



Geoscape Ottawa-Gatineau

Grade 9 - 11 Lesson Plans to accompany the Geoscape Ottawa-Gatineau poster and website
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Theme 11 : INDOOR RADON : AN INVISIBLE HAZARD

OVERVIEW

- Students investigate the hazardous nature of radon gas
- Students analyze the location of potential concentrations and assess the relative degree of risk.
- Students evaluate methods of reducing or preventing radon gas from entering homes.

DURATION 75 minutes (1 period)

ACTIVITY

1. Students complete a web search on “What is radon” and “How Radon Works” and complete the background reading “Changing Technology” p. 12 [Earth Matters](#).
2. Students complete the worksheet.
3. Students correlate the map of “uranium content in the upper soil levels”, on the Geoscape poster, to the rock type and formations shown on the bedrock geology maps of the GSC Urban Geology web site. (http://gsc.nrcan.gc.ca/urbgeo/natcap/index_e.php)
4. The teacher leads a class discussion. Notes are taken. Students discuss the reasons for the distribution pattern of potential radon gas on the above map. They assess risk levels and analyze preventive measures that should be taken to reduce the impact of radon gas.
5. Optional - Each student creates a crossword puzzle with at least 20 words from the content of this material. Students then exchange crosswords with another student and finished puzzles are submitted to teacher. (Various crossword puzzle creators are available on the Internet i.e. Crossword Magic.)

Student worksheet:

Radon is only a hazard in some locations. It comes from the natural breakdown of uranium found in some rocks or incorporated in some sediments. It is carried through porous or fractured rock to the surface by groundwater. Non-porous rock and sediment hinders its movement. Radon is harmless if it moves from the ground into the atmosphere. However, it can be harmful if it can enter a house through cracks and openings in the basement walls and floors. It can accumulate to high levels in houses and high levels of radon are associated with lung cancer.

Assess the presence or absence of a radon hazard in each of the houses (A-G). Give reasons for your decision.

