

**Radon
In
Schools**

The focus

- To understand and identify the major threats presented by the presence of radon in schools.
- To utilize the EPA's 6-point plan to mitigate radon in schools.
- To educate teachers, administrators, and students on radon gas in schools.

Module 3

Situation with radon in schools

Successful IAQ (Indoor Air Quality) management in schools comprises effective pollution source control.



Module 3

The health risk to students

Thousands of classrooms nationwide have elevated radon levels, needlessly exposing hundreds of thousands of students and staff to this serious health risk.



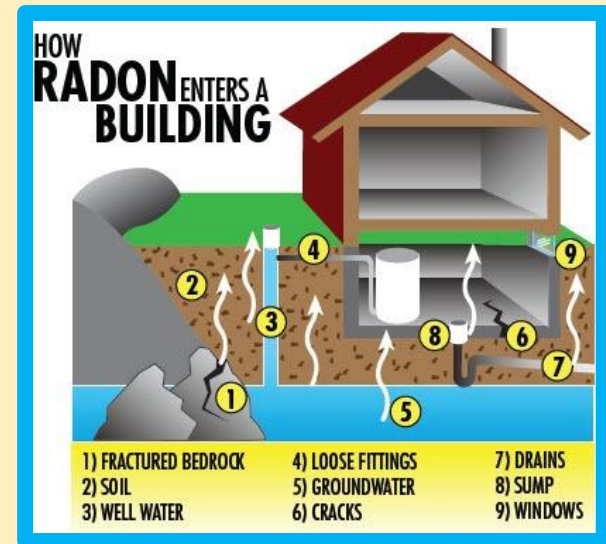
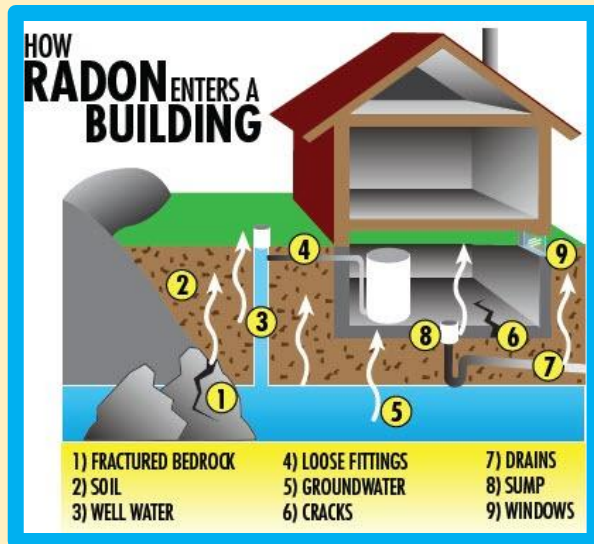
How radon enters schools

- Radon gas enters from the soil beneath the school through cracks and openings in the foundation. Air pressure inside a building is sometimes lower than pressure in the soil under the foundation.
- Because of this difference in pressure, a building acts like a vacuum, drawing radon inside from the soil.

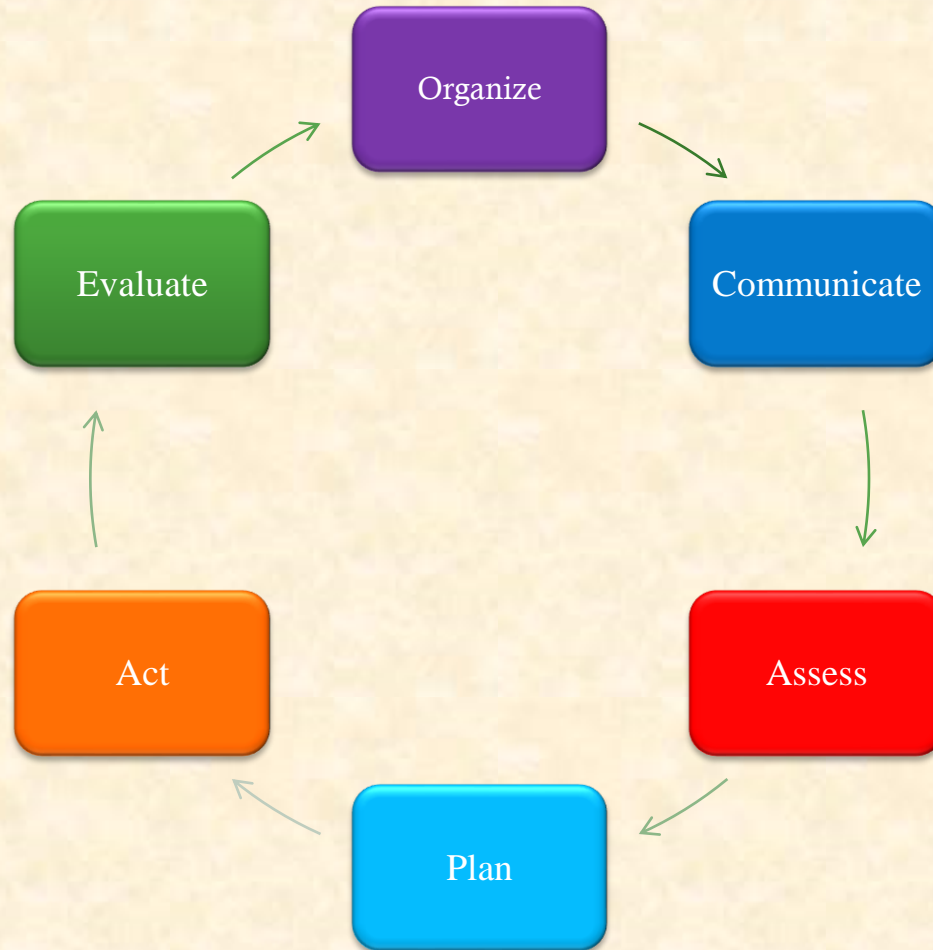


Danger of cracks in foundation

Typical cracks and openings include joints where the floor meets the wall, expansion joints in the floor, openings in the floor for pipes and wires, and hollow masonry walls that penetrate the floor.



6-Point plan for success



Organize for success

- Organizing for success begins with securing senior buy-in, and, ensuring senior-level support.
- **Develop a Systematic Approach:** Use the *IAQ Tools for Schools Action Kit* to tie your goals for radon testing to your overarching IAQ, health and environmental program goals. Coordinate this effort with existing IAQ management program activities.



Organize – Part 2

- **Build an Effective Team:** Assemble a multidisciplinary team to plan for radon testing and mitigation. Include on your team a trained radon professional; start by talking with your state radon program representative.
- Invite members from existing IAQ or Health and Safety Committees, facilities managers, air-conditioning technicians, IAQ professionals, school administrators, other staff and parents.



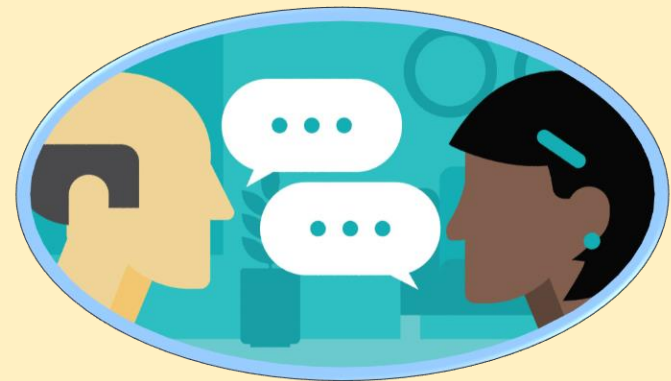
Organize – Part 3

Design Standard Operating Procedures: Develop district-wide radon management procedures and adapt testing protocols and remedial action steps according to the needs of each school.



Communicate with everyone

- **Make the Radon Program Meaningful:** Include radon awareness as part of your overall IAQ management training and education efforts.
- Share with parents and staff the link between radon and building operations, and encourage them to test their homes as the home is often the most significant source of radon exposure.



Be transparent and inclusive

- Communicate your action plan to stakeholders and the importance of radon testing. Share your testing results, mitigation plans and follow-up testing plans.
- In cases of elevated radon levels, ensure that your mitigation plan is in place so you can communicate those plans to parents. Invite key stakeholders to examine the issue and be part of the solution.



Assess your environments

- **Walk the Grounds:** Perform radon assessments in conjunction with your regular IAQ walkthroughs.
- Obtain floor plans to estimate the number of test kits needed and to determine where to place the test kits.
- If elevated radon levels are found, survey your buildings for structural or mechanical issues that could be allowing radon to enter, such as cracks in the foundation, expansion joints, sub-slab HVAC ducts and building pressurization patterns.



Use technology

Track radon test results, assessment data and pending actions on a spreadsheet or in an electronic work order system to build awareness of emerging priorities so that facility maintenance can plan accordingly.



Plan your activities

Work in Stages: Working with your radon team, identify your action steps and set a schedule for your testing plan. Determine what type of test kits to use and which rooms will be tested. Your state radon program can help you identify next steps and offer other guidance throughout the process of testing and mitigation.



Testing for radon protects environments

Prioritize action

Identify funding and staff resources available for testing and mitigation. If mitigation is necessary, then initiate radon reduction in the highest radon risk areas first.



Module 3

Act to addresses issues – test for radon

Test according to your plan. Refer to Radon Measurement in Schools: Revised Edition EPA 402-R-92-014, for more detail.

EPA suggests initial short-term testing in all frequently occupied, ground contact rooms.



Module 3

Implement radon reduction plans

If you find high radon levels and need to mitigate, consider hiring a mitigation contractor. Some states have restrictions on who can test or mitigate a school. Consult with your state radon office for state-specific recommendations.



Train people to identify risks

Attend radon training to learn about radon and how to effectively test, mitigate and maintain radon reduction. Empower maintenance and facilities staff to become radon champions as occupants will likely refer to them for answers about the testing plan and mitigation actions.



Educate staff

Include teachers in your testing process to foster awareness and create support. Encourage them to incorporate radon into lesson plans by having students participate in radon-related science projects or in the [National Radon Poster Contest](#).



Evaluate to improve

Solicit Feedback: Ask for feedback from your radon testing team, district stakeholders and parents to improve the radon management process. Identify best practices that improve your process for future follow-up radon testing.



Ensure planning continuity

Determine additional testing needs and follow-up. Retest according to plan if schools were mitigated to ensure radon mitigation systems are functioning properly. Schedule re-testing following all major renovations, and consider how HVAC modifications or upgrades may affect radon intrusion.



Resources

The EPA provides these excellent resources entitled:

- “Reducing Radon in Schools: A Team Approach”

<https://nepis.epa.gov/Exe/ZyPDF.cgi/00000AOV.PDF?Dockey=00000AOV.PDF>

- Web Conferences and Webinars for Indoor Air Quality in Schools <https://www.epa.gov/iaq-schools/web-conferences-and-webinars-indoor-air-quality-schools>



Radon In Schools

The End of Module 3