

HIGH SCHOOL BIOLOGY
INVESTIGATION 7
WHAT ARE OUR RISKS FROM RADON?

- CCS 2.1** (Health promotion and disease prevention) All students will achieve optimal wellness by learning and applying health promotion concepts and skills.
- C.1 Grade 8 Create and justify a healthy eating plan that considers health, cultural, environmental, and social factors.
- D.3 Grade 8 Investigate local and state efforts to prevent and control diseases and health conditions.
- D.6 Grade 8 Investigate health problems related to environmental conditions and recommend ways to reduce or eliminate them.
- E.2 Grade 8 Develop and demonstrate strategies to reduce risk of injuries in the home, school, and community.
- D.3 Grade12 Assess local, state, national, and international efforts to prevent and control diseases and health conditions.
- F.1 Grade12 Compare and contrast the impact of gender, culture, age, and technology on the ways individuals and groups communicate and express emotions.
- F.4 Grade12 Predict how choices and behaviors contribute to conflict, harassment, and violence and recommend alternate behaviors.
- CCS 2.2** (Life skills) All students will achieve optimal wellness by learning and applying health-enhancing personal, interpersonal, and life skills.
- A.2 Grade 8 Analyze health ideas, opinions, and issues from a variety of valid and reliable health sources.
- CCS 3.4** (Listening) All students will listen actively to information from a variety of sources in a variety of situations.
- A.3 Grade 12 Demonstrate appropriate listener response to ideas in a persuasive speech, oral interpretation of a literary selection, or scientific or educational presentation.
- CCS 4.2** (Geometry and measurement) All students will develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena.
- A.4 Grade 12 Use reasoning and some form of proof to verify or refute conjectures and theorems.
- Verification or refutation of proposed proofs
 - Simple proofs involving congruent triangles
 - Counter examples to incorrect conjectures

- CCS 4.4** (Data analysis, probability, and discrete mathematics) All students will develop an understanding of the concepts and techniques of data analysis, probability, and discrete mathematics, and will use them to model situations, solve problems, and analyze and draw appropriate inferences from data.
- B.5 Grade 8 Estimate probabilities and make predictions based on experimental and theoretical probabilities.
- A.3 Grade 12 Design a statistical experiment, conduct the experiment, and interpret and communicate the outcome.
- CCS 4.5** (Mathematical processes) All students will use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas.
- A.2 Grade All Solve problems that arise in mathematics and in other contexts (cf. workplace readiness standard 8.3).
- Open-ended problems
 - Non-routine problems
 - Problems with multiple solutions
 - Problems that can be solved in several ways
- A.3 Grade All Select and apply a variety of appropriate problem-solving strategies (e.g., "try a simpler problem" or "make a diagram") to solve problems.
- C.4 Grade All Apply mathematics in practical situations and in other disciplines.
- D.5 Grade All Make and investigate mathematical conjectures.
- Counter examples as a means of disproving conjectures
 - Verifying conjectures using informal reasoning or proofs
- D.6 Grade All Evaluate examples of mathematical reasoning and determine whether they are valid.
- CCS 5.1** (Scientific Processes) All students will develop problem-solving, decision-making and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results.
- A.1 Grade 12 When making decisions, evaluate conclusions, weigh evidence, and recognize that arguments may not have equal merit.

- CCS 5.4** (Nature and process of technology) All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
- C.1 Grade 6 Select a technological problem and describe the constraints and criteria that are addressed in solving the problem.
- C.1 Grade 12 Plan, develop, and implement a proposal to solve an authentic, technological problem.