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## Lesson Plan Template

Lesson Segment Focus Energy Loss Between Living and Nonliving Things

Lesson 1 of 1

Course & topic addressed Science The Cycling of Matter and Flow of Energy

Date 1/4/19 Grade 7<sup>th</sup>

### Student Outcomes

Specific learning objectives for this lesson.	Students will understand how energy is transferred through both living and nonliving organisms, and how that energy can be lost.
Describe the connection to previous lessons. (Prior knowledge of students this builds upon)	Students will build upon their knowledge of food webs and food chains.
Knowledge of students background (personal, cultural, or community assets)	

### State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include state abbreviation and number & text of the standard.	7-LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
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### Academic Language Support

What planned instructional supports might you use to assist students to understand key academic language to express and develop their content learning? What will you do to provide varying supports for students at different levels of academic language development?	There will be a visual demonstration to show the movement of energy. This would show the loss of energy without using many words. This will also allow students at different levels to participate in the discussion.
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### Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the lesson?	Energy Pyramid, Tertiary Consumers, Secondary Consumers, Primary Consumers, Producers, Consumers, Decomposers, Herbivores, Carnivores
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## Materials

Materials needed by teacher for this lesson.	Energy Loss Diagram handout, Candy Bar, Whiteboard, and Smartboard
Materials needed by students for this lesson.	Pencil and Paper

## Lesson Timeline with Instructional Strategies & Learning Tasks (This should be VERY DETAILED)

Amount of Time	Teaching & Learning Activities	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson.
5 Minutes	<b>Introduction:</b> Bell Ringer	Students will enter the classroom and the teacher should already have the bell ringer questions wrote on the whiteboard. These questions should include: What is a Carnivore? What is an Herbivore? What are Producers? What are Consumers? These questions should trigger the students past learning experiences. The students will write down their answers. Once the teacher has given the students a few minutes to write their answers on a piece of paper, the teacher should go over the questions and allow the students discuss allowed what they have wrote as their answers.
30 Minutes	<b>Instruction:</b> Students will be introduced to the Energy Pyramid and participate in an interactive demonstration of energy loss.	<p>The teacher will hand out the energy loss diagram. She will then discuss with the students what they see. She should ask questions such as: What does this diagram show? What are some interesting things that you see? The teacher should discuss what Tertiary Consumers, Secondary Consumers, and Primary Consumers are. The teacher should encourage the students to take note of their definitions on their handouts. Next, the teacher will do a demonstration of how energy is lost through the different organisms. She will ask for volunteers. The first volunteer will represent the sun and will be given the chocolate bar. The next volunteer will represent a producer. The teacher may ask the class of an example of a producer to properly label the volunteer, for example, grass. The volunteer representing the sun will then break off about half of the candy bar and give it to the grass volunteer representing energy. The next volunteer will be the primary consumer and the producer will break off more of the candy bar and give to them. The next volunteer will be the secondary consumer and they will repeat the candy breaking process. The next volunteer will be the tertiary consumer and will get the least amount of candy or “energy.” This demonstration will show the loss of energy through both living and nonliving organisms.</p> <p style="text-align: center;"><b>Energy Loss</b>  </p>

Amount of Time	Teaching & Learning Activities	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson.
10 Minutes	<b>Closure:</b> Students will write a paragraph over what they learned in the lesson.	Students will write a quick conclusion paragraph over what they learned in the class and their experience. The teacher will use this to later assess their learning and their demonstration experience in the class.

#### Accommodations/Modifications

How might I modify instruction for:  Remediation? Intervention? IEP/504? LEP/ESL?	The teacher could modify her instruction by breaking the students up in small groups at the end of class and allowing the students that need more help to talk opening about what they have learned instead of writing the conclusion paragraph.
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#### Differentiation:

How might you provide a variety of instructional methods/tasks/instructional strategies to ensure all student needs are met?	This lesson incorporated writing, so students who are better at English can shine. While it also has elements for the students to get up and openly participate.
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#### Assessments: Formative and/or Summative

Describe the tools/procedures that will be used in this lesson to monitor students' learning of the lesson objective/s (include type of assessment & what is assessed).	<input type="checkbox"/> Formative / <input type="checkbox"/> Summative	Formative assessment is used when asking the students questions during the class, as well as having them write the summarizing paragraph.
	<input type="checkbox"/> Formative / <input type="checkbox"/> Summative	
	<input type="checkbox"/> Formative / <input type="checkbox"/> Summative	

#### Research/Theory

Identify theories or research that supports	
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the approach you used.	
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**Lesson Reflection/Evaluation**

What went well? What changes should be made? How will I use assessment data for next steps?	<i>TO BE FILLED IN AFTER TEACHING</i>
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Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

\*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1ZoJ:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&gl=us>; <http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx>;  
<http://www.mcneese.edu/f/c/9cb690d2/Lesson%20Plan%20Rubric%20Aligned%20with%20InTASC.docx>; <https://www.uwsp.edu/education/Documents/edTPA/Resource12.pdf>;  
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