

Team Members
ROCKIN' RADONS
 ☼ #Radioactive ☼

- Emily Grogan
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- Iris Ham
- Emi Hoang
- Gia Hoang
- Caroline Hurd
- Sarah Kim
- Charlie Seidel
- Nicolas Torres
- Brady Wendt

A shout out to:

Mr. Skip Fritz, (Our engineer)
 Dr. Tsoi, (Our chemist), Dr.
 Derek Cooper, (UGA Radon
 specialist), Mr. Scott, (Building
 code expert), Mr. Robert, (The
 radon mitigator), Mrs. Teresa
 Ponador, (Our geologist) Mrs.
 Thetford and her language
 arts class, Mrs. Westbrooks,
 (Our principal) The Tech-
 KNOW-Hawks at
 Puckett's Mill Elementary
 School!

All of our parents and teach-
 ers and Mrs. Westbrooks for
 supporting our program! We
 appreciate everyone who
 helped us with our entire jour-
 ney throughout Robotics!

Big Idea:

How can we reduce the number
 of people over exposed to radon?

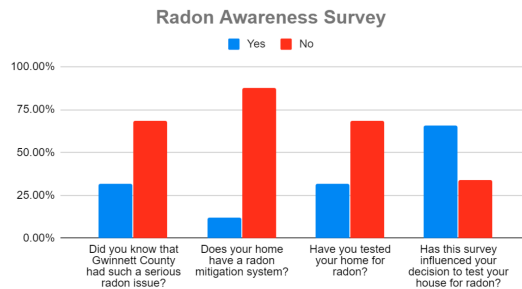
Our Coaches and Mentor

Mrs. Mandy Collins
 Mrs. Jenny Ittner
 Mr. Chuck Ittner



Visit our website:

<https://sparrowbots.weebly.com>



Rockin' Radons

#RADIOACTIVE

Team #329

Puckett's Mill Elementary
Gwinnett County Public Schools

Our team's mission is to increase radon awareness and harness the power of plants and soils to reduce radon levels in homes within our community. We have created an innovative solution to achieve these goals.

Radon is a colorless, tasteless, and odorless gas. Exposure over long periods of time can damage cells in your lungs leading to cancer. According to the National Cancer Institute, radon is responsible for up to 22,000 lung cancer deaths in the United States each year.



Bibliography

- Cooper, Derrek Manning. *Radon Educator UGA College of Family and Consumer Sciences Team 329*. 29 October 2019. 2019.
- Dan Lockney. *NASA Plant Research Offers a Breath of Fresh Air*. 29 October 2019. https://spinoff.nasa.gov/Spinoff2019/cg_7.html.
- Dreas, Scott. *Building Code Expert Team 329*. 2 October 2019. email letter.
- Environmental Protection Agency. *Consumers Guide to Radon Elimination*. pdf. Washington: EPA, 2013. https://www.epa.gov/sites/production/files/2016-02/documents/2013_consumers_guide_to_radon_reduction.pdf.
- Fritz, Scott. *Engineer Team 329*. 9 September 2019. Face to Face.
- Gray, Theodore. *The Elements*. New York: Black Dog & Leventhal, 2009. Book.
- Juan Antonio Garcia-Rodriguez. "Radon gas—the hidden killer." *Canadian Family Physician* July 2018: 496–501. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6042664/>.
- NuEnergy. *Using Radon as a Fuel Source*. 17 February 2013. <https://www.nuenergy.org/using-radon-as-a-fuel-source/>. 2 October 2019.
- Ponader, Mrs. Theresa. *Geologist Team 329*. 7 October 2019. Phone Interview.
- Tsoi, Dr. *Chemist, Georgia Gwinnett College Team 329*. 25 Sept 2019.
- University of Georgia Cooperative Extension. *UGA Cooperative Extension Radon Education*. 19 August 2019. <https://www.fcs.uga.edu/extension/home-radon>. 15 October 2019.

Innovative Solution

After looking at current solutions, we came up with the....Plant Purifier! The Plant Purifier is unique plant holder that has activated charcoal in the base and a tillandsia plant at the top. The plant absorbs a variety of harmful gases including radon. This attractive plant absorbs radon gas in the air and is especially helpful if your home's radon levels are below 4.0 pci/l.

Our team discovered that many people who order testing kits for their homes don't actually follow through with getting the results. So we think that the Plant Purifier could be used as an incentive for people to complete the testing process. For each plant purchased, pencils are also given to a school in Ecuador.

We have created a song to help create awareness about radon. From our survey, many of our school's teachers and staff didn't know that radon was a public health concern in our community. We want to create awareness for this dangerous gas with our song, play, and innovative solution.

Our Main Focus

Our main problem this year focuses on finding a problem with a piece of land or property. From our research, we have learned that Radon is a huge problem in Georgia, especially the Piedmont region. We know that Radon is the leading cause of lung cancer for nonsmokers and can cause 21,000 deaths per year. Many people do not even know about Radon, or its potential to cause lung cancer.

If radon is the leading cause of lung cancer, why aren't we doing anything?! We know that there are different levels of radon in each house. If the house has over 4.0 pci/l, then the house has a serious radon problem. If someone lives in a house over 4.0 pci/l and doesn't do anything about it, the person is at risk for developing lung cancer. That's why we have to do something about it! TEST YOUR HOME TODAY!

https://estore.uga.edu/C27063_ustores/web/classic/store_cat.jsp?CATID=858&STOREID=226