observe changes			travels in a straight line			
in movement of objects			until striking an object.			
in the sky.						
I can explain what						
causes day and night.						
I can demonstrate that						
the earth revolves						
around the sun.						
I can chart shadows						
throughout the day.						
Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	
Suggested	Suggested	Suggested	Suggested	Suggested	Suggested	
Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	Strategies/Activities	

| Balanced Assessment: |
|--|--|--|--|--|--|
| Formative | Formative | Formative | Formative | Formative | Formative |
| Summative | Summative | Summative | Summative | Summative | Summative |
| Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts) | Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts) | Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts) | Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts) | Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts) | Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts) |
| Resources Needed |

Weeks 25-27	Weeks 28-30
Unit/Topic	Unit/Topic
PHYSICAL SCIENCE	PHYSICAL SCIENCE
MOTION AND FORCES	MOTION AND FORCES
Position and Motion of Objects	Motion of an Object (Change in Position)
Changes and Position and Motion	

Interactions of	Magnets with Other Magne	ets and Matter			
	CORE CONTENT 4.1		CORE CONTENT 4.1		
SC-EP-1.2.3			SC-EP-1.2.2		
	e position and motion of one motion as related to the st	•	Students will describe the change in position over time (motion) of an object.		
			An object's motion can be	observed, described, comp	pared and graphed by
The position and motion	of objects can be changed	by pushing or pulling,	measuring its change in po	sition over time.	
•	variety of ways (such as ro			DOK 2	
• •	the amount of change in po				
_	f the push or pull (force). T principle. By examining cau				
•	orces and motions, consec				
be predicted.	,	.			
	DOK 2				
magnets with other mag some things move withou	SC-EP-1.2.1 Students will describe and make inferences about the interactions of magnets with other magnets and other matter (e.g., magnets can make some things move without touching them). Magnets have observable properties that allow them to attract and repel				
	ertain kinds of other mater				
	basic properties of magne awn about the interaction				
objects.	awii about the interaction	s with other common			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DOK 3				
	CURRICULUM			CURRICULUM	
Week 25	Week 26	Week 27	Week 28	Week 29	Week 30
Identify	Identify	Identify	Identify	Identify	Identify
Sub-Topics	Sub-Topics	Sub-Topics	Sub-Topics	Sub Topics	Sub-Topics
I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:

I can predict how position of objects can change.	→ same	→ same	I can explain and observe an object's motion over time.	→ same	→ same
I can describe position and motion of objects. I can describe how magnets work together. I can demonstrate how magnets attract and repel each other.			I can compare and graph an object's motion over time. I can explain whether a circuit is open or closed. I can tell how electricity in circuits can produce light. I can construct a model of a simple circuit.		
Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary
Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities
Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative
Summative	Summative	Summative	Summative	Summative	Summative

Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or dept)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)
Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed

Weeks 31-33			Weeks 34-36		
Unit/Topic UNIFYING CONCEPTS ENERGY TRANSFORMATIONS Electrical Circuits			Unit/Topic UNIFYING CONCEPTS ENERGY TRANSFORMATIONS Electrical Circuits Continued		
	CORE CONTENT 4.1			CORE CONTENT 4.1	
SC-EP-4.6.3 Students will analyze models of basic electrical circuits using batteries, bulbs and wires, in order to determine whether a simple circuit is open or closed. Electricity in circuits can produce light. Describing and comparing models demonstrates basic understanding of circuits. DOK 2			SC-EP-4.6.3 Students will analyze models of basic electrical circuits using batteries, bulbs and wires, in order to determine whether a simple circuit is open or closed. Electricity in circuits can produce light. Describing and comparing models demonstrates basic understanding of circuits. DOK 2		
	CURRICULUM		CURRICULUM		
Week 31	Week 32	Week 33	Week 34	Week 35	Week 36
Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics

I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:
I can explain whether a circuit is open or closed. I can tell how electricity in circuits can produce light. I can construct a model of a simple circuit.	→ same	→ same	I can explain whether a circuit is open or closed. I can tell how electricity in circuits can produce light. I can construct a model of a simple circuit.	→ same	→ same
Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary
Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities
Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative

Summative	Summative	Summative	Summative	Summative	Summative
Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts)
Resources Needed					