

*Inspect and Investigate***Inspecting The School****Overview**

Students inspect their school for evidence of pests and conditions good for pests and suggest changes that can be made to help fix the problems.

Objectives

Students will:

- learn the needs of several common indoor pests.
- apply their knowledge by looking for signs of pests and habitats.
- discuss how to modify the habitats they discover.
- learn how the behavior of people affects pests.

Subjects

science, art

Background

Inspecting and investigating is one of the most important steps in IPM. In this step we check to discover:

- What pests do we have?
- Where are they coming from?
- What are they eating and drinking?

Since we target control methods at the places where pests are living and getting in, the information we learn in the inspection tells us where to start. We discover things that need to be fixed or cleaned. After we learn what pest we are dealing with we can do some research to discover what it needs to live and where it likes to live. All of this information helps us choose the best way to control the pest

Materials

Knowing What to Look For worksheets (one per student per pest. For example, if you do mice, cockroaches, and ants, each student should get three sheets. It may help to copy them on different colored paper), inspection sheets (one per group or per student), clipboard (optional), pencil, flashlight, maps of school

Duration

two class periods- 2 hours

and focus our energy in the right place.

The key things we are looking for in an inspection are:

- pests (live or dead mice, cockroaches, etc.)
- signs of pests (cast skins, droppings, tracks, damage they have caused)
- conditions good for pests (cracks and holes, clutter, damaged doorways and window, leaky faucets, dirty dishes, etc.)

Getting Ready

Before this activity, talk with the building manager or IPM coordinator for the building about the problems pests and areas for your school. If possible, walk through the building with this person. Choose pests

and places to focus on based on previous problem areas and any new areas you find when you walk through the building. Obtain permission for the students to inspect these areas of the school from the principal and others as your school's policies dictate. For example, the kitchen, teacher's lounge and custodian's closet are often good places for pests, but you should obtain permission before you take the students into these areas. Instead of inspecting the whole school, you may also choose to inspect just specific parts like the cafeteria, lockers, playground, classroom, hallways and doorways, and bathrooms.

It is helpful to have adult helpers for this activity. With the support of your administrator, you may wish to ask the custodian(s) and/or food service workers, the IPM coordinator or pest management personnel to assist the groups in this inspection.

Doing the Activity

Class period 1

Step 1: Discussion. Review the IPM steps with the students. Ask: *Why is inspecting and investigating so important?* Emphasize the need to know what pests we have and where they are coming from. If the students interviewed people in the school, review what they learned from the interviews. Remind the students that we need to have proof that the pests are here. Talking to people is the first step. The next step is gathering clues on what pests we might have in our school.

Step 2: Learning About Pests. Remind the students that since we are scientists, we need to know as much as we can about what we are looking for before we look for it. Review the wanted posters if completed. Based on your conversations with the IPM coordinator or pest management personnel and your own inspection, choose the pests you wish to focus on. Complete pest profile worksheets with the class on the these pests. You may wish to copy the pest profile sheets onto overhead projector sheets and complete the pest profile sheets with the class.

Class period 2

Step 3: The Inspection. Split the students into smaller groups (groups of 5 or less tend to work better). Assign an adult and a part of the school to each group. Review the inspection form with the class so they know how to fill it out. Review the procedures before you hand out the clipboards and flashlights! Give a flashlight, clipboard and inspection worksheet to each group. They should also bring one set of the pest profile worksheets. It may help to assign students specific jobs (for example: recorder, flashlight holder, person who will report to the class). Each group inspects their assigned part of the building or grounds. After about 15 minutes students should return back to the classroom and complete the inspection sheet.

Step 4: Presenting Findings. Each group should choose a person to present their findings to the class. When they report to the class, they should say who was in their group, where they inspected, what they found, and what they decided people could do to change what they found.

Closure/Assessment. Enlarge the maps of the school so that they are poster-size. Develop a color-code for each pest (ie. green=cockroaches, red=mice, blue=ants, yellow=other). Have a member of the group put a colored thumbtack or use a marker to show what they found in their part of the building. Discuss with the class what they found. The following questions may aid in discussion.

Focus Questions

What pests are problems in our school?

Where do we need to monitor for pests?

Why did some areas of the school show more signs of pests than others?

What can we do to prevent or keep out pests in these areas?

What do adults need to do?

Places to Inspect

Inside:

Teacher's lounge (refrigerator, pop machine, sink, furniture)

Bathrooms (sinks, seals around toilets)

Cafeteria

Kitchen

Doorways

Hallways

Classrooms (windows, baseboards, sinks, closets, near desk, cluttered areas, art supplies, snacks)

Locker rooms and lockers

Outside:

Dumpster

Doorways

Plantings next to the building

Gutters and overhang of roof

Windows

Holes or damage on building

The Inspection

Guidelines for Adult Helpers

Each group should have:

- Clipboard
- Flashlight
- Pencil
- Inspection sheet
- Wanted poster
- One copy of each *Knowing What to Look For* worksheet

1. Familiarize yourself with the information on the pest profile forms as well as the questions on the inspection forms.
2. Take your group to the assigned room/place in the school.
3. Remind them that they are looking for signs of cockroaches, mice and other pests as well as conditions that are good for pests (leaks, holes/cracks, space around doors or windows, clutter, food/crumbs).
4. Have them inspect the area with one person recording what they find on the sheet.
5. As they inspect, point out to the students what each has found. Remind them that they are looking for things the pests can eat, places they can hide, ways they can get in, as well as signs of the pests themselves.

Return to the room and allow the students complete the section on the inspection sheet on what kids can do and what adults can do.

Conditions Good for Pests

Inside

1. Dirty dishes
2. Food or crumbs on the floor, carpet, counters
3. Grime around drains, sinks, refrigerators, stoves
4. Leaky pipes, sinks, faucets, water fountains
5. Pet food or water (and the spills around them)
6. Food in unsealed bags or boxes
7. Empty pop cans and other cans for recycling (not rinsed or in sealed containers)
8. Garbage cans without tight-fitting lids
9. Garbage or litter
10. Cracks around doors and windows
11. Holes or cracks in walls or floors.
12. Clutter (piles of stuff that pests can hide in or behind)

Outside

1. Holes in the building
2. Broken gutters
3. Cracks around doors and windows
4. Plants growing on or into the building
5. Dumpster- garbage not in bags or outside the dumpster, no lid

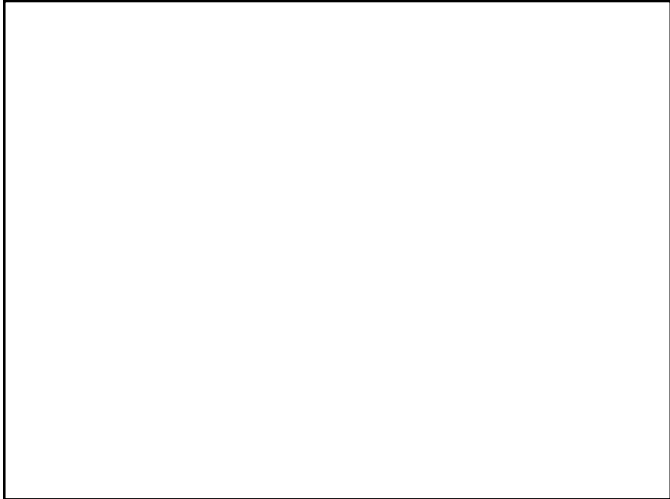
Things People Can Do To Keep Pests Away

1. Keep dishes washed or rinsed
2. Don't eat food around the house or school
3. Clean everywhere, especially where food is.
4. Vacuum and clean floors and furniture-move furniture
5. Fix any leaks
6. Keep food in tightly sealed containers
7. Put empty pop cans inside sealed bags. Do not let huge numbers pile up in the room.
8. Keep garbage in cans with lids and empty often.
9. Don't leave wrappers or garbage and litter around!
10. Fix doors and windows so they seal tightly
11. Fix all holes and cracks
12. Place garbage in sealed bags before putting in dumpster. Keep the lid shut.

Name: _____ Date: _____

Knowing What to Look For

Pest name: _____



Likes to eat:

This pest needs these things to survive:

Where in the school would you look for it?

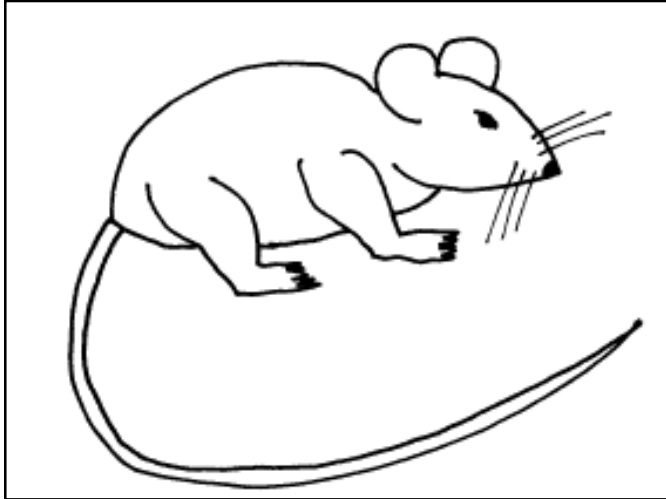
List evidence of this pest that you can look for.

List conditions of the school you could look for that can make this a very good place for pests to live.

Name: KEY Date: _____

Knowing What to Look For

Pest name: House Mouse



Likes to eat:
peanut butter
cereal
grains- rice, oatmeal
flour
fruits and vegetables
nuts, butter, candy bars

This pest needs these things to survive:

food water shelter

Where in the school would you look for it?

doorways basement
kitchen storage rooms
janitor closets in walls, under sinks

List evidence of this pest that you can look for.

droppings noises in walls
chewed holes bad smell
tracks/footprints spilled or nibbled food

List conditions of the school you could look for that can make this a very good place for pests to live.

space around doorways broken windows or screens
open containers or boxes dirty dishes
holes-size of dimes clutter or piles of stuff

Name: KEY Date: _____

Knowing What to Look For

Pest name: German Cockroach



Likes to eat:
almost anything
crumbs and leftovers
soap and soap scum
wallpaper glue
pet food
food waste/garbage

This pest needs these things to survive:
food water shelter

Where in the school would you look for it?
kitchen food storage
garbage cabinets
Kindergarten room Art room

List evidence of this pest that you can look for.
live or dead roaches old skins or legs
egg cases droppings-black dots
rustling noise smell

List conditions of the school you could look for that can make this a very good place for pests to live.
pet food storage litter in rooms and lockers
leaky faucets or sinks unrinsed pop cans
food in unsealed containers grime in food areas

What We Found



Date: _____

Room/Location in school: _____

Team members: _____

We found evidence of pests

In the lines below write what you saw. Examples are: the actual pest, its droppings, gnawing, damage, nest/anthill

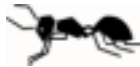
cockroaches



mice or rats



ants



other



We found conditions good for pests

In the lines below write what you saw. Examples are: open dumpsters, garbage or clutter, cracks or holes, drips or leaks

Things that we can do to make this place worse for pests.

Things adults can do to make this place worse for pests.
