

*Integrating Science and Technology  
and  
Catholic Curriculum Maps*

**Grade 1**

**Understanding Life Systems Strand**

**Needs and Characteristics  
of  
Living Things**



**Catholic Curriculum Corporation  
Central and Western Region**

**November, 2008**

## Understanding Life Systems Strand Grade 1

### Unit At-A-Glance

<p><b>Catholic Social Teaching:</b> Dignity of the Human Person</p> <p><b>Essential Question:</b> Who is God?</p> <p><b>OCSGE:</b> The graduate is a responsible citizen who respects the environment and uses resources wisely (7i)</p>	
<p><b>Topic:</b></p>	<p><b>Needs and Characteristics of Living Things</b></p> <p>This strand takes advantage of the natural curiosity of young children by beginning a study of a variety of living things, including humans. Students will investigate the basic needs of living things, observe their similarities and differences, and develop an understanding of their general characteristics.</p>
<p><b>Unit Guiding Question:</b></p>	<p>Why are all living things in God’s creation important and what are my responsibilities toward them?</p>
<p><b>Unit Culminating Task:</b></p> <p>Students will use the research process to create a booklet that</p> <ul style="list-style-type: none"> <li>• identifies a living thing from God’s creation and its characteristics</li> <li>• describes how these characteristics enable it to meet its basic needs</li> <li>• explains why living things are important to God’s creation</li> <li>• explains how you can show responsibility and care for God’s living things</li> </ul>	
<p><b>Essential Understandings</b></p>	
<p><b>Catholic Curriculum Map:</b> <i>Essential Question(s) &amp; Links</i></p>	<p>What are my responsibilities to the world in which we live?</p> <ul style="list-style-type: none"> <li>• Examine God’s creations</li> <li>• Recognize individual uniqueness</li> <li>• Express feelings of wonder and curiosity about the world</li> <li>• Identify ways that people care about the world</li> </ul>
<p><b>Science and Technology:</b> <i>Fundamental Concept(s)</i></p>	<p>Sustainability and Stewardship</p>
<p><b>Science and Technology:</b> <i>Big Ideas and Overall Expectations</i></p>	<p>Living things grow, take in food to create energy, make waste and reproduce (OE 2,3)</p> <p>Plants and animals, including people, are living things (OE 2,3)</p> <p>Living things have basic needs (air, water, shelter) that are met from the environment (OE 1,2,3)</p> <p>Different kinds of living things behave in different ways (OE 2,3)</p> <p>All living things are important and should be treated with care and respect (OE 1,2,3)</p>
<p><b>Science and Technology:</b> <i>Scientific Inquiry Skill</i></p>	<p>Research</p>
<p><b>Science and Technology:</b> <i>Expectation Tags, Guiding Questions and Specific Expectations</i></p>	<p>Relating Science and Technology to Society and the Environment</p> <ul style="list-style-type: none"> <li>• When God created people, God asked us to care for the earth and all living things. What can we do to keep the environment clean and healthy for people and all the plants and creatures of the earth? (SE 1.1)</li> <li>• We know the earth is no longer the way that God created it. What are some of the things that have changed? What or who has caused this change? (SE 1.2)</li> </ul>

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	<p>Developing Investigation and Communication Skills</p> <ul style="list-style-type: none"> <li>• What does God give all living things, including humans, so they will grow and survive? (SE 2.2)</li> <li>• How did God make the plants and animals the same? How did God make the plants and animals different? (SE 2.3)</li> <li>• How did God create plants so they can grow strong and survive? (SE 2.4)</li> <li>• God gave us the tools to be scientists when we were created. What are some of the things a good scientist uses to learn about the world? (SE 2.5)</li> </ul> <p>Understanding Basic Concepts</p> <ul style="list-style-type: none"> <li>• What special characteristics does God give to different plants and animals? (SE 3.2)</li> <li>• What parts did God create in humans to help them meet their need for air, food, water and space? (SE 3.3)</li> <li>• When God created the earth, God made it perfect. It was healthy and clean. What does a clean, healthy environment look like? (SE 3.4)</li> <li>• Why does God ask us to care for and respect the world? (SE 3.5)</li> <li>• What things did God create that help take care of and provide for other things in creation? (SE 3.6)</li> </ul>
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### Unit Overview

NOTE: Teachers will want to adjust the suggestions to address the learning needs of their students.

Subtask	Lesson / Time	Essential Understandings	Assessment	Resources
1	1.1 Overview of the Unit (40 minutes)	Examine God’s creations OE2: investigate needs and characteristics of plants and animals, including humans SE 2.2	Direct observation; question and answer (oral) anecdotal record	Picture book about creation or a children’s bible Genesis 1 Chart Paper Markers
2	Basic Needs of Plants and Animals 2.1 Basic Needs of Plants (40 minutes) 2.2 Basic Needs of Animals (40 minutes) 2.3 Assessment Task (40 minutes)	Recognize individual uniqueness OE2: investigate needs and characteristics of plants and animals, including humans SE 2.2, 3.6	Direct observations; Question and answer (oral) teacher-prepared observation checklist	Non-fiction reading material; Pictures of animals, plants, basic needs; teacher-prepared observation checklist; Diagram of a plant and animal and labels of basic needs to cut and paste; scissors, glue
3	Characteristics of Living Things 3.1 Five Senses (40 minutes) 3.2 Observation of Plants and Animals (40 minutes) 3.3 Continued Observation of Plants and Animals (20 minutes) Sharing of Findings (20 minutes)	Express feelings of wonder and curiosity about God’s creation OE2: investigate needs and characteristics of plants and animals, including humans OE3: demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans SE 2.5, 3.3, 2.1, 2.3, 2.4, 2.6	Direct observations; Question and answer (oral) teacher-prepared observation checklist	Poster/picture of senses; Collection of items to see, feel, taste, smell and hear; Live plants and animals; Video of live animals, plants; Teacher-created recording sheet; Nonfiction texts; Teacher selected web sites; chart paper; markers; Thank you prayer for senses

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4	<p>A Healthy Environment 4.1 God's Perfect Creation (40 minutes) 4.2 The Effect of People on the Earth (40 minutes) 4.3 The Responsibilities of People to Care for the Earth (40 minutes)</p>	<p>Examine God's creations What are my responsibilities to the world in which we live? Identify ways that people care about the world OE1: assess the role of humans in maintaining a healthy environment OE3: demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans SE 3.1, 3.2, 3.3, 1.1, 2.7, 1.2</p>	<p>Direct observations; Question and answer (oral) teacher-prepared observation checklist</p>	<p>A Creation story; Paper; Crayons, markers; Observation checklist; person-shaped paper or outline; glue; Chart paper;</p>
5	<p>Culminating Performance Task 5.1 From Graphic to Research Booklet (40 minutes x 4) 5.2 Sharing the Learning (40 minutes)</p>	<p>Why are all living things in God's creation important and what are my responsibilities toward them? OE1: assess the role of humans in maintaining a healthy environment OE2: investigate needs and characteristics of plants and animals, including humans OE3: demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans</p>	<p>Direct observations; Question and answer (oral); Exit strategies; Rubric</p>	<p>Graphic organizer BLM 5.1 a); teacher-created research booklet BLM 5.1b) or BLM 5.1 c); nonfiction texts, printouts from websites, teacher-selected computer websites, pencils, crayons, markers</p>

## Understanding Life Systems Strand Grade 1

### Subtask 1: Overview of the Unit

#### Description

Brief overview of the unit including the Essential Understandings, Introduction of the unit culminating task, read and respond to the creation story

#### Lesson 1.1: Overview of the Unit

##### Purpose

Students will respond to the creation story by sharing what they know about living things, including plants, animals and humans

##### Essential Understandings

Catholic Curriculum Map Links:

- Examine God's creations

Science and Technology:

- Investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth and space, using a variety of methods and resources (SE 2.2)

##### Assessment for Learning

Use observation to identify student's ability to orally contribute to sharing and brainstorming; use oral questions and answers of students to investigate their level of understanding about living things; Provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for individual or small group instruction

##### Teacher Notes

This lesson will provide the students with an overview of the unit, including an example of the culminating task. The creation story will provide the starting point for the discussion of all living things. You will need an example of the culminating task, a research booklet, a picture book about creation (e.g. *Creation* by Gerald McDermott) or a children's Bible Genesis story; chart paper; markers

##### Instruction

###### Time to Teach

- Teacher introduces the unit, describes the focus of the unit (essential understandings) and shows an example of the culminating task, a research booklet
- Teacher reads aloud a creation story
- Teacher asks "What are some of the things animals need to live? What things do people need to live? What things do plants need to live?"
- A characteristic is a special quality or feature that makes a person or thing different from others. "What special qualities or features do you know about in animals? In people? In plants?"

###### Time to Practice

- Students use think-pair-share to respond to question
- Students brainstorm as a whole group in response to the question.
- Teacher records brainstorming session on chart paper.

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#### Time to Share

- Teacher leads the class in a prayer of thanksgiving to God the Creator. Place examples or pictures of living things on the prayer table as appropriate.
- *Thank you God for all that grows,  
Thank you for the sky's rainbows,  
Thank you for the stars that shine,  
Thank you for these friends of mine,  
Thank you for the moon and sun,  
Thank you God for all you've done!*
- Students offer their own prayers of thanksgiving orally, “Thank you God for.....”

## **Understanding Life Systems Strand Grade 1**

### **Subtask 2: Basic Needs of Living Things**

#### **Description:**

Investigation of the basic needs of plants and animals and the unique features of God's creation, with an assessment task for students

#### **Lesson 2.1 Basic Needs of Plants**

##### **Purpose**

Students will investigate the needs of plants, participate in a sorting activity, read about plants and share their findings with a peer.

##### **Essential Understandings**

Catholic Curriculum Map Links:

- Recognize individual uniqueness

Science and Technology:

- Investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth and space, using a variety of methods and resources (SE 2.2)
- Identify what living things provide for other living things (SE 3.6)

##### **Assessment for Learning**

Observe students using a teacher-prepared checklist to assess understanding and process of sorting and matching plants with basic needs; use oral questions and answers to investigate the level of understanding about basic needs a student demonstrates; provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for individual or small group instruction

##### **Teacher Notes**

This lesson will give students the opportunity to explore the basic needs of plants, sort and match pictures of plants and their basic needs, read about plants and share some of their findings.

You will need non-fiction reading material; Pictures of animals, plants, basic needs; teacher-prepared observation checklist

##### **Instruction**

###### **Time to Teach**

- Teacher asks "Remember the story of creation? When did God make plants? Why? What makes a plant different from other things that God has created? What does God give a plant so it will grow and survive?"

###### **Time to Practice**

- Students will match and sort pictures of plants with their basic needs
- Students will read about plants.

###### **Time to Share**

- Students will share one interesting fact with a partner.

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### **Lesson 2.2 Basic Needs of Animals**

#### **Purpose**

Students will investigate the needs of animals, participate in a sorting activity, read about animals and share their findings with a peer.

#### **Essential Understandings**

Catholic Curriculum Map Links:

- Recognize individual uniqueness

Science and Technology:

- Investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth and space, using a variety of methods and resources (SE 2.2)
- Identify what living things provide for other living things (SE 3.6)

#### **Assessment for Learning**

Observe students using a teacher-prepared checklist to assess understanding and process of sorting and matching animals with basic needs; use oral questions and answers to investigate the level of understanding about basic needs a student demonstrates; Provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for individual or small group instruction

#### **Teacher Notes**

This lesson will give students the opportunity to explore the basic needs of animals, sort and match pictures of animals and their basic needs, read about animals and share some of their findings. You will need Non-fiction reading material; Pictures of animals, plants, basic needs; teacher-prepared observation checklist, an example of a checklist can be found at

[www.teachervision.fen.com/tv/printables/scottforesman/Sci\\_1\\_TOP\\_A2\\_4.pdf](http://www.teachervision.fen.com/tv/printables/scottforesman/Sci_1_TOP_A2_4.pdf)

#### **Instruction**

##### **Time to Teach**

- Teacher asks “Remember the story of creation? When did God make animals? Why? What makes an animal different from other things that God has created? What does God give an animal, including humans, so it will grow and survive?”

##### **Time to Practice**

- Students will match and sort pictures of animals with their basic needs
- Students will read about animals.

##### **Time to Share**

- Students will share one interesting fact with a partner.

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### **Lesson 2.3 Assessment Task**

#### **Purpose**

Students will complete a cut and paste activity, matching basic needs with a plant and an animal

#### **Essential Understandings**

Catholic Curriculum Map Links:

- Recognize individual uniqueness

Science and Technology:

- Investigate and compare the basic needs of living things, including the need for air, water, food, warmth and space, using a variety of methods and resources (SE 2.2)
- Identify what living things provide for other living things (SE 3.6)

#### **Assessment for Learning**

Use observation to identify students who apply their understanding of basic needs of plants and animals accurately; use oral questions and answers to investigate the level of understanding about basic needs a student demonstrates; Provide feedback to student to ensure their understandings are accurate; use assessment information to identify the need for further individual or small group instruction

#### **Teacher Notes**

This lesson will give students the opportunity to demonstrate their understanding of the basic needs of plants and animals by cutting, sorting and matching pictures of basic needs with a diagram of a plant and a diagram of an animal. You will need a diagram of a plant and animal and labels of basic needs to cut and paste; scissors, glue

#### **Instruction**

##### **Time to Teach**

- Teacher asks “How did God make the plants and animals the same? How did God make the plants and animals different? Why?”
- “Plants and animals have some of the same needs and some different needs? Why did God create them the same and different?”

##### **Time to Practice**

- Students will share their understanding with the large group as they respond to the questions
- Students will complete a cut and paste activity matching a diagram of a plant and of an animal with labels of basic needs.

##### **Time to Share**

- Teacher will lead class in a simple thank you prayer for the gifts of water, air, food, warmth and space that God has given us to make us grow and survive.
- Students will offer a prayer of thanksgiving for a favourite plant or animal.
- “Thank you God for making (plant or animal), because.....”

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### **Subtask 3: Characteristics of Living Things**

#### **Description:**

Students will identify the five senses and use of the senses to explore classroom items, live plants and animals and record and share investigation of plants and animals

#### **Lesson 3.1 Five Senses**

##### **Purpose**

Students will identify their five senses, and use their senses to explore a variety of items in the classroom.

##### **Essential Understandings**

Catholic Curriculum Map Links:

- Express feelings of wonder and curiosity about the world

##### **Science and Technology**

- Investigate characteristics of parts of the humans body, including the five sense organs and explain how those characteristics help humans meet their needs and explore the world around them, using a variety of methods and sources (SE 2.5)
- Identify the location and function of parts of the human body, including sense organs (SE 3.3)

##### **Assessment for Learning**

Use a teacher-created observation checklist to determine students understanding of location and function of sense organs and use of language appropriate to exploring with the senses (I see, I feel, I taste, etc); use oral questions and answers to investigate the level of understanding about the senses a student demonstrates; Provide feedback to student to ensure their understandings are accurate; use prompts to expand learning and appropriate use of language

##### **Teacher Notes**

This lesson will give students the opportunity to identify their five senses and use them to explore a collection of materials. You will need poster/picture of senses; Collection of items to see, feel, taste, smell and hear

##### **Instruction**

###### **Time to Teach**

- Teacher begins “God gave us the tools to be scientists when God created us. What are some of the things that God has created that a good scientist uses to learn about the world?”
- “How do you learn about something new?” (Give examples – new food, new clothes, change in the weather, unusual sound, strange smell)
- “What does your nose do for your body? What do your ears do for you? What about your eyes? What does your mouth and tongue do for you? Why are your fingers and hands so important? What do we call these things?” (five senses)

###### **Time to Practice**

- Students identify their senses and their location on the human body
- Students explore a variety of items using their senses

###### **Time to Share**

- Students describe what they see, feel, hear, taste and smell to their small group.

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### Lesson 3.2 Observations of Plants and Animals

#### Purpose

Students will investigate plants and animals (classroom materials, pets, plants, schoolyard insects, trees, video of animals, and time-elapsd video of plants growing) and record their observations and questions using a teacher-created recording sheet

#### Essential Understandings

Catholic Curriculum Map Links:

- Express feelings of wonder and curiosity about the world

Science and Technology:

- Follow established safety procedures and humane practices during science and technology investigations (SE 2.1)
- Investigate and compare the physical characteristics of a variety of plants and animals, including humans (SE 2.3)
- Investigate the physical characteristics of plants and explain how they help the plant meet its basic needs using a variety of methods and resources (SE 2.4)
- Use appropriate science and technology vocabulary, including *investigation*, *explore*, *needs*, *space*, and *food*, in oral and written communication (SE 2.6)

#### Assessment for Learning

Use observation to identify students who apply their understanding of their senses accurately and appropriately to the investigation of plants and animals; use oral questions and answers to investigate the level of understanding and use of vocabulary about the senses and the plants and animals being observed, which a student demonstrates; Provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for further individual or small group instruction

#### Teacher Notes

This lesson will give students the opportunity to use their five senses to explore plants and animals in the school, schoolyard, in books and on the internet or video recordings

You will need examples of animals and plants; teacher-created recording sheet; nonfiction texts; teacher selected web sites

#### Instruction

##### Time to Teach

- Teacher will establish guidelines and goals for observation of plants and animals
- Teacher begins “God created the world to be filled with all kinds of plants and all kinds of animals. We will take some time to observe some of the animals and plants of the world and record what we see, hear, smell, feel and maybe even taste and also record any questions we have about what we observe.”

##### Time to Practice

- Students will observe plants and animals (classroom materials, pets, plants, schoolyard insects, trees, video of animals, time elapsed video of plants growing) and record their observations and questions using a teacher-created recording sheet.

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#### **Time to Share**

- Students describe what they see, feel, hear, taste and smell to their small group.
- Students will express their feelings of wonder as they describe what it was like to see, feel, hear and smell during the observations.
- Students will share their observations informally and invite others to discover similar characteristics and features of plants and animals (Look what I see!)
- Students will express their curiosity by indicating what they would like to learn more about and why.

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### Lesson 3.3 Continued Observations of Plants and Animals and Sharing

#### Purpose

Students will continue to investigate plants and animals (classroom materials, pets, plants, schoolyard insects, trees, video of animals, time elapsed video of plants growing) and record their observations and questions using a teacher-created recording sheet

#### Essential Understandings

Catholic Curriculum Map Links:

- Express feelings of wonder and curiosity about the world

Science and Technology:

- Follow established safety procedures and humane practices during science and technology investigations (SE 2.1)
- Investigate and compare the physical characteristics of a variety of plants and animals, including humans (SE 2.3)
- Investigate the physical characteristics of plants and explain how they help the plant meet its basic needs using a variety of methods and resources (SE 2.4)
- Use appropriate science and technology vocabulary, including *investigation*, *explore*, *needs*, *space*, and *food*, in oral and written communication (SE 2.6)

#### Assessment for Learning

Use observation to identify students who apply their understanding of their senses accurately and apply it appropriately to investigating plants and animals; use oral questions and answers to investigate the level of understanding and use of vocabulary about the senses and the plants and animals; Provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for further individual or small group instruction

#### Teacher Notes

This lesson will give students the further opportunity to use their five senses to explore plants and animals in the school, schoolyard, in books and on the internet or video recordings. Students will share their findings and select a plant or animal to study further in the culminating task.

You will need examples of plants and animals; teacher-created recording sheet; nonfiction texts; teacher selected web sites; chart paper; markers; thank you prayer for senses

It is recommended that the teacher begin to gather resources for the culminating task, based on the plants and animals that the students select to study further.

#### Instruction

##### Time to Teach

- Teacher will reestablish guidelines and goals for observation of plants and animals
- Teacher begins “Yesterday we observed some of the animals and plants of the world and recorded what we could see, hear, smell, feel and maybe even taste and also recorded any questions we had about what we observed. Today we will continue our observations and recording.”
- “At the end of the lesson, I will ask you to select one plant or animal that you would like to learn more about.”

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#### Time to Practice

- Students will continue to observe plants and animals and record observations and questions using a teacher-created recording sheet. (classroom materials, pets, plants, schoolyard insects, trees, video of animals, time-elased video of plants growing, non fiction text)

#### Time to Share

- Students will share their observations in small groups.
- Students will select one plant or animal to learn more about in future lessons.  
    *“I want to learn more about....”*
- Teacher will record each student’s plant or animal selection.
- Teacher will lead a thank you prayer for the gift of our senses and all the wonderful things the students have explored and experienced.
- *I see with my eyes*  
    *I hear with my ears*  
    *I taste with my tongue*  
    *I smell with my nose*  
    *I touch with my fingers*  
    *Thank you God for my five senses*  
    *And the world you give me to explore in.*
- Students will add to prayer if they wish.
- Thank you God for the \_\_\_\_\_ that I got to (taste, see, smell, touch, hear)

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### Subtask 4: A Healthy Environment

#### Description:

Identification of environment as a place where plants and animals, including humans, exist or live; identification of elements of a clean and healthy environment and a damaged environment; commitment to action from students to help the environment

#### Lesson 4.1 God's Perfect Creation

##### Purpose

Students will identify the elements of and illustrate a clean and healthy environment

##### Essential Understandings

Catholic Curriculum Map Links:

- Examine God's creations

Science and Technology:

- Identify *environment* as the area in which something or someone exists or lives (SE 3.1)
- Describe characteristics of a healthy environment, including clean air, water and nutritious food, and explain why it is important for all living things to have a healthy environment (SE 3.4)
- Use a variety of forms to communicate with different audiences and for a variety of purposes (SE 2.7)

##### Assessment for Learning

Use an observation checklist to assess student's understanding of the source, elements and importance of a healthy environment; use oral questions and answers to investigate the level of understanding about the environment a student demonstrates; Provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for further individual or small group instruction

##### Teacher Notes

This lesson gives you the opportunity to revisit the creation story and talk about the creation of the environment that supports the plants, animals and humans. To begin, discuss the perfect environment, as created by God. Students will draw a picture of the perfect environment. Use a large paper (12x18) with a fold down the middle and put God's creation on one side and leave room for the picture the students will draw in the next lesson on the other side.

You will need a Creation story; paper; crayons, markers; observation checklist

##### Instruction

###### Time to Teach

- Teacher rereads the creation story, focusing on the creation of people and their role as stewards or caretakers of the earth
- Teacher begins "What is an environment? When God created the earth, it was a perfect environment. It was healthy and clean. What did the clean, healthy environment that God created look like?"

###### Time to Practice

- Students describe their understanding of the elements of a clean and healthy environment.
- Students will draw a picture of a perfect environment, as God created it.

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#### Time to Share

- Students share their drawings with the large group
- Teacher leads a prayer of thanksgiving for God's perfect creation

*I thank you God for this amazing day*

*For all the things you bring my way*

*For plants and birds and water and trees*

*For gentle rains and the blowing breeze*

*For the sun and the moon and the stars so bright*

*For the long warm days and the cool cozy nights*

*For work and play and a family to love*

*For all your blessings sent from above*

*I thank you God for all that I see*

*And most of all for making me!*

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### Lesson 4.2 The Effect of People on the Earth

#### Purpose

Students will illustrate an environment that has been impacted by people. They will identify some of the problems that have occurred in the environment as a result of people's lack of care and respect.

#### Essential Understandings

Catholic Curriculum Map Links:

- What are my responsibilities to the world in which we live?
- Identify ways that people care about the world

Science and Technology:

- Identify *environment* as the area in which something or someone exists or lives (SE 3.1)
- Describe characteristics of a healthy environment, including clean air, water and nutritious food, and explain why it is important for all living things to have a healthy environment (SE 3.4)
- Describe changes or problems that could result from the loss of some kinds of living things that are part of everyday life, taking different points of view into consideration (SE 1.2)
- Use a variety of forms to communicate with different audiences, for a variety of purposes (SE 2.7)

#### Assessment for Learning

Use an observation checklist to assess student's understanding of the cause and impact of damage to the environment; use oral questions and answers to investigate the level of understanding about a healthy environment a student demonstrates; Provide feedback to student to ensure their understandings are accurate; Use assessment information to identify the need for further individual or small group instruction

#### Teacher Notes

This lesson gives students the opportunity to consider the impact people have had on creation and the implications of this impact. Species have become endangered and extinct, water and air is not clean, garbage is a problem and so on. After discussion, students will draw a picture of an unhealthy environment on the other half of the paper they used in the last lesson.

You will need Paper; Crayons, markers; observation checklist

#### Instruction

##### Time to Teach

- Teacher begins "We know the earth is no longer the way that God first created it. What are some of the things that have changed? Are these changes good or bad? What or who has caused this change?"
- Teacher asks "What are we in danger of losing in the future? What would you miss if it was gone (trees, insects, grass)?"

##### Time to Practice

- Students respond in the whole group to the teacher's guiding questions.
- Students will draw a picture of an unhealthy environment, as people have destroyed it or what it may look like in the future if we do not care for it.

##### Time to Share

- Students share their drawings with the large group
- Teacher leads a prayer of petition asking God to help us care for all of creation

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#### **Lesson 4.3 The Responsibilities of People to Care for the Earth**

##### **Purpose**

Students will discuss and select a plan of action to care for the environment.

##### **Essential Understandings**

Catholic Curriculum Map Links:

- What are my responsibilities to the world in which we live?
- Identify ways that people care about the world

Science and Technology:

- Describe how showing care and respect for all living things helps to maintain a healthy environment (SE 3.3)
- Identify personal action that they themselves can take to help maintain a healthy environment for living things, including humans (SE 1.1)
- Use a variety of forms to communicate with different audiences, for a variety of purposes (SE 2.7)

##### **Assessment for Learning**

Use observation to determine student's understanding of their role as a caretaker or steward and their plan for action; use oral questions and answers to investigate the level of understanding about our responsibilities to the environment a student demonstrates; Provide feedback to students to ensure their understandings are accurate; Use assessment information to identify the need for further individual or small group instruction

##### **Teacher Notes**

This lesson gives students the opportunity to make a plan of action for caring for God's creation. The person-shaped paper they use will remind them of their individual call to be a steward of creation and placing their person and their plan on the damaged earth reminds them that they can make a difference for today and for the future. You will need markers; person-shaped paper or outline; glue; chart paper

##### **Instruction**

###### **Time to Teach**

- Teacher begins "When God created people, God asked us to care for the earth and all living things. What can we do to keep the environment clean and healthy for people and all the plants and creatures of the earth? What are we already doing now?"

###### **Time to Practice**

- Students will think-pair-share to respond to the question.

###### **Time to Share**

- Students will share, with the whole group, ideas about their God-given role as stewards/caretakers of the earth and the actions they can take to care for the earth to keep it healthy or to repair the damage that has been done to the earth.
- Teacher will record ideas and action plans on chart paper
- Students will record, on a person-shaped paper, their plan for action to help care for the earth and students will glue person-shaped paper on the picture they drew in the last lesson.
  - Teacher will lead class in a prayer asking God to help us in our job as caretakers of the earth and then lead the class into the schoolyard for a simple act of stewardship – tidying up some garbage, weeding a garden, watering some plants, etc.

## **Understanding Life Systems Strand Grade 1**

### **Subtask 5: Culminating Task**

**Description:** A step-by-step research task that gives students the opportunity to demonstrate and apply their understanding of life systems and their responsibility to the environment

Students will create and share a research booklet that:

- identifies a living thing from God's creation and its characteristics
- describes how these characteristics enable it to meet its basic needs
- explains how you can show responsibility and care for God's living things
- explains why that living thing is important to God's creation

#### **Lesson 5.1 From Graphic to Research Booklet**

##### **Purpose**

Students will determine the focus of their research and use a graphic organizer to record information from two sources. Students will then use the information in the graphic organizer to complete the research booklet template for either an animal or a plant. This process will occur over a number of days.

##### **Essential Understandings**

Catholic Curriculum Map Links:

- Why are all living things in God's creation important and what are my responsibilities toward them?

Science and Technology:

- assess the role of humans in maintaining a healthy environment (OE1)
- investigate needs and characteristics of plants and animals, including humans (OE2)
- demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans (OE3)

##### **Assessment for Learning**

Use observation and a rubric to assess and evaluate student learning for the unit; use oral questions and answers to determine the level of understanding about the living thing chosen, our responsibilities to the environment a student demonstrates; Provide feedback to student to ensure their understandings are accurate

##### **Teacher Notes**

This is a step-by-step process to model and teach an age-appropriate research process and report. You will need copies of BLM 5.1 a) Graphic Organizer, as well as nonfiction texts, printouts from websites, teacher-selected computer websites (e.g., [www.enchantedlearning.com](http://www.enchantedlearning.com)), teacher-created research format(s), pencils, crayons, markers.

(The research process used was accessed at [www.accessola.com](http://www.accessola.com), which is the Ontario Library Association website.)

Next students will receive support to use the information gathered in the graphic organizer to complete the research booklet provided by the teacher, BLM 5.1 b) Animal or BLM 5.1 c) Plant.

This task also fulfills the Language expectation for writing: Generate, gather and organize ideas and information to write for an intended purpose and audience (Writing OE 1)

## **Understanding Life Systems Strand Grade 1**

### **Instruction**

#### **Time to Teach Day One**

- Teacher will recall lesson 3.3 in which each student selected a plant or animal to learn more about. Teacher will refer to the chart that was completed to help students remember.
- Teacher will model using a resource and identifying information to write or draw in the graphic organizer to answer: What does it look like? Where does it live? What does it need? BLM 5.1a)
- Teacher will present a copy to each student of BLM 5.1 a) Graphic Organizer
- Teacher will instruct students to fill in the name of their plant or animal
- Teacher will present resources to students

#### **Time to Practice Day One and Day Two**

- Students will read through the questions in the graphic organizer with the teacher
- Students will fill in the graphic organizer as instructed by the teacher with pictures and/or words
- Students will explore resources for possible sources of answers and information about their living thing
- Teacher will support students as needed

#### **Time to Share Day Two**

- Students will share their plan for further research with the whole group
- Teacher will present an exit paper format for sharing orally – Today I learned.... I am very confused by.... I wonder ...

#### **Time to Teach Day Three**

- Teacher will review the exit responses from the previous lesson and respond to any frustrations or concerns
- Teacher will present students with the research booklet for the good copy
- Teacher will model revising information and putting it in the good copy

#### **Time to Practice Day Three and Four**

- Students will record information from their graphic organizer and locate additional information as needed to complete their research booklet
- Teacher will support students as needed

#### **Time to Share Day Four**

- Students will work in pairs or small groups to proofread the work of a peer
- Students will give oral feedback to their partner, commenting on things they liked, things they wanted to know more about and things that were unclear or confusing

**Understanding Life Systems Strand**

**Grade 1**

BLM 5.1a)

Graphic Organizer

Student Name: \_\_\_\_\_

**Name of Plant or Animal:** \_\_\_\_\_

**Resource 1:** \_\_\_\_\_

<b>What does it look like?</b>	<b>Where does it live?</b>	<b>What does it need?</b>

**Resource 2:** \_\_\_\_\_

<b>What does it look like?</b>	<b>Where does it live?</b>	<b>What does it need?</b>

**Understanding Life Systems Strand**

**Grade 1**

**BLM 5.1 b) Animal**

**My Animal Research Booklet**

Student Name: \_\_\_\_\_

**Name of the animal I am learning about:**

\_\_\_\_\_

**Picture of my animal:**

**Where my animal lives:**

**My animal lives in \_\_\_\_\_.**

**Understanding Life Systems Strand**

**Grade 1**

**My animal needs:**

**One important thing my animal needs to live is \_\_\_\_\_.**

**Special features or characteristics my animal has:**

**One special thing I like about my animal is: \_\_\_\_\_.**

**My animal is an important part of God's creation:**

**I can take care of my animal and God's creation when I:**

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**Understanding Life Systems Strand**

**Grade 1**

**BLM 5.1 c) Plant**

**My Plant Research Booklet**

Student Name: \_\_\_\_\_

**Name of the plant I am learning about:**

\_\_\_\_\_

**Picture of my plant:**

**Where my plant lives:**

**My plant lives in \_\_\_\_\_.**

**Understanding Life Systems Strand**

**Grade 1**

**My plant needs:**

**One important thing my plant needs to live is \_\_\_\_\_.**

**Special features or characteristics my plant has:**

**One special thing I like about my plant is: \_\_\_\_\_.**

**My plant is an important part of God's creation:**

**I can take care of my plant and God's creation when I:**

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## **Understanding Life Systems Strand Grade 1**

### **Lesson 5.2 Sharing the Learning**

#### **Purpose**

Students will share a research booklet that:

- identifies a living thing from God's creation and its characteristics
- describes how these characteristics enable it to meet its basic needs
- explains how you can show responsibility and care for God's living things
- explains why that living thing is important to God's creation

#### **Essential Understandings**

Catholic Curriculum Map Links:

- Why are all living things in God's creation important and what are my responsibilities toward them?

Science and Technology:

- assess the role of humans in maintaining a healthy environment (OE1)
- investigate needs and characteristics of plants and animals, including humans (OE2)
- demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans (OE3)

#### **Assessment for Learning**

Use observation and a rubric to assess and evaluate student learning for the unit; use oral questions and answers to investigate the level of understanding about the living thing chosen, our responsibilities to the environment a student demonstrates; Provide feedback to student to ensure their understandings are accurate;

#### **Teacher Notes**

This is a step-by-step process to model and teach an age appropriate research process and report. In this step, students will present their research projects and demonstrate their ability to communicate their learning and apply their knowledge of their animal to their understanding of the need to care for God's creation. Students will receive support to complete the research presentation.

This lesson also meets the Language Expectation for Oral Communication: Use speaking skills and strategies appropriate to communicate with different audiences for a variety of purposes (OE2)

You will need the rubric for each child; guiding questions to prompt children to share their information and understanding with as much detail as possible (e.g., Is your living thing a plant or an animal? What does it look like? What does it need to grow and survive? What is special about it? Why did God create it? Why is it important to God's creation? How can you care for and respect this living thing? )

#### **Instruction**

##### **Time to Teach**

- Teacher will present the expectations for listening and responding to each presenter
- Teacher will call upon each student to present for about 2 minutes maximum

##### **Time to Practice**

- Students will present their information to the whole group and respond to questions about their living thing

##### **Time to Share**

- Students will mark a face on their paper to show the teacher how they felt about sharing their work with the whole group (happy face, sad face, neutral face, etc)

Integrating Science and Technology and Catholic Curriculum Maps  
**Understanding Life Systems Strand**  
**Grade 1**

Student Name: _____				
Categories	Level 1	Level 2	Level 3	Level 4
<b>Knowledge and Understanding – Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)</b>				
Knowledge of characteristics and needs of living things	The student: <ul style="list-style-type: none"> <li>demonstrates limited knowledge of characteristics and needs of living things</li> </ul>	The student: <ul style="list-style-type: none"> <li>demonstrates some knowledge of characteristics and needs of living things</li> </ul>	The student: <ul style="list-style-type: none"> <li>demonstrates considerable knowledge of characteristics and needs of living things</li> </ul>	The student: <ul style="list-style-type: none"> <li>demonstrates thorough knowledge of characteristics and needs of living things</li> </ul>
Understanding of the importance of a healthy environment for all living things	The student: <ul style="list-style-type: none"> <li>demonstrates limited understanding of the importance of a healthy environment for all living things</li> </ul>	The student: <ul style="list-style-type: none"> <li>demonstrates some understanding of the importance of a healthy environment for all living things</li> </ul>	The student: <ul style="list-style-type: none"> <li>demonstrates considerable understanding of the importance of a healthy environment for all living things</li> </ul>	The student: <ul style="list-style-type: none"> <li>demonstrates thorough understanding of the importance of a healthy environment for all living things</li> </ul>
<b>Thinking and Investigation -- The use of critical and creative thinking skills and inquiry and problem-solving skills and/or processes</b>				
Use of graphic organizer to plan research	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to plan research with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to plan research with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to plan research with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to plan research with a high degree of effectiveness</li> </ul>
Use of graphic organizer to create research booklet format	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to create research booklet with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to create research booklet with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to create research booklet with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses graphic organizer to create research booklet with a high degree of effectiveness</li> </ul>
Use of information gathered to determine why all living things in God's creation are important and what our responsibilities are toward them	The student: <ul style="list-style-type: none"> <li>determines why all living things in God's creation are important and what our responsibilities are toward them with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>determines why all living things in God's creation are important and what our responsibilities are toward them with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>determines why all living things in God's creation are important and what our responsibilities are toward them with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>determines why all living things in God's creation are important and what our responsibilities are toward them with a high degree of effectiveness</li> </ul>
<b>Communication - The conveying of meaning through various forms</b>				
Organization of research information using booklet format	The student: <ul style="list-style-type: none"> <li>organizes information using booklet format with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>organizes information using booklet format with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>organizes information using booklet format with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>organizes information using booklet format with a high degree of effectiveness</li> </ul>

**Understanding Life Systems Strand  
Grade 1**

Orally communicates research information to peers	The student: <ul style="list-style-type: none"> <li>communicates research information to peers with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>communicates research information to peers with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>communicates research information to peers with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>communicates research information to peers with a high degree of effectiveness</li> </ul>
Use of vocabulary, and terminology of the unit in written and oral form	The student: <ul style="list-style-type: none"> <li>uses vocabulary, and terminology of the unit with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses vocabulary, and terminology of the unit with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses vocabulary, and terminology of the unit with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>uses vocabulary, and terminology of the unit with a high degree of effectiveness</li> </ul>
<b>Application - The use of knowledge and skills to make connections within and between various contexts</b>				
Application of knowledge of basic needs and characteristics of all living things to one specific living thing	The student: <ul style="list-style-type: none"> <li>applies knowledge of basic needs and characteristics of all living things to one specific living thing with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>applies knowledge of basic needs and characteristics of all living things to one specific living thing with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>applies knowledge of basic needs and characteristics of all living things to one specific living thing with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>applies knowledge of basic needs and characteristics of all living things to one specific living thing with a high degree of effectiveness</li> </ul>
Transfer knowledge of needs and characteristics of living things to God's call for us to be stewards of creation	The student: <ul style="list-style-type: none"> <li>transfers knowledge of needs and characteristics of living things to God's call for us to be stewards of creation with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>transfers knowledge of needs and characteristics of living things to God's call for us to be stewards of creation with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>transfers knowledge of needs and characteristics of living things to God's call for us to be stewards of creation with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>transfers knowledge of needs and characteristics of living things to God's call for us to be stewards of creation with a high degree of effectiveness</li> </ul>
Making connections between God's call for us to be stewards of creation and the needs and characteristics of living things	The student: <ul style="list-style-type: none"> <li>makes connections between God's call for us to be stewards of creation and the needs and characteristics of living things with limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>makes connections between God's call for us to be stewards of creation and the needs and characteristics of living things with some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>makes connections between God's call for us to be stewards of creation and the needs and characteristics of living things with considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>makes connections between God's call for us to be stewards of creation and the needs and characteristics of living things with a high degree of effectiveness</li> </ul>
Propose personal action that they themselves can take to help maintain the health of God's creation	The student: <ul style="list-style-type: none"> <li>proposes course of practical action of limited effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>proposes course of practical action of some effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>proposes course of practical action of considerable effectiveness</li> </ul>	The student: <ul style="list-style-type: none"> <li>proposes highly effective course of practical action</li> </ul>