

Black Belt Service Project – Paul Le Hardy (KAT student)

Electrical Fire Safety and Smoke/Fire Detection Devices

This project was divided into two basic parts. First, to educate our community about electrical fire safety, by distributing printed matter door to door, by some of the team members in my group. Secondly, replacing the batteries in the smoke detectors of senior's homes, done by myself and the other half of the group.

My initial approach was to do some research about smoke detectors.
Here is what I found:

Smoke detectors, also known as smoke alarms, are devices that sense smoke, typically as an indicator of fire. Smoke can be detected either optically ([photoelectric](#)) or by physical process ([ionization](#)).

Ionization detectors are more sensitive to the flaming stage of fires than optical detectors, while optical detectors are more sensitive to fires in the early smoldering stage.

Ionization smoke detectors are usually cheaper to manufacture than photoelectric, or optical smoke detectors. They may be more prone to false alarms triggered by non-hazardous events than photoelectric detectors, and have been found to be much slower to respond to typical house fires.

The amount of radioactive material contained in ionizing smoke detectors is very small and thus doesn't represent a significant radiological hazard.

Detector alarms should be tested weekly, batteries replaced every six months (or when you hear a short beep).

Ionization type units, as the one pictured bellow, should be replaced every ten years. Notice that the date of detector manufacture (Sept 2014) is displayed on the back of the unit.

All this information was shared with the team members, as well as the people that we replaced their batteries (and in a couple of cases, old units).



A total of thirteen homes were visited, with twenty-seven batteries replaced, two new detectors installed and two others replaced.

This project was also a great opportunity for many of the young team members to learn something new, and valuable as well. Many utilized a multimeter to check the batteries, learned how to remove and replace the batteries, and a good method of labeling the detectors with the battery replacement date, without permanently writing on it.



Here, Anna writes the due date, in large numbers on a piece of clear tape, so it can be easily read from a distance.



Mahayla and Rylan Griggs, both KAT 2nd Dan black belts, distribute Electrical Fire Safety information brochures to friends and neighbors.



Other team members in action!



Aiden and Ryan, Shayna's children, all three were involved in the distribution of Electrical Fire Safety education material, and are advanced taekwondo students at KAT.



Mrs. Amparo Fortier (left), gives Ms. Carol Nuss a copy of the Fire Safety brochure. Ms. Nuss was the recipient of a free smoke detector unit, donated by Home Depot.



Sebastian were also part of the smoke detector team.

Zoe, Dillon and

Acknowledgements

The very first step in order to start this project, was to procure some material to support it.

I would like to thank Fire Inspector Charles Harrelson, from the Buckley Air Force Base fire department, for providing me with the valuable Electrical Fire Safety brochures. The information came in very handy, just before the Christmas season, when most people overload their power outlets with lots of lights and illuminated decorations.

I approached Mr. Dan Robertson, Assistant Manager at the Chambers Road (Aurora) Home Depot, who after explaining my project to, donated all the batteries required to cover my proposal as well as a smoke detector.

Thank you gentlemen, not only for supporting me, but for supporting our community as well!

I would also like to thank the team members that made this project a success.

Mrs. Amparo Fortier

Leigh Griggs, Mahayla and Rylan

Anna and Sebastian Razo

Shayna Reibman and her children Aiden and Ryan

Zoe Le Hardy

Dillon Thibeault

Kam Sa Hahm Nida (Thank you) to all of you!

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