

Reduce. Reuse. Recycle.

Grade Level: 5

Subject Area: Science, English, Technology and Art

Short Description:

In this lesson, students will be presented with the idea of reduce, reuse, recycle and formulate a solution to how as a school, we can reduce our waste and disposals. They will make several advertisements to promote these concepts to the school for Earth Day, April 22. Students will research and formulate different projects making awareness posters and school advertisements.

Standards

State Curriculum Standards met in this lesson:

Science

- 5.7 The student will investigate and understand how the Earth's surface is constantly changing. Key concepts include
- e) weathering and erosion; and
 - f) human impact.

English

- 5.1 The student will listen, draw conclusions, and share responses in subject-related group learning activities.
- a) Participate in and contribute to discussions across content areas.
 - b) Organize information to present reports of group activities.
 - c) Summarize information gathered in group activities.
- 5.2 The student will use effective nonverbal communication skills.
- a) Maintain eye contact with listeners.
 - b) Use gestures to support, accentuate, and dramatize verbal message.
 - c) Use facial expressions to support and dramatize verbal message.
 - d) Use posture appropriate for communication setting.
- 5.3 The student will make planned oral presentations.
- a) Determine appropriate content for audience.
 - b) Organize content sequentially or around major ideas.
 - c) Summarize main points before or after presentation.
 - d) Incorporate visual aids to support the presentation.
 - e) Use grammatically correct language and specific vocabulary.
- 5.8 The student will write for a variety of purposes: to describe, to inform, to entertain, and to explain.
- a) Choose planning strategies for various writing purposes.
 - b) Organize information.
 - c) Demonstrate awareness of intended audience.

- d) Use precise and descriptive vocabulary to create tone and voice.
- e) Vary sentence structure.
- f) Revise writing for clarity.
- g) Use available technology to access information.

Art

- 5.3 The student will use the elements of art—line, shape, form, color, value, texture, and space—to express ideas, images, and emotions.
- 5.7 The student will collaborate with others to produce a work of art that characterizes a historical time period.
- 5.8 The student will defend a position regarding a historical or contemporary issue through the production of a work of art.
- 5.9 The student will demonstrate an understanding of symbolic meanings by incorporating symbols
- 5.12 The student will express ideas through artistic choices of media, techniques, and subject matter.

Computer Technology

- C/T 3-5.2 The student will demonstrate proficiency in the use of technology.
- Use skills and procedures needed to operate various technologies such as scanners, digital cameras and hand-held computers.
 - Identify basic software applications such as word processing, databases, and spreadsheets.
- C/T 3-5.4 The student will practice responsible use of technology systems, information, and software.
- Understand the need for the school division's acceptable use policy.
 - Discuss the rationale of fair use and copyright regulations.
 - Follow rules for personal safety when using the Internet.
- C/T 3-5.5 The student will demonstrate knowledge of technologies that support collaboration, personal pursuits, and productivity.
- Work collaboratively when using technology.
 - Practice and communicate respect for people, equipment, and resources.
 - Understand how technology expands opportunities for learning.
- C/T 3-5.7 The student will use technology resources for solving problems and making informed decisions.
- Determine when technology tools are appropriate to solve a problem and make a decision.
 - Select resources to solve problems and make informed decisions.
- C/T 3-5.8 The student will use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- Produce documents demonstrating the ability to edit, reformat, and integrate various software tools.
 - Use technology tools for individual and collaborative writing, communication, and

publishing activities.

- Use telecommunication tools to communicate and share information with others.

Instructional Outcomes:

- understand the importance of reduce, reuse, recycle.
- differentiate between trash and recyclables.
- describe how people change the Earth's surface and how negative changes can be controlled.
- participate as active listeners in group learning activities
- use their organizational skills in preparing, presenting, and summarizing information gathered in group activities.
- understand how gestures, facial expressions, posture, and body language affect delivery of the message.
- select and organize information when preparing for an oral presentation
- use visual aids when preparing for an oral presentation.
- plan and organize information as they write for a variety of purposes
- Demonstrate the different elements of art.
- Use skills and procedures needed to operate various technologies such as scanners, digital cameras and hand-held computers.

Enduring Understandings/Essential Knowledge:

- Humans have varying degrees of impact on the Earth's surface through their everyday activities. With careful planning, the impact on the land can be controlled.
- Students will be active participants in discussions across content areas. They will become able to assume the role of the speaker and the role of the listener.
- Students will refine their organizational skills in preparing, presenting, and summarizing information gathered in group activities.
- Students will also become able to summarize their own material prior to delivering a presentation.
- Students will enhance their oral presentations with appropriate body language, correct posture, and eye contact with listeners.
- Students will begin to use dramatic gestures and facial expressions that are suitable to the content

and the audience.

- Students will organize their thoughts and choose appropriate vocabulary to convey their message effectively.
- **Voice** shows an author's personality, awareness of audience, and passion for his or her subject. It adds liveliness and energy to writing.
- The three domains of writing are:
- **composing** – the structuring and elaborating a writer does to construct an effective message for readers
- **written expression** – those features that show the writer purposefully shaping and controlling language to affect readers
- **usage/mechanics** – the features that cause written language to be acceptable and effective for standard discourse.
- Students will work to gain more control over the conventions of writing, including composing effective sentences, spelling, capitalization, and punctuation.
- Students will also identify the following parts of speech: nouns, pronouns, verbs, adjectives, adverbs, prepositions, and interjections.

Essential Questions:

- How often do you and your family recycle?
- Do you feel as if our school is trying to make a difference in our waste disposals?
- Do you know the difference between things that can be recycled and things that should be trashed?
- Why is it important that we use the three Rs?
- How is the Earth affected by not recycling?
- What are some things that you think you can do to help?
- How could we promote recycle, reduce, and reuse?
- How might we prove that waste has become a problem?

Procedures

Lesson Set:

To begin the lesson, dump out a trashcan full of trash and recyclables onto a table or a desk where the whole class can see all of the contents. This should be a trash can you have put together yourself, this

way there are not any unsuspected items! Ask the students if all of these items should have been trashed. Pull out a blue recycle bin or a box that is labeled “RECYCLE”. Together, go through the items and separate what should be trash and what should be recycled. Afterwards, compare the two bins to see how much you have taken from the trash pile. Make sure to have more recyclables than trash. Mainly paper because it is the number one most trashed item! This will soon tie into the lesson. Have students fill out a KWL chart to get an idea on their knowledge on the subject.

Rationale:

In this lesson, students will be brought back to the concept of reduce, reuse, recycle. They will be encouraged to promote reducing, reusing, and recycling throughout the school and the community.

Techniques and Activities:

1. *Break the class into groups of four. This should give you about 5 to six groups. You do not want groups with more than five. If more groups are needed, add them.*
2. *Show and display pictures of various landfills here in Hampton Roads.*
3. *Explain to students how big of a problem this has become and out action is required to help the Earth.*
4. *Explain to the students that they will be conducting a service learning project as a group to promote Earth Day and reducing, reusing and recycling.*
5. *Hand out assignment sheet to each student along with rubrics for assessment. This sheet will explain the activities that are going to be done over the week. There will be two activities completed as a group and one individual advertisement.*
6. *Review assignment sheet with the class. Make sure to read word for word so students can get a good understanding of what is expected of them. The first project consists of research about the Earth’s waste and what we can do to reduce it. The second will be an advertisement made by each student on one object that can be reused in several different ways. The third will be a paper recycling box for important places within the school (Library, office...). And the final project will consist of a video made by the group to promote reducing, reusing, recycling.*
7. *Allow time for questions.*
8. *Each student will be given a role within the group to make sure that everyone is actively participating. Roles will be as followed: Researcher, Reporter, Investigator, and Illustrator. More roles can be made for extra students. Example: Editor*
9. *Allow students a minute in their group to decide who will do what. If there is confusion, step in and assign the roles yourself.*

10. Allow students about 15 to 20 minutes to research the web, textbooks, or any resources provided by the teacher. They should be looking for statistics, examples, ideas, or anything that can help them become more aware of how important it is to recycle, reduce, and reuse. They are able to work within their groups but each student needs to document their own research and information.

11. Allow the students to write a mini reflection, approximately one paragraph, on what needs to be done to make a change in their journals and have them list recyclable items and things that they could possibly be turned into for everyday usage. This should only take about 5 to 10 minutes. Make sure to make yourself available for any questions or for students who may be stuck.

Next Day:

12. Make sure to have all your supplies available for today.(6-10 clean, medium-sized, cardboard boxes, paint, paper plates, paintbrushes, cups with water, paper towels, and lots of newspaper). Students will be working on art to compose paper recycle boxes to be placed throughout the school. To make it easier on yourself, place everything needed for each group in a box. This way, students can quickly get their supplies when it is time for the activity to take place.

13. Have students come together in their groups.

14. Explain to them that they will be decorating and illustrating the cardboard boxes for paper recycling due to that fact that lots of paper is thrown away verses being recycled.

15. Show the students an example of what you expect for them. This should be a previous project or one composed by the teacher.

16. Advise the students that this project should be inspired by mother nature and Earth Day. Their final projects should illustrate that.

17. Have the students call out what they think of when they think about the Earth and saving the planet. Explain to them this is the importance of this project. Advise students upon completion of their box, they will have to complete an individual advertisement for an item that can be reused.

18. Show and place “Jelly Jar” flyer on the board so students have an idea of what you are looking for. The poster should contain illustrations and dialogue that reach out to the students’ peers.

19. Have one student from each group gather a box of materials.

20. Advise the students to cover all space on the table before pulling out all supplies.

21. Give the students 30 minutes to work on painting their boxes as a group.

22. Upon completion, each student will be allowed time to compose their own individual advertisement. The final projects will be placed throughout the school.

23. Each completed box and poster should be placed in a designated area to dry.
24. Have students gather and put away all materials where they should be located. Paint brushes should be washed out, desks should be cleared, and all trash properly disposed of.
25. After the class is back to order, allow students 10-15 minutes to formulate an idea for a video advertisement. Make sure all students are taking notes in their journals and documenting all ideas for their final project.

Next Day:

26. Advise students to come together in their groups and finalize the script for their advertisement. One student should document the schedule for the video to be turned into the teacher for review. Allow students about 15-20 minutes to work.
27. Make sure to let students know that their final video must be no shorter than 45 seconds and no longer than a minute and 15 seconds. It must be quick, entertaining, and straight to the point.
28. Go from group to group to get an idea of how their finalization process is coming. Pose questions to challenge students' abilities and give constructive criticism when needed. Remember this video is geared towards other children in the school, so students need to focus on their audience.
29. Once students begin to complete their script, allow them time to practice QUIETLY, in different sections of the class. This helps give early finishers practice and allows other students a chance to complete the assignment.
30. The teacher should tape recordings during recess or any free time allotted within the classroom schedule. This should take no longer than 20 minutes seeing students have already practiced their scripts. You want to make sure you record these videos while some other form of instruction or free time is being taken place, this way all students have something to do!
31. Gather each group individually and make sure everyone is prepared to do their take. Allow students enough takes to get a good advertisement.
32. Upon completions, these advertisements will be used to play on the morning announcements. Each week during April, a groups' video will be featured during the announcements to promote the importance of reducing, reusing and recycling!

Lesson Closure:

Upon completion of the videos. The teacher should download them all into one disc. This disc should be brought to class for viewing and critiquing the next day. Students will be given a rubric to grade each other's final advertisement video. The videos should be played then students should be allowed a minute or two to fill out the rubric for assessment. Make sure to collect all student feedback. Ask students how they will promote Earth Day? What have they learned from their research? What new techniques did they learn about recycling, reducing, and reusing?

Assessment/Evaluation:

Students will receive a final grade on the project from various activities from the service learning project. They will be expected to have followed the rubric and will be graded on how each component. Their writing journals will be reviewed for participation to make sure that all students were actively participating in the project. The final work of art will be graded for its creativity and collaboration. Advertisements placed around the school will be graded for content. The groups' video will be graded as well. Parts of final grade will be as follow:

Group Video: 30%

Individual Advertisement: 20%

Writing Journal: 20%

Participation: 10%

Paper Recycle Box: 10%

Feedback will be given throughout the whole project by the teacher. From observations teacher should be able to tell students what they are looking for and they are following directions properly. Upon completion of the whole service learning project, students will receive a rubric with a breakdown of how they received the grade they did.

Student Products:

- Recycle Bins
- Participate in a service learning project
- Resolve a global problem in a smaller location
- Critique peers final presentation
- Advertisements
- Group Videos
- Group Presentation

- Conduct research

Supplemental Activities:

- Students will be given the comic Adventures of the Garbage Gremlin to relate to the lesson.
- Students will be allowed to work on provided website to enhance their knowledge on recycle, reduce, and reuse. These websites challenge students to formulate plans to reduce the waste in their own city.
- If working on an art day, students should be allowed to compose a piece of art made of recycled goods provided by the teacher.

Adaptations for Special Learners:

Describe how you will adapt the instructional learning strategies for learners with special needs-learners with disabilities, ESL students, and gifted learners.

ESL:

- When reviewing directions with the class write directions on the board.
- Show examples of what you expect from the students. By showing a paper recycle box you made and an example of “Jelly Jar” advertisements, students can get an idea of what is expected.
- Provide extra time to complete assignments
- Provide one-on-one time, or group assistance in brainstorming, writing, and creation phase of students.
- Instead of writing a short paragraph for reflection, consider having student write a few sentences or make an illustration.

Disabilities:

- When reviewing directions with the class write directions on the board.
- Show examples of what you expect from the students. By showing a paper recycle box you made and an example of “Jelly Jar” advertisements, students can get an idea of what is expected.
- Provide extra time to complete assignments
- Provide one-on-one time, or group assistance in brainstorming, writing, and creation phase of students.
- Provide assignment sheet and rubrics
- Have students repeat back directions after they have been given to make sure they understand what is expected.
- Reduce amount of writing and giving them the option of typing on the computer if needed.
- Allow to work with a “buddy” to complete project.

Gifted:

- Create graphs or charts with statistical research found within group.

- *Lead students in the thought process of the script for their advertisements.*
- *Allow students to generate a school plan to decrease waste.*

Differentiated Instruction:

- *Flexible grouping- the students will be placed in mixed groups based on their ability level. Since this is a project that involves different products of several subjects, students with different strengths should be involved within the groups.*
- *Varied resources- since computer and internet resources may not be readily available, handouts and research should be provided for students to use to help with their assignment.*
- *Each student will be assigned different roles within their group.*
- *Inquiry-Based Learning-students are given the challenge of the service learning project of promoting recycle, reduce, and reuse within there school.*

Resources

Materials and resources needed for this lesson.

1. Resources for students to use for research (Links attached)
2. Medium to large recycled cardboard boxes from school or local grocery store
3. Glue
4. Paint
5. Scissors
6. Student writing journals
7. Pens
8. Pencils
9. Markers
10. Paintbrushes
11. Newspaper...LOTS!
12. Small Styrofoam cups
13. Paper Towels
14. Tissue paper
15. Writing Journals
16. Rubrics
17. Assignment Sheets
18. Art samples
19. Flyer samples

Technology resources needed for this lesson

1. Computer
2. Digital camera with recording option
3. Projection screen
4. Telecommunication System (Used for student announcements)

Web Addresses needed for this lesson:

1. <http://www.epa.gov/osw/education/kids/gremlin/gremlin.pdf> - HW reading
2. <http://www.epa.gov/osw/education/kids/games/crossword/index.htm> - Waste No Words, game for early finishers.
3. <http://www.epa.gov/osw/education/pdfs/jjposter.pdf> - Example of a reuse poster
4. <http://www.epa.gov/epawaste/education/kids/space/index.htm> - N. Trubble and the Environauts
5. <http://www.epa.gov/osw/wycd/catbook/index.htm> - resource for students research