TEACHER'S NOTES 3

HOW MUCH RADIATION IS AROUND YOU?

BACKGROUND

An underlying objective of this exercise is to help the students develop a general understanding of, and appreciation for, radiation, including its ubiquity, uses, and misuses. Many people display an irrational fear of radiation. Hopefully, this fear can be replaced with some degree of understanding.

WARM-UP

Prior to beginning this activity, distribute a copy of an article on food irradiation. Discuss the pros/cons of this approach to food preservation.

TEACHING TIPS

This may be an appropriate time to review radiation with your students. Specifically, have them use a dictionary to find the meaning of the root word. Use the Background Information on Radon (Section III) to assist students in developing a general understanding of radiation. Radiation is not just a science issue. It is a health and social issue as well.

You may also conduct a hands-on geiger counter demonstration prior to this lesson plan. Have students record changes in the amount of radioactivity detected by the geiger counter in response to 1) changing distance from the radioactive source, and 2) shielding the source with different kinds of materials (e.g., paper, thin plastic, aluminum foil, wood, etc.). See Resources, Equipment/Materials.

GROUPING

A large group is suggested so that students can benefit from and respond to the comments from their peers. Afterwards, students can work individually or in pairs to complete their radiation profiles.

RECOMMENDED TIME ALLOCATION

One class period

STUDENT RESPONSES

Students should find that radon is generally more important than any other radiation source in their personal exposure. Medical exposure can be important in a limited number of cases. Power plant and weapons fallout exposure are relatively insignificant (unless a large scale accident occurs).

LEARNING PROCESS SKILLS

Science	Math	Social Studies	Social or Group
Communicating Inferring Comparing Categorizing	Investigating Analyzing	Judging information related to a problem	Collaborating with others

EXTENDED ACTIVITIES

1. Have students research the current status of the nuclear power industry. Is nuclear power a desirable alternative to the burning of fossil fuels to generate electricity?
2. Have students research different patents that involve the use of radiation (See Resources, Information Resources).
3. Have students research the types of cosmic rays that penetrate the earth's atmosphere, including potentially dangerous ultra violet rays. Have them also explore the well-publicized ozone holes in the stratosphere.

Radon Alert
Lesson Plan Evaluation Sheet
and FREE POSTER AND STORYBOOK offer

The New Jersey Department of Environmental Protection is happy to provide these lesson plans for use by teachers. In order to evaluate the use of the lesson plans, we would greatly appreciate your response to the following questions. All teachers who return these forms will receive a FREE RADON POSTER depicting information about radon in a colorful format and a STORYBOOK about a Native American child and his experience with radon in his home.

1. Which Radon Alert lesson plan(s) did you use?

_____

2. How useful did you find it/them (check one) ?

___ Not useful
___ Slightly useful
___ Moderately useful
___ Very useful
___ Extremely useful

3. Do you plan to use them again in the future? ___Yes ___ No

4. In your view, what would make the lesson plans MORE useful:

Your name:_____ Phone Number: _____

Subject area: _____Grade:_____

Mailing address:

_____

_____

To receive your FREE RADON POSTER and STORYBOOK, mail or fax this completed form to:
NJDEP Radon Program, P. O. Box 415, Trenton, NJ 08625
Fax: 609-984-5595.

(Questions? Call the Radon Program at 1-800-648-0394.)