

CHOICES AFFECT THE ENVIRONMENT I MAKE A DIFFERENCE

Performance Standard 13B/12E.E

Students will apply their understanding of the interactions of societal decisions in science and technology innovations and discoveries accordingly:

- *Knowledge:* Research how personal and societal choices that humans make affect the environment.
- *Application:* Predict scenarios of positive and negative personal and societal choices on the environment.
- *Communication:* Explain how choices can have negative or positive effects in the environment.

Procedures

1. ***In order to know and apply the concepts that describe the interactions of science, technology and society (13B) in the context of the concepts that describe (the features and processes of) the Earth and its resources (12E),*** students should experience sufficient learning opportunities to develop the following:
 - Investigate the interactions of societal decisions in science and technology.
 - Predict how personal and societal choices affect their familiar environment or the environment of a broader scope.
 - Explaining how choices have affected resource supplies.
 - Compare resource supplies and demands and the actions of citizens.
2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.
3. Provide each student a copy of the “Choices and the Environment-Predictions” work sheet and have them complete it as an introduction to the issue investigation. From these prediction categories and their predictions, students need to find resources which can provide scientific research about the possible impact of each of the resources. From their research, ask students to create a four-panel cartoon series which demonstrates the effect of the category on the environment with actual statistical projections or scientific information. Students may create poster-sized cartoons on one or more of the categories.
4. Evaluate each student’s work using the Science Rubric as follows and add the scores to determine the performance level:
 - *Knowledge:* The descriptions of how personal or societal choices affected the environment were complete and accurate.
 - *Application:* The creative displays were thorough and accurately reported in the cartoon series.
 - *Communication:* The explanations were well focused, well detailed, and well reasoned.

Examples of Student Work not available

Resources

- Copies of ‘Choices and the Environment Predictions’ work sheet
- Research resources for individual or group use
- Paper, markers, etc. for cartoon development and presentation
- Science Rubric

Time Requirements

- 2-4 class periods for introduction, research, cartoon development and presentation

NAME _____ DATE _____

CHOICES AFFECT THE ENVIRONMENT - PREDICTIONS
I MAKE A DIFFERENCE

In the spaces below, predict how personal and societal choices affect our own environment. What are some of the specific choices that can be made?

GENERAL CHOICES	Personal effect on environment	Societal effect on environment
<u>Increase</u> consumption of gasoline and fossil fuels.		
<u>Decrease</u> consumption of gasoline and fossil fuels.		
<u>Increase</u> personal water usage.		
<u>Decrease</u> personal water usage.		
<u>Increase</u> personal usage of glass, plastic, and metal products.		
<u>Reduce</u> personal usage of glass, plastic, and metal products.		
<u>Recycle</u> glass, plastic and paper products.		
<u>Don't recycle</u> glass, plastic, and paper products.		
Other choices?		