

The Journey that Matters

Lesson Segment Focus: The Cycle of Matter

Lesson 1 of 1 APP: Total Recall

Course & topic addressed: Science & Matter and Energy in Organisms and Ecosystems

Date: 3-12-19 Grade: 5th

Student Outcomes

Specific learning objectives for this lesson.	• Students will learn about the movement of matter among plants, animals, decomposers, and the environment. • Students will create a model to describe the movement of matter.
Describe the connection to previous lessons. (Prior knowledge of students this builds upon)	• Students will know about ecosystems. • They will understand that plants receive materials needed for growth from air, water, and the soil.
Knowledge of students background (personal, cultural, or community assets)	Students are from a rural area and know that manure is used as plant food. They also know that cows, horses and other animals that graze eat plants as food.

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.	5-LS2-1 • Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]
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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?	The Students will have access to our class word wall for content specific vocabulary. This will included cognates for ESL students. Depending on the language supports needed by ESL and students who have need of reading supports, easier texts will be provided or text translated in the appropriate language to read side by side the text in English.
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Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the lesson?	Carbon. Nitrate. Decomposers. Consumers. Organisms. Ecosystem. Primary. Secondary. Apex. Bonds.
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Materials

Materials needed by teacher for this lesson .	Role cards for the four roles involved in Reciprocal Teaching, copies of the article “Trophic levels of food chains” for four students and herself, a screen and projector, computer, internet, the video (https://youtu.be/TitrRpMUt0I), and internet.
Materials needed by students for this lesson .	Each student will need their own school iPad, the app Total Recall, and a textbook, each student will need a pen and pencil for notes, they will also need their role card.

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.
15 minutes	Introduction: Teacher will introduce the reciprocal teaching model to the students.	The teacher will introduce the reciprocal teaching method to the students. She will explain and model the jobs of Predictor, Interrogator, Clarifier, and Summarizer. The teacher will pick out the first four students to do these jobs. Other students will have the opportunity to participate in this model later in the lesson. Students will practice this model briefly by reading the article (https://eschooltoday.com/ecosystems/ecosystem-trophic-levels.html) and going over these jobs. The teacher will give feedback on how they did on the jobs and then the lesson will start.

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.
20 minutes	<u>Instruction:</u> Teacher and students will read a textbook section on the flow of matter. Although this is at their reading level, this is somewhat complicated text as it is content specific and requires understanding of content related vocabulary. The teacher is using reciprocal teaching in order to enhance comprehension and develop the students questioning skills.	The teacher will tell the students to go to their assigned groups of four. The teacher has assigned these groups with one natural leader in each group. She will instruct this student to hand out jobs (there will be role cards provided at each table) and go back over the jobs with their fellow students. The students will read the text paragraph by paragraph out loud in their group. The students will rotate readers for each paragraph. At the end of each paragraph, the four students will do their “jobs”. The teacher will move around the room and facilitate the discussion where needed, but will try and let the students assume the main role in the lesson. The students who have jobs will do their parts. The clarifier and questioner will ask questions about the text and vocabulary, clearing up any misconceptions that may have occurred. Then the summarizer will summarize the paragraph. Next, the predictor will predict what they think the next paragraph will be about. At the end of the text, the groups will stay in their groups as the class has a discussion as a whole. The teacher will ask open ended questions that will allow her to informally assess the students’ comprehension of the text.
15 minutes	<u>Closure:</u> The teacher will close with a video and a closing project to assess the students’ comprehension of the flow of energy.	The students will turn and watch the video (https://youtu.be/TitrRpMUt0I). The teacher will then instruct the students to use the Total Recall apps in their tablets to create a model that shows the flow of energy in an ecosystem. The students will send the teacher their model when they’re finished.

Accommodations/Modifications

How might I modify instruction for: Remediation? Intervention? IEP/504? LEP/ESL?	This method of teaching has been proven in research to help ESL and special education students with reading comprehension. The word wall is also a modification.
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Differentiation:

How might you provide a variety of instructional methods/tasks/instructional strategies to ensure all student needs are met?	Students could be placed in special groups that had a different level of text or bilingual text. The group placements should also help students be able to interact and get help from their fellow students. The word wall and video are also forms of differentiation.
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Assessments: Formative and/or Summative

Research/Theory

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).	☒ Formative ☐ Summative	The students will create a model of the flow of matter in Total Recall.
	☒ Formative ☐ Summative	The teacher will listen to discussion and take notes on the students' comprehension and critical thinking skills.
	☐ Formative ☐ Summative	
Identify theories or research that supports the approach you used.	Klinger and Vaughn used this model to improve comprehension in students. They implied that these methods would be effective in general education classrooms that have special education or ESL students.	

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> N/A
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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>; <https://www.uwsp.edu/education/Documents/edTPA/>

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