materials for the arts

Science: Ecosystems

Teacher: Geluna Karki
Grade: 3 or 4

	EXPLANATION
AIM or OBJECTIVE	The students will be able to create their own coral reef and learn about the endangered ecosystem.
NYS STANDARDS	**3rd and 4th Grade English Language Arts Common Core Standards** **Key Ideas and Details:** CCSS.ELA-Literacy.RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. CCSS.ELA-Literacy.RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text. **Craft and Structure:** CCSS.ELA-Literacy.RI.3.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently. CCSS.ELA-Literacy.RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text. **Grades K-4: NYS Visual Arts Standards and Performance Indicators** **Standard #1: Creating, Performing, and Participating in the Arts** Students develop their own ideas and images through exploration and creation of artworks based on themes, symbols and events. Students identify and use, in individual and group experiences, some of the roles and means for designing, producing and exhibiting artworks. **Standard #2: Knowing and Using Art Materials and Resources** Students understand the characteristics of various mediums *(2D, 3D and electronic images)* in order to select those that are appropriate for their purposes and intents.
MATERIALS/ RESOURCES/ TECHNOLOGY	Book called Coral Reefs by Gail Gibbons Chart paper with several different colorful illustrations of coral reefs Pencil and eraser Scissor Construction Paper Colorful Tissue Paper Glue stick Tape Crayons, markers, and water colors Paint brushes Plastic cups to hold water Internet Access to Brainpop: http://www.brainpop.com/science/diversityoflife/coral/

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VOCABULARY	Coral reef, ecosystem, endangered, conserve
PROCEDURE and PRACTICE	*This lesson is part of a week-long Earth Day Unit.* 1) Students will be asked to come to the back rug area of the classroom. 2) I will write the aim on the dry erase board: The students will be able to create their own coral reef and learn about the endangered ecosystem. 3) I will set the stage by informing students that besides Mount Everest and the Great Wall of China (these are things that the students have previously learned), the Great Barrier Reef in Australia can be seen by the astronauts from outer space because they are so large. I will then read the book Coral Reefs by Gail Gibbons. During the read aloud, I will also go over the vocabulary words like coral reef, ecosystem, endangered, and conserve. I will talk to them about why their ecosystem is endangered, and what people are doing to conserve them. I will also show the video that teaches about coral reef from Brainpop Website. 4) After that, I will inform the students that we will be making their own coral reef. 5) I will ask my student helpers to distribute the art materials (pencil and eraser, scissor, construction paper, colorful tissue paper, glue stick, tape, salt, crayons, markers, and water colors, paint brushes and plastic cups to hold water) as the students go back to their table. 6) Then I will share the chart paper with several different colorful illustrations of coral reefs with the students so they can get inspired while making their coral reef. 7) Next, I will begin by demonstrating how to draw the seaweed and coral on the ocean bed with crayons. I want them to observe how the texture changes when I paint over the entire page with watercolor. The wax of the crayons creates a special effect when mixed with the watercolor. I will use torn, crumpled tissue paper and use glue stick to decorate some of the corals. I will take another sheet of construction paper and draw fish, starfish and seahorses. I will color them and cut them out. Finally, I will stick them in the coral reef paper to create a 3-D effect. 8) After the demonstration is over, I will then ask the students to create their own coral reef. 9) When all the students are done with their coral reef design, I will ask the students to tape each of their coral reefs with the entire class so they can form one giant coral reef design to share with the school.
MODIFIC-ATIONS	Since it is a self-contained class, to differentiate, I will ask some students to write descriptions of where corals are found and what conditions they need to survive.
INFORMAL ASSESSMENT	I will ask the students what we are doing that is hurting the coral and the coral reefs.
CLOSING	I will close the lesson by asking students to share their thoughts about why it is important to conserve the coral reef ecosystem.
FOLLOW-UP	Teach about preserving the Rain Forest.
FORMAL ASSESSMENT	I will hand them student assessment sheets that will assess if they have mastered the concept of the activity.
REFERENCES	**Book:** Coral Reefs by Gail Gibbons **New York City Connection**: Trip to New York Aquarium **Website:** http://www.brainpop.com/science/diversityoflife/coral/