

LESSON 11: A Class or School Game and Reuse Day

LESSON'S CONCEPT

Reusing materials helps to conserve natural resources and landfill space.

PURPOSE

To provide students with experiences in reusing by having them organize a class or school “Game and Reuse Day.”

OVERVIEW

In this lesson students will:

- Name organizations and events that facilitate the reuse of old items.
- Work in groups to develop a game made out of discarded materials.
- Participate in an auction in which items brought to class by students are auctioned off.
- Organize a class or school “Game and Reuse Day” when games made out of discarded materials will be played and reusable books and toys brought by students will be won, bartered, sold, or exchanged.

CORRELATIONS TO CALIFORNIA'S CONTENT STANDARDS AND FRAMEWORKS

- Students work in groups to develop a game out of discarded materials. They describe in writing the directions for making the game and the rules for playing it.
 - Students “write expository compositions (e.g., description, explanation . . .).” (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 38)
 - “Students create original artworks based on personal experiences or responses.” (*Visual and Performing Arts Framework, Visual Arts Education: Creative Expression Component, Goal 4*, page 101)

- Students organize a class or school “Game and Reuse Day.” They visit other classes and advertise the event.
 - Students “deliver informative presentations about an important . . . event . . .” (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 34)
- Students write a persuasive letter or composition about the “Game and Reuse Day,” stating why it should or should not be organized next year.
 - Students “write persuasive letters or compositions.” (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 31)

SCIENTIFIC THINKING PROCESSES

observing, communicating, comparing, relating

TIME

20–30 minutes to prepare for the lesson; 45–60 minutes per day for five days to implement the lesson (to make the games and to play them)

VOCABULARY

Have the class select one or two vocabulary words from this lesson.

PREPARATION

1. Read the “Background Information for the Teacher” at the end of this lesson.
2. For the class auction, ask students to bring in one item to be auctioned.

They should get permission from their parent or guardian to donate it for the class auction.

- 3. For the reuse day, ask students to bring in books and toys (no more than five items per student) from home that they or their family members no longer want. Send a letter to parents and guardians home with students explaining the reuse project. (An example of a letter is provided in this lesson.)
- 4. Obtain several items (e.g., pencils, pens, books, and other items that students would want) to auction off in class.
- 5. Make copies of “A Plan for a Game Using Discarded Materials” for each group of two or three students (page 437).
- 6. If a school-wide event will be implemented, locate a place in which to conduct the games and the toy and book exchange, and obtain permission from school officials. If only a class event will be implemented, obtain permission from school officials to conduct this event in your classroom.

MATERIALS

For “Part I, Designing Games Made from Reused Materials”

- Art materials, such as water-based paints, paintbrushes, glue, masking tape, rubber bands, pipe cleaners, rulers, scissors
- Discarded materials from which to make games, such as:
 - Paper (e.g., colored construction, tissue, bags, newspapers, magazines, wall paper, shelf paper, envelopes, cardboard rolls from paper towels)
 - A variety of boxes (e.g., from cereals, shoes, laundry detergent; egg cartons; other cardboard boxes)
 - Plastic containers (e.g., shampoo bottles, 2-liter soda bottles, gallon water bottles, yogurt containers, margarine tubs)
 - Cans (aluminum and steel)
 - Textiles (e.g., towels, sheets, other fabrics, socks, ribbons, buttons)
 - Miscellaneous items, some of which might not be discarded items (e.g., popsicle sticks, string, balls)
- A copy of “A Plan for a Game Using Discarded Materials” for each group of two or three students

Note: The exact materials required will depend on the types of games that students will be making.

For “Part II, Participating in a Class Auction”

- Several items that students would want that can be used for the example of a classroom auction (e.g., pencils, pens, books)
- Items that students brought in for the class auction
- Ten pieces of scrap paper for each student to use as “money” during the auction

For “Part III, Organizing a Class or School Game and Reuse Day”

- Books and toys that students brought in for the reuse day
- Materials to publicize the event and for making signs at the event
- Ten pieces of scrap paper for each item brought by students to use during the “School Game and Reuse Day”

PRE-ACTIVITY QUESTIONS

A. Ask students:

- How is throwing away things that could be reused a waste? *They usually end up in a landfill and will not be used again; therefore, the natural resources used to make the items are wasted.*
- What are some things you no longer use that someone else could use?
- What events facilitate the reuse of old items? *Garage sales, flea markets.*
- What organizations facilitate the reuse of old items? *Churches and other charitable organizations, such as Goodwill, Salvation Army, Red Cross, Humane Society.*
- What other ways can we get items reused? *Individual exchanges, notification on bulletin boards or on the internet, donations to secondhand stores.*

B. Discuss with students:

- What could we do as a class to make sure that the items we no longer want get reused?
- What events can we organize that reuses items? *Emphasize trading as a partial solution to decrease our solid waste and as a way to conserve natural resources.*

Suggest to students that a “game day” could be organized. For the “game day” they can make games from reused products and use some of the items brought in by students as prizes.

- Do we want to organize such an event?

PROCEDURE

Note: If students do not want to organize a school-wide “Game and Reuse Day,” they can still make the games to play in their classroom and organize a reuse day only for their class.

Part I, Designing Games Made from Reused Materials

- A. Tell students that they will be designing county fair-type games from reused materials.
 - Brainstorm with students games they have played at a county fair that were not computer games.
 - List their ideas on the chalkboard. (Some ideas for games are listed in section “B.”)
- B. Have students work in groups of two or three to design games from reused materials. Groups can select an idea from the brainstormed list or come up with one on their own.

Note: If a school-wide “Game and Reuse Day” will be organized, then these games need to be large enough to be set up on the school grounds for other students to play.

Examples of games are listed below:

- **Ring tossing.** Use a broomstick; or cut out of cardboard the shape of deer antlers or an octopus with arms sticking up; make rings out of cardboard to toss on the broomstick, antlers, or octopus arms.
- **Bean bag tossing.** Make a large frog out of cardboard and cut a hole for the mouth; make bean bags on which insects are painted to toss into the frog’s mouth.
- **Tossing an item through a hoop.** Make a hoop from a wire coat hanger; make the toss items out of discarded materials.
- **Bowling.** Make bowling pins by decorating paper towel rolls and filling them half full with heavy discarded materials to weigh them down; use a ball or bean bag to knock down the pins. Bowling pins can also be made from two-liter beverage

containers.

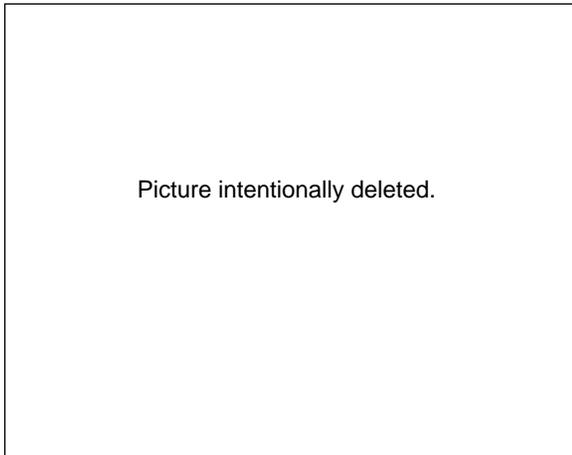
- **Fishing.** Attach string or yarn to a dowel; attach the other end of the string to a paper clip and bend the paper clip to make a hook; make cutouts of fish and add a base to them; punch a hole on top of the fish so the fish can be hooked by the hook on the line. Or, if you do not want to make a base for the fish, glue a paper clip to the mouth of the fish and bend the paper clip upward so that the fishing hook on the line can hook the fish that is lying on its side.
 - **Tossing an item into a cup.** Decorate egg cartons and use them for making caterpillars, trains, and flowers. Make sure that the egg depressions are facing up. Toss a bottle cap into a depression in an egg carton for a prize.
 - **Knocking down buildings and other items.** Build a village and make boats, trucks, or trains from various sizes of milk cartons and plastic beverage bottles. Use straws for axles and derricks. Use spools, buttons, or milk carton circles for wheels. Cut openings for windows and doors. Use a cord, knotted at one end, and string it through several milk cartons to make a train. Make bean bags to knock over buildings, trucks, or trains for prizes.
 - **Playing marbles.** Make small figures out of cardboard; paint straight lines inside a shallow box and set the figures at the end of each line. Use a marble to knock down the figures.
- C. Once students have selected a game to construct, ask them to complete a project sheet, “A Plan for a Game Using Discarded Materials.” They should include on the sheet what they are going to make, what it will look like, how they will make it, the materials they will need to make it, and the rules of the game.
 - D. Students should bring in and organize all their materials. Send a letter home explaining to the parents what the class is doing and how they can assist.
 - E. When students have completed making their games, allow the class to try all of the games and encourage students to make recommendations for improvement. You might want to have the students in each group decide

whether they will incorporate these recommendations.

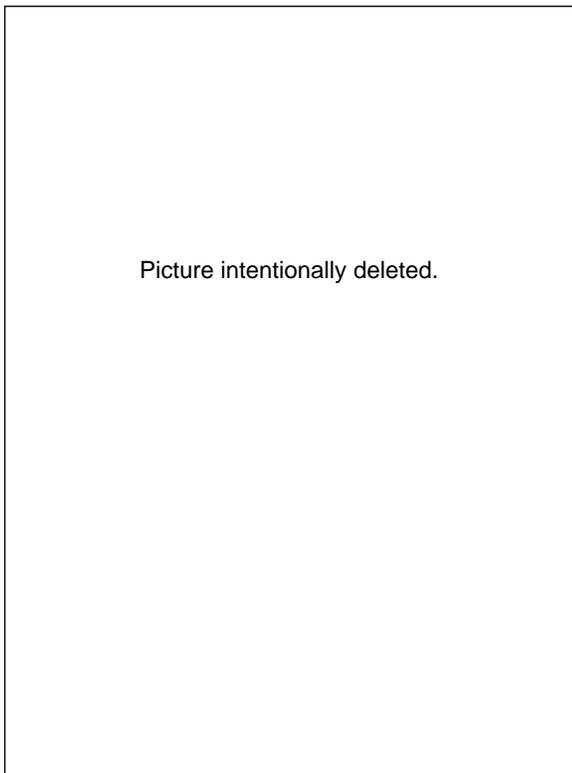
Part II, Participating in a Class Auction

- A. Stand in front of the class with the items that would be attractive to your students. Announce that you are from the “Three Rs Auctioneers.” Put on your best auctioneer’s hat and start an enthusiastic round of bidding, pitching heavily on the value of the first item. Tell students that since this is

Milk Jug Toss



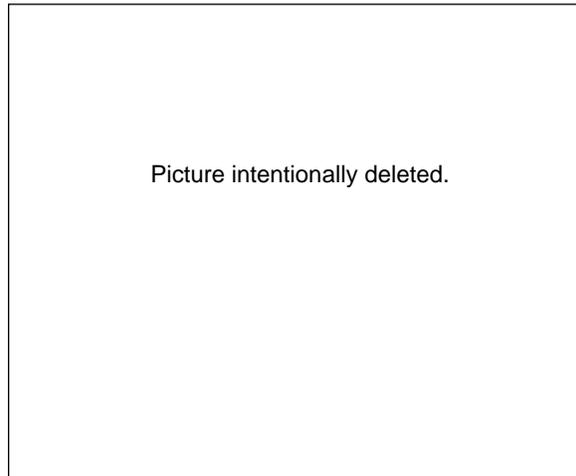
Tray Toss



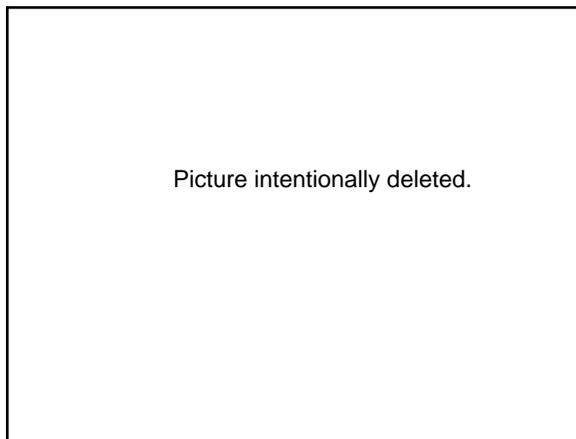
only a trial run, bidding for this item will not count. Ask students to describe how an auction works.

- Hold up different items that you brought for students and pitch each item’s value. See what the class thinks they are worth. After displaying several items and advertising their worth, proceed with the auction.
 - Provide ten pieces of scrap paper to each student to represent \$10. Auction one item that you got for students. Then have a student volunteer auction off another item. Continue the auction, allowing different students to be auctioneers, until all items have been auctioned off.
- B. Use the items that students brought to be auctioned (see “Preparation” step “1”).

Cartoon Toss



Can Bowling



Examples of games submitted by Janet Cohen’s sixth-grade students at Gold Trail Elementary School, Gold Trail Union School District.

(Use school's letterhead.)

Dear Parent or Guardian,

Please read the following information with your child:

As part of our study on reducing and reusing, we will be making games out of discarded materials. These games will be played at a school "Game and Reuse Day" on _____. Your child will be gathering materials for a game that his or her group has selected to design. Please help your child gather the materials needed for the game. The materials should be articles that were going to be thrown out, such as egg and milk cartons, paper towel rolls, and cardboard boxes. All containers should be rinsed well.

In addition, we will be having a class auction. Please send one item that can be auctioned in class. Each student will receive tokens to use to bid at the auction. No money will be exchanged.

Also, we will be having a book and toy exchange at the "Game and Reuse Day." If possible, please send books and toys (but no more than five items) to school with your child by _____.

Thank you,

- Give ten pieces of scrap paper to everyone who brought an item.
 - Hold a classroom auction, using the scrap paper for money.
- C. When the auction is over, ask students what they thought about the auction. Discuss with students:
- What was the thing about the auction that impressed you the most?
 - What can we do differently next time to improve our class auction?
- Part III, Organizing a Class or School Game and Reuse Day**
- Note:* It is important that students do all the organizing of this event. Avoid the urge to do the work yourself. The teacher's role should be that of a facilitator, guiding the students as they do the work. Additional information and issues to consider concerning the class or school "Game and Reuse Day" are listed in the "Background Information for the Teacher."
- A. Determine the scope of the class or school "Game and Reuse Day." Will this event include only your class or several classes that are implementing this curriculum, or will this be a school-wide event?
- B. Obtain permission from the administrators.
- Acquire parental permission to trade objects for tokens or for other objects.
 - Determine the date the event will be held.
 - Determine what time of the day the event will be held (e.g., recess, lunch time, after school, during school).
 - Identify the exact location of the event.
 - List materials and other needs (e.g., tables, electricity, or water at the site) for the event.
 - Select an area where students can bring in the items on the day of the event.
 - Make signs to provide directions for the event.
 - Make "money" or tokens out of scrap paper.
 - Set up a first-aid station.
- B. After the logistics are worked out, and if other classes will be involved, ask your students to go to different classes and advertise the event, asking that each student in all other classes bring books and toys for the exchange (up to five items).

- C. On the day of the event, have your students:
- Give each student ten tokens for each item they bring. Students can also choose not to sell their item for tokens but, instead, trade an item directly for another item. They can also use tokens or aluminum cans to play a game.
 - Set up a bargaining table where students can exchange items.
 - Make a list of items that are brought in. This information will be used in the “Application” section “A.”
 - Select items (this can be done randomly so that all participants are treated fairly) which will be used as prizes for each game. Prizes can also be made from re-used materials (e.g., milk carton planters with plants in them).

DISCUSSION/QUESTIONS

Discuss with students:

- Why is reusing items considered a better waste management action than recycling?
Reusing does not require the energy and resources needed to collect and recycle items into new items.
- Are new things always better than used things? Are new models always better than older models? Explain your answer.
- How can a value be placed on each item? How do you decide how much something is worth? How do you decide what someone else might pay for it?

APPLICATION

- Have students keep a list of what was traded and have them describe what natural resources were conserved as a result of conducting the school “Game and Reuse Day.”
- Have students determine what to do with any leftover items from the school game and waste exchange day. For example, the items could be donated to charitable organizations.
- Once the “Game and Reuse Day” is over, discuss with students what to do with the games that they designed.
- Ask students to write a persuasive letter or composition about the “Game and Reuse Day” stating why it should or should not be organized next year.

Project Idea: Have students organize a conserva-

tion and recycling fair to provide information on recycling and fun for the community.

EXTENSIONS

- Conduct a school-wide contest for inventing games. A team of students can write up criteria for selecting games that will be used for the game day. All students creating games should be informed of these criteria. A variety of categories can be selected and recognition given to students winning in each category.
- Assign students to write want ads. They can put in requests for items for which they are looking; e.g., willing to exchange “X” item for “Y” item.
- Encourage students to explore the history of bartering. How was it used by Native Americans and Euro-Americans in the seventeenth, eighteenth, and nineteenth centuries? Students could conduct a research project on the history of bartering, selecting a specific time period or a specific region on which to focus. Then have students present their findings.
- Organize a reusable items drive and donate the things collected to a charitable organization.

RESOURCES

Books

Milne, Lyndsay. *Fun Factory: Games and Toys from Household Junk*. Westport, Conn.: Reader’s Digest Young Families, 1995.

Contains great ideas for organizing a play day, using reused materials.

Pfiffner, George. *Earth-Friendly Outdoor Fun: How to Make Fabulous Games, Gardens, and Other Projects from Reusable Objects*. New York: John Wiley & Sons, Inc., 1996.

Shows how to make games from discarded items.

Name(s): _____ Date: _____

A PLAN FOR A GAME USING DISCARDED MATERIALS

Name of the game: _____

1. Describe the game: _____

2. Describe how you will make the game: _____

3. List the materials you need for the game: _____

4. On the back of this sheet, please describe the rules of the game.

4-6 Module
Unit 2

BACKGROUND INFORMATION FOR THE TEACHER

Reusing items is part of waste prevention and is an important action for reducing waste. There are dozens of ways that we can give common discards a second life. Only an awareness of the possibilities and the willingness to be creative are required.

Logistics for the Class or School “Game and Reuse Day”

Organizing a class or school “Game and Reuse Day” can be an extremely useful and educational activity. Before undertaking this project, a number of key questions should be answered about how it will work. The students should be asked about how to select and to manage the many possible parts. Consider the following questions and issues:

- Who will need to be contacted to obtain permission to organize this event? (This is usually the principal and the superintendent and sometimes the school governing board.)
- Will the exchange be a single event or a program lasting a few weeks or months?
- What will be the parameters of exchange; i.e., what is acceptable to bring in? (For example, for the first event, students can bring only toys and books.)
- What will be the “rate of exchange?” (For example, “tokens” can be given for each toy and book, but no more than five items can be brought in by each student. Students could also choose to make an even exchange of one item for another item. Students could win prizes by playing the various games. Tokens and aluminum cans can be used as payment to play each game.)
- What will happen to items not selected, won, or “bought”? (Items could be taken back by students bringing them; an auction could be held, using tokens or aluminum cans for

bidding; or, where appropriate, the leftover items could be taken to a charitable organization or secondhand store.)

- Can students donate items without taking something? (Students could receive tokens, which they can use to play the games.)
- How can you ensure that the event will not be a “dumping ground” for items no one would want? (One way is to limit the number of toys and books to no more than five items per student. Also, there could be “quality control” by a group of students who decide whether an item is acceptable.)
- What could be done if students cannot bring items to exchange? (Teachers or other adults could bring some items for these students.)
- How could parental permission for exchange items be managed? (A letter to parents and guardians could be sent home; students could also draft an official books and toys exchange form with a sign-off blank for parents or guardians; parents and guardians could be asked to participate in the event.)
- Who will manage this event? (The students should be doing most of the work, while teachers and parent volunteers act as guides.)

Whatever form the final program takes, it is important to establish some basic parameters for what is acceptable at the exchange, as defined by students. These should be described in writing and approved by all participants in the event.

If the reuse program is continued, it could be conducted during regular hours on specified dates. The program could be also continue and be run like a school store, managed by students, but with the exception that no money changes hands for the items.