

THE THREE R'S – RECYCLE, REUSE OR REDUCE

Performance Standard 13B/11A/12 E.B

Students will apply the process of scientific inquiry to identify ways to classify and conserve our resources accordingly:

- *Knowledge*: Know what resources (renewable and non-renewable natural resources) in the classroom and around the home can be recycled, reused, or reduced (the context of the Three R's).
- *Application*: Predict things that can be conserved according to whether they can be recycled, reused, or their consumption can be reduced in the classroom or at home.
- *Communication*: Make a "Three R's" chart and explain it to the class.

Procedures

1. ***In order to know and apply concepts that describe the interaction between science, technology, and society (13B) and know and apply the concepts, principles and processes of scientific inquiry (11A)***, students should experience sufficient learning opportunities to develop the following:

- Begin guided inquiry to predict conditions that can influence personal change about resource conservation,
- Define recycle, reuse, and reduce (use) and provide examples.
- Classify renewable and non-renewable materials in the classroom or at home that can be saved by recycling, reusing or reducing their use.
- Predict possible amounts for recycling, reusing or reducing resource use in the classroom, school or at home.

Note to teacher: This activity relates to knowledge associated with standard 13 B, while addressing the performance descriptors for stage B within standard 11A. The Illinois Department of Commerce and Community Affairs may be contacted for classroom assistance: (<http://www.commerce.state.il.us>)

2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.
3. Begin guided inquiry by having students ask questions about "where does the garbage go from home or school?" They should also consider "where do some of our materials come from?" Guide students toward answering their questions using applicable scientific vocabulary and resources.
4. Practice with sorting or classifying samples which can be recycled, reused or reduced from the classroom and home. Give each group of 4 to 6 students access to a collection of waste items. Provide each student with a "Three R's" task sheet. As a group, sort their wastes into sets of Reduce, Reuse, and Recycle items. Remind them that each category they have made is a separate "data set". As individuals they should record the data they have collected in the appropriate spaces of the "Three R's" task sheet. Ask students to draw pictures or write the words for at least the following:
 - Four examples of things that can be recycled (e.g., plastic bottles, newspapers, aluminum cans, etc.).
 - Four examples of things that can be reused (e.g., wrapping paper, aluminum foil, clothing, etc.).
 - Four examples of things that can be reduced (e.g., electricity usage, amounts of food, paper, etc).
5. Continue the guided inquiry by having students predict which kinds of materials are easy to conserve, which materials would weigh the most or least, which personal practices they can begin to conserve, etc. Introduce students to the ideas of 'waste-free' lunches (e.g., reusable lunch box, drink bottle, sandwich container bulk chips containers, etc.)
6. Have each student share his/her chart with the class, explaining the items shown and how and why they can be recycled, reused or reduced and at least one prediction (about volume, masses, personal practices, etc.) about each category. Consider setting a classroom goal for a "Three R's".
7. Evaluate each student's work using the Science Rubric as follows and add the scores to determine the performance level:
 - *Knowledge*: The identification of items that can be recycled, reused, or reduced was accurate.
 - *Application*: The predictions in each category were practical and possible.
 - *Communication*: The chart was acceptable; the explanation and predictions were well-reasoned and well-detailed.

Examples of Student Work not available

Time Requirements

- One class period

Resources

- Collections of household and classroom “waste” items that can be safely handled by students (20 items per group of 4-6 students)
- Science Rubric
- Copies of the “Three R’s” task sheet

NAME _____ DATE _____

THE THREE R'S – REDUCE, REUSE, AND RECYCLE

Draw four pictures or write words for things to recycle, reuse, or reduce their use in each box.

Recycle

Reuse

Reduce