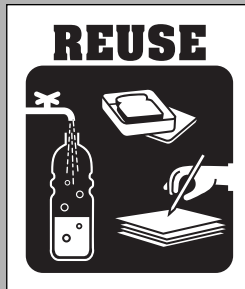


Reuse Choices



OBJECTIVES:

Students will:

1. make group decisions about different ways to reuse things.
2. list three ways to reuse at least three items.



STANDARDS: Science



SKILLS: Analysis, classification, description, problem solving



SETTING: Classroom



TIME: 40 minutes



VOCABULARY:

Recycling bin
Reuse

Introduction

Overview:

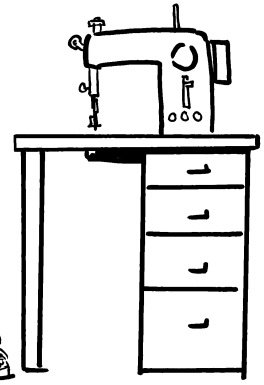
In this lesson, students will participate in making group decisions for identifying the best choice among four alternatives for reusing items. The students will bring in items from home and list at least three ways to reuse each item.

Teacher Background:

The products we use require many resources to produce. Compact disks have many components, including aluminum, gold, crude oil, natural gas, water, silver and nickel, among others. A lot of resources are needed to produce paper, with wood from trees, of course, being the main ingredient. One way to reduce the amount of resources we use is to reuse products.

Reuse is the second choice in the 4Rs hierarchy because the life of an item is extended. By reusing items instead of disposing of them, resources are conserved and landfill space is saved. Energy is also saved because it is not required to make a new product. The practice of reuse eliminates waste handling and disposal costs.

Students can develop the ability to think critically about choices they make that will help reduce waste. They can develop their own opinions and learn to convey and justify their thoughts in



order to make decisions based on their values. During the decision-making process, students may attempt to locate additional information or evidence that may support their opinions on topics such as waste reduction.

Materials:

Students:

- "Reuse Choice Cards" (one card per group of four students)
- "Reuse Choices" worksheet (one per student)

Teacher:

- Example of a "Reuse Choice Card" overhead
- "Reuse Choices" worksheet overhead
- Rubric overhead
- Rubrics (one per student)

Preparation:

Be prepared to divide the students into groups of four and assign each student within the group to defend one solution (a, b, c, or d).

Make copies of the reuse choice cards and cut them out so each group has one card.

Blank cards have also been provided for students to create their own reuse choice cards.



ACTIVITY

Discussion

1. Have the students describe choices that they make every day such as selecting food, choosing which games to play, picking who will be their friends, etc. Help them to recognize that there may be long-term consequences to many of their choices.
2. Ask students what they could choose to do with a piece of paper after writing on one side (write/draw on the backside, make a paper airplane, put it in the recycling bin, throw it away, etc.).
3. Ask the students to explain how they arrived at that particular choice. Explain that we often make decisions based on evidence that supports our opinions about different topics.
4. Ask students whether they can define “reuse” (extending the life of items by using them again as they are or creating new uses for them). Help the students recognize that there are long-term consequences to their choice of reusing, recycling or throwing away things like paper. Reusing helps extend the life of items by using them again, and it conserves natural resources.
7. Explain how solution “d” may be a good choice because reusing the cardboard extends the life of the box until it is recycled.
8. Post the overhead of the rubric, and review with the class the expectations for this lesson.
9. Organize the class into groups of four, and pass out one card to each group. Give the groups five minutes to discuss their reuse choice card.
10. Come back together as a class, and have each group present the best solution from their choice card.
11. Pass out the “Reuse Choices” worksheet to each student, and assign them to write a list of three items that they can reuse at home or at school and how each item can be reused.

Procedure

1. Tell the students that they will be divided into groups of four and given reuse choice cards.
2. Have four volunteers come up to the front of the class and help you model how to do the activity.
3. Assign each volunteer to represent choices a, b, c, and d.
4. Put up an overhead of a reuse choice card. Read it aloud to the class.
5. Model for the class how to defend their assigned solution, and ask the volunteers to come up with answers or evidence to defend their solutions. For example, the student assigned to choice b might defend it by saying that recycling the box saves natural resources because the cardboard will get used to make something new.
6. After hearing about all four solutions, model how the group should decide on the best solution(s) to their choice that helps conserve natural resources. Students can share their personal opinions and ask questions of other group members to justify their opinions.

Wrap-Up

1. Ask some students to share their list of items and reuse ideas with the class.

Final Assessment Idea

Have the students create their own reuse choice cards using the blank cards provided on the student worksheet. Then have them answer their own questions and explain in writing how their reuse choice extends the life of a product or natural resource.



RESOURCES

Extensions:

Have a classroom “reuse” show-and-tell day. Ask students to bring in an item from home that has been or will be reused. Have each student show their object and tell how it can be reused.

Have students research artists who reuse common objects. Then ask students to collect items from home they would normally throw away such as bottle caps, packaging, etc. Create a class sculpture by reusing the items brought from home to show the importance of practicing the 4Rs.

Teacher Materials:

California State Content Standards

The standards below represent broad academic concepts. This lesson provides connections to these academic concepts through hands-on activities and exploration. This lesson is not designed for a student to master the concepts presented in the standards. Additional lessons in the classroom that build on this lesson or the standard(s) ensure that students will have the opportunity to master these concepts.

SCIENCE	CONTENT STANDARDS
Grade 4	Investigation and Experimentation 6.a. Students will differentiate observation from inference (interpretation) and know scientists’ explanations come partly from what they observe and partly from how they interpret their observations.
Grade 5	Investigation and Experimentation 6.h. Students will draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.





Reuse Choices Rubric

A rubric is a scoring tool that defines the criteria by which a student's work will be evaluated. This rubric is provided to assist you in setting expectations for students and assessing their performance and engagement during the lesson based on specific tasks. Ideally, a rubric is developed with the cooperation of the students. Two blank rows have been provided for you and your class to develop and add your own assessment criteria.

CATEGORY	4	3	2	1
Identifying the best reuse choice to conserve natural resources	Student leads a group in identifying the best choice for reusing items.	Student participates in identifying the best choice for reusing items.	Student has difficulty in participating in group decisions to reuse items.	Student does not participate in the group activity.
Listing ways to reuse three items	Student clearly identifies three reuse items with many ways to reuse each.	Student identifies three reuse items with some ways to reuse them.	Student identifies items for reuse but does not clearly show ways to reuse them.	Student does not do the assignment.



Student

Reuse Choice Cards

Directions: Each group member will defend one of the four reuse choices below (a, b, c, or d). After each group member has justified why their choice is the best to conserve natural resources, decide on the Best solution as a group.

CHOICE CARD	CHOICE CARD
<p>You help a neighbor unload her groceries and you notice that, as she unloads the food, she is throwing the paper bags in the garbage can.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. suggest she can reuse the bags next time she shops. B. say nothing. C. ask her whether you can have the bags to make something. D. tell her to buy some cloth bags she can reuse every time she shops. 	<p>You are running on the playground, and you fall and rip the knee of your jeans.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. patch the hole in the jeans. B. throw away the jeans. C. save the jeans to cut off and use for shorts. D. cut up the jeans and use the fabric to make a rug.



Reuse Choice Cards

Directions: Each group member will defend one of the four reuse choices below (a, b, c, or d). After each group member has justified why their choice is the best to conserve natural resources, decide on the Best solution as a group.

CHOICE CARD	CHOICE CARD
<p>Your friend tells you they just bought a CD and listened to it. They say they hate it and are going to throw it away.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. tell them to give the CD to a friend who might like it. B. do nothing. C. ask them for the CD and use it for an art project. D. ask them for the CD because you like it. 	<p>You are at the Alameda Flea Market and see a sturdy old chair for a cheap price.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. buy the chair and paint it. B. buy the chair and use it as it is. C. do nothing. D. buy the chair and try to sell it to someone for more money.





Reuse Choice Cards

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CHOICE CARD	CHOICE CARD
<p>You are helping a friend organize their room and you notice they have a large pile of greeting cards.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. throw the cards in the garbage. B. do nothing. C. show your friend how to cut up the cards and turn the cards into gift tags. D. tell your friend to put the cards in the recycling bin. 	<p>A package full of styrofoam pellets, each about the size of popcorn, arrives at your home.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. place the pellets in a recycling bin. B. use them for an art project, like Christmas tree ornaments C. save them for packaging your own gifts that you will be mailing later. D. throw them away.



Reuse Choice Cards

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CHOICE CARD	CHOICE CARD
<p>After cleaning out a closet, you have twenty-five extra wire coat hangers.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. give them to a thrift store for hanging up their donated clothes. B. return them to dry cleaner or laundry that uses them as part of their business. C. recycle them in a container for metals. D. save them at your home for reuse when you buy new clothes. 	<p>When you help clean out a refrigerator, you find leftover food scraps in containers that are now spoiled.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. throw the food in the containers away. B. put vegetable and fruit scraps in a compost bin, wash and reuse the container. C. put the food scraps in an organics recycling bin that accepts food items with yard waste. D. get rid of the food scraps by putting them in the sink's garbage disposal and throw away the container.





Student

Reuse Choice Cards

Directions: Each group member will defend one of the four reuse choices below (a, b, c, or d). After each group member has justified why their choice is the best to conserve natural resources, decide on the Best solution as a group.

CHOICE CARD	CHOICE CARD
<p>After shopping at a grocery store, you have taken home ten plastic bags.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. return these bags to the grocery store for recycling. B. throw them in the garbage because you can't put them in your recycling bin. C. reuse the bags during your next trip to the grocery store. D. use the bags at home to collect garbage and then throw them away. 	<p>After shopping at a clothing store, you have taken home some plastic bags.</p> <p>SOLUTIONS You should:</p> <ul style="list-style-type: none"> A. recycle the bags. B. throw them in the garbage because you can't put them in your recycling bin. C. reuse the bags during your next shopping trip. D. use the bags at home to collect garbage and then throw them away.



Reuse Choice Cards

Directions: Use the blank cards below to create your own reuse choice card.

CHOICE CARD	CHOICE CARD





Reuse Choices

Directions: Write or draw three items that you can reuse at home or school. Describe three ways that each item can be reused.

NAME OF REUSE ITEM	WAYS IT CAN BE REUSED
1.	1. 2. 3.
2.	1. 2. 3.
3.	1. 2. 3.

Name: _____ Date: _____



DEFINITIONS

Vocabulary:

Recycling bin: container for accepting items that will be recycled into new products.

Reuse: extending the life of an item by reusing it again as it is or creating a new use for it.

