



## INVESTIGATION 2

## What is the root word?

### NOTES TO TEACHER

**PURPOSE:** to apply the use of combining forms, prefixes, suffixes, and root words as context clues for defining vocabulary words associated with radon gas.

*Note: Use this as an interim activity while students are getting their survey results tabulated.*

### MATERIALS:

- Pencils
- Dictionary

### BACKGROUND:

The investigations and activities presented in this manual include vocabulary words (e.g., radiation, picocuries, radioactivity, curies) that lend themselves to a rich classroom discussion on root words, combining forms, and affixation. Students' understanding of the words included in this activity are essential to their successful completion of the lesson plans.

This investigation will give students experience with using prefixes, suffixes, and root words to define radon-related vocabulary words.

### WARM-UP:

Have students list words containing different prefixes and suffixes from a recent story or newspaper article. Next, have students underline the affix from the root word in each example.

### PROCESS SKILLS:

Science	Mathematics	Social Studies	Social or Group
Categorizing	Analyzing	Defining and	Collaborating with
Comparing	Classifying	clarifying problems	others

### ACTIVITY SUMMARY:

#### STEP 1

Prior to beginning this activity, students brainstorm a word list that begins with the prefixes, de, non, re, and anti. Students then discuss the meaning of each word when one prefix is replaced with another.

*Note: Step 1 should help students distinguish root words from prefixes and suffixes.*

## STEP 2

Students enter the root words from their word list.

## STEP 3

Students find 10 new words that use the root words from the word list.

## STEP 4

Students create eight new words from the root words using different prefixes.

*Note: It is suggested that you provide students with a comprehensive listing of common prefixes and suffixes at the conclusion of the activity.*

## MINIMUM RECOMMENDED TIME

Three or four hours.

## STUDENT RESPONSES

Handout #1

Word List

Radiate	Visible
Expose	Screen
Mitigate	Detect
Vent	Structure
Radio/Active	Atom
Curie	Stable

Handout #2

Responses will vary.

## EXTENSION ACTIVITIES

1. Have students research the root words or combination prefixes/root words associated with specific themes (e.g., space travel, ecology, sports).
2. Have students create a set of "new words" by combining different affixes with common root words.
3. Have students conduct a scavenger hunt in their community or at the library looking for as many pictures representing or symbolizing the words from the word list.
4. Have students use a dictionary to define each of the root words from the word list on a separate sheet of paper.





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

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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?**

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**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:**

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