

Keeping the Classroom Pest-Free: We All Have Our Part to Play

Life in South Carolina has much to offer- plentiful sunny days and a long growing season for those flowers and vegetables. However, there is a drawback to living in this temperate climate; the pests prosper right along with the roses and tomatoes!

Keeping a school classroom pest-free has its own set of challenges. Students, staff, and teachers are often pressed for time and have to resort to eating on the run, leaving a nice bug buffet behind in the process. How can we all do our part to minimize the clutter and crumbs and ensure that our classrooms are not serving as Stuckey's Truck Stops for the bugs and mice? How can we keep the bugs at bay while still keeping the indoor air free of pollutants and pesticides? The answer is **Integrated Pest Management**.

Integrated Pest Management, or **IPM**, is an approach to getting rid of pest populations by using what we know about pests to make the classrooms, kitchens, and cafeterias less attractive to them. Pests come inside because they've found the things they need to survive-food, water, and shelter. It's like a three-legged stool: take away any one of those three things and the stool will not stand, even if two of the legs are still there. If we can get rid of some of the things that sustain pests in school environments, we can get rid of the pests themselves, and without having to use a lot of chemicals in the process. In IPM, the chemicals that are used will be applied where the bugs are, not where the people are, meaning we spend less money on chemicals, get rid of the pests more effectively, and have a much lower risk of potential chemical exposure for all of the humans who are trying to teach, learn, and grow in their school environment.

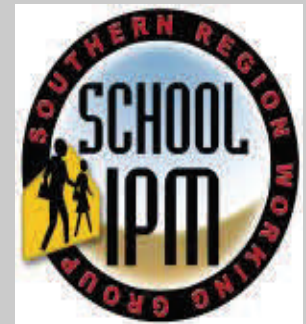
What Can I Do?

In the classrooms-

Remove microwaves, mini-fridges, and other small appliances from classroom areas if possible. Many school districts have found that by eliminating food-preparation appliances from classrooms they have also removed a major pest attraction, as many insects are drawn to the tiny crumbs and other bits of food left behind. In addition, pests find many good places to hide inside these appliances, and will live there happily for months on end as long as the food, water, and shelter are available.

Store animal food in tightly-sealed containers, such as screw-cap jars or tupperware.

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Don't store items in cardboard boxes-cockroaches love to hide in the corrugated insides of the box and hitch-hike their way into your classroom! When receiving items in a cardboard box, check for "invaders", remove the items from the box, put them in a plastic storage bin, and get rid of the cardboard as soon as possible.

Keep clutter to a minimum. There are a lot of supplies that need to be stored in the average classroom, but the way they are stored can make a lot of difference. Keep all supplies, art materials, etc. in plastic containers.

Store items on shelves instead of the floor whenever possible. Make sure that you can see behind all the shelves and storage- mice and roaches love to travel right next to the walls, so if you have clutter next to the walls, they can travel to and fro undetected during the day.

Leave space for the custodial staff to see and clean behind and under stored items, they are part of your team-help them do their job while they help you do yours!

Report any pests you see, either by writing them on the Pest Sightings Log in the front office, or by reporting them to the Building Coordinators.

Do not bring pesticides from home to spray in the classroom! SC law requires that anyone applying a pesticide in a school must have a pesticide applicator's license in the appropriate category, even if they are "just spraying something they picked up at Wal-Mart".

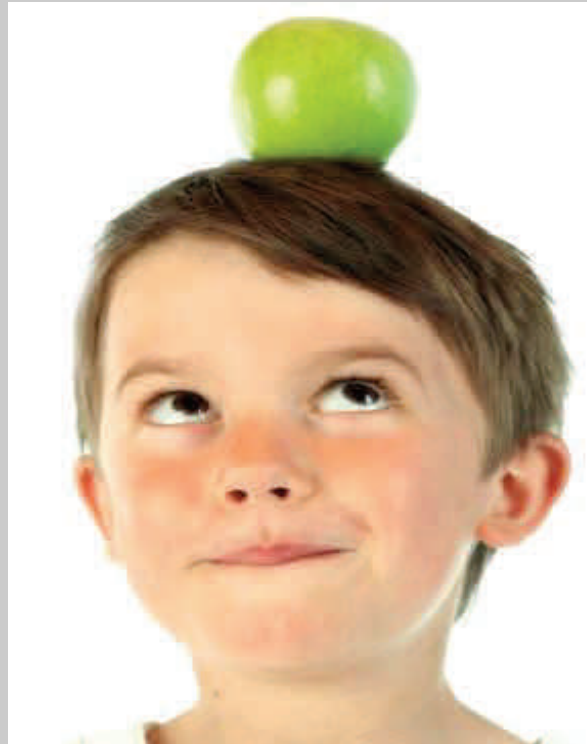
Do not prop open door and/or windows. The "bugman" can spray any kind of chemical in existence and not get rid of a pest problem if the entryways are wide open for more critters to come in!

When disposing of food items put them in a ziplock bag and seal them up before putting them in the trash. Once you put the bag in your trash, it will be moved many more times before finally making its way to the landfill, and at every step of the way, open food waste can and will attract pests to the area in which it is kept.

If your school has a recycling program, please be sure to rinse out all plastic or aluminum containers before putting them in the recycling bins, as this will cut down the likelihood of visiting yellow jackets and bees that are attracted to the sugary liquids remaining in the bottles and cans.

Report leaks or standing water to the Building Coordinator as soon as possible. Moisture problems lead to insect and mold problems, which brings us back to allergies! It's hard for kids to learn when they're sneezing and wheezing, and those awful sinus headaches can render even the most motivated student unable to think straight.

Asthma can be aggravated by exposure to cockroach droppings and body parts, and also by exposure to pesticides. We will be helping improve the indoor air quality of our schools by following an IPM plan, and hopefully improving the learning environment in the process!



Are you a teacher, and want to incorporate info on IPM into your science curriculum? Look here for curricula for grades 2-7:

www.clemson.edu/ipm/schoolipm_teachers.html

Students learn better when they eat breakfast, and for many schools, that means a breakfast-in-the-classroom program. Studies have shown that students who eat breakfast at school have better attendance, are less likely to be tardy and exhibit fewer behavior problems than those who don't. Can you serve breakfast in the classrooms and keep pests out? Evidence suggests the answer is yes.

Lake Worth Independent School District (ISD) in Lake Worth, Texas has run a successful breakfast program for more than 15 years. Every morning, kitchen staff prepares bagged breakfasts for students, including juice, milk, crackers, and yogurt or donuts. The bags are then put inside large plastic totes and placed on carts outside each classroom five to ten minutes before school starts. After calling roll, the teacher collects the cart from the hallway and distributes the bags.

When children have finished eating, all trash is placed back in the tote and left on a trash cart outside the classroom door. Custodians collect trash from the hallways, usually no more than an hour or two after breakfast, and take it outside to the dumpster. According to Jeff Thomas, director of operations and IPM coordinator for Lake Worth ISD, "If the food was left in the classroom trash, it would be an open invitation to any roaches and rodents in the area." Ideally, no food or food scraps will be left in the classroom after breakfast. Any teachers who keep leftover food are required to use airtight containers. Any beverages are kept in a small refrigerator in each classroom.

Handy IPM tips include:

Keep paper towels or wipes in each classroom so students and teachers can clean desks after breakfast.

Classrooms where food is eaten may need to be vacuumed or mopped more frequently.

Consider shampooing carpeted classrooms in the winter and summer. Depending on the children's age and the menu, carpets may need to be shampooed more often.

Custodial and food service staff should work together to ensure that food is both nutritious and easy to serve, eat and clean up. For example, consider serving bagels or tortilla wraps instead of muffins to reduce crumbs.

If a cockroach or rodent problem occurs in a classroom, a full-court press needs to be applied to inspect, monitor, seal entry points and harborages, trap rodents, and thoroughly HEPA-vacuum up droppings, cockroach cast skins and other pest debris. Cockroach baits can be used in areas inaccessible to children if needed to resolve the problem. As a last resort, breakfast may need to be moved to another location temporarily.

Training staff is critical. According to Thomas, "Nearly every time a teacher put in a work order for a pest problem, we discovered food stashed in a cupboard or drawer. From time to time a teacher will forget and throw breakfast leftovers in the classroom trash can. I try to remind all the teachers regularly that they have a vital role in preventing pests." He recommends occasionally attending faculty meetings and handing out [IPM fliers](#) to staff.

Lake Worth ISD also details the measures taken to discourage pests in their breakfast and lunch programs in their IPM plan, which is updated regularly. "With consistent and repeated communication and reminders to staff, it's feasible to have breakfast in the classroom while still practicing IPM," says Thomas.

(written by Jodi Schmit, IPM Institute, and used by permission of the IPM Institute of America)

Sandhill Research and Education Center in Columbia, SC saw an influx of school district employees at their Lake House training facility in late June. The attendees came to learn about Integrated Pest Management and the role it can play in reducing pests in the school environment. The training included sessions on everything from how to set up a good inspection and monitoring system in school buildings to fire ant management and mosquito control.

The two-day training was put on by Clemson University's Department of Pesticide Regulation. Reduced Risk Specialist Leslie Godfrey was responsible for the coordination and management of all aspects of the event. "There was a bit more work involved than I had anticipated," commented Godfrey, "but it was very satisfying to be able to provide School IPM information and give those school district employees an opportunity to earn continuing certification hours in the process. Some of these folks made quite a long drive to get here; I hope it was worthwhile! There were a lot of conversations going on between sessions, and it was great to see everyone sharing experiences and asking questions of each other. They probably got more from that than they did from the actual training!" Godfrey then added, "Chris Mills, IPM Coordinator for Union County Schools in Monroe, NC, was kind enough to come down and do a presentation for us on the second day of training, and Chris did a wonderful job telling the story of how the IPM program in his district evolved over time, and was gracious enough to spend the rest of the day answering questions. He was definitely the hit of the event!" When asked if the training would be repeated, Godfrey replied, "I certainly plan to do more of these trainings, not only in Columbia but all over the state. If any school district would like to have me come to them and put on a School IPM training for their employees, I would be more than happy to do so!" If you are interested in hearing more about School IPM, or having School IPM training in your district, Leslie Godfrey can be reached at (803) 736-7680, ext 112, or via email at lgdfry@clemson.edu.



Attendees at the SC School IPM Training enjoy a day of learning and interaction at the Sandhill REC Lake House Training facility.

Need more info on School IPM? Here are some great resources:

eXtension.org- pest action plans, how-to videos, structural pest control recommendations, and a forum where you can ask questions of the country's top eXtension agents.

National School IPM Information Source: <http://schoolipm.ifas.ufl.edu/INDEX.html>

The IPM Institute of North America: <http://www.ipminstitute.org/school.htm>

Southwest Technical Resource Center: <http://schoolipm.tamu.edu/>

EPA's IPM in Schools page: <http://www.epa.gov/pesticides/ipm/>

Need information on obtaining your pesticide applicator's license? Check here: www.clemson.edu/public/regulatory/pesticide_regulation/our_service_areas/pest_management_professionals/

and click on the links "Commercial Applicator Licensing", "Non-Commercial Licensing".

For information on taking the pesticide applicator certification exam, scroll down that same page, and look under "Exam Information for SC Applicator's License", where you will find links to the current exam schedule, an exam pre-registration form, and a study material order form.

Want to make sure you know the Rules and Regs of the SC Pesticide Control Act? Check here:

www.clemson.edu/public/regulatory/pesticide_regulation/forms/rules_and_regs_dpr.pdf

DPR has published a good many Information Bulletins, which can be found here:

www.clemson.edu/public/regulatory/pesticide_regulation/bulletins/index.html

Need information on dealing with pests in the home, garden, etc.? Clemson Extension has some answers for you at the Home and Garden Information Center, which can be found here:

www.clemson.edu/extension/hgic

What, you want more insect info? The Dept of Soils, Entomology, and Plant Sciences has it here:

www.clemson.edu/cafls/departments/esps/factsheets/