Lesson #4
Field Day
Be an IPM detective

The New York State Integrated Pest Management Program

Learn how you can use the 6 steps of integrated pest management to help protect the environment.

www.nysipm.cornell.edu
Throughout this booklet, we have mentioned IPM. **Do you remember what it means?**

Integrated Pest Management

(Integrated means using a combination of ways to do something).

IPM uses knowledge to deal with pests in the best way possible. This includes being effective, being environmentally safe and using methods that are not too costly.

The New York State IPM Program is part of Cornell University, the New York State land grant college. Land grant colleges research the best ways to care for the land and help agriculture to be successful. The IPM program teaches homeowners environmentally friendly ways to deal with pests in their homes, lawns, parks, playgrounds and gardens. We also work with farmers to help reduce the numbers of insect, weed and disease pests affecting their livestock and crops. IPM is also used at golf courses, in schools and other buildings where people live, work and play. IPM teaches people how to make good pest management decisions.

This is the Green Lacewing. It is a beneficial insect. Its larva eats many pest insects. The lacewing is found outside naturally. When we use insecticides, we also injure helpful insects like the lacewing. Encourage beneficial insects by providing some flowering plants and natural areas in your yard.

*Thanks to Beneficial Insectary for the use of their photograph.*

How can you use IPM? There are many ways students can use IPM. We’ll start today!

Today’s assignment: Be a pest detective. You will be assigned to a small group and given a site to examine and assess. This means you will look for any possible pests that might be present, and determine why they are there and if they are causing a problem. You will use the 6 IPM steps to make these decisions and a ‘scouting’ report we’ve provided.

When you are done, your group will explain to your classmates and teachers what weeds and insects you found in your site and what actions should or should not be taken. You can even give this information to the people who take care of your school building and grounds.

*Teachers: Invite your school groundskeeper to talk to your class and join the activities!*
Integrated Pest Management means:

1. Proper Identification
2. Learn the pest or host biology
3. Scout for pests
4. Determine a threshold
5. Choose tactics
6. Evaluate results
Integrated Pest Management Site Assessment Worksheet

Group number or name_____________________ Site # ________________________

Describe the site:

___near sidewalk               ___open field                  ___near playground
___edge of property, near woods  ___lawn area                  ___landscaped area

Sunlight conditions:
___ open and sunny all day       ____ some shade, some sun
___ shady most of the day        ____ unknown at this time

Soil conditions: (choose all that apply)
___ dry                          ___ hard (compacted)
___ moist                        ___ wet

describe the TEXTURE of this soil:
smooth or slippery = clay
gritty = sand
a little of both = loam

Plant material found:
___mostly turfgrass             ___mostly turfgrass and weeds
___ornamental plants and some weeds ___woodland or meadow plants

Circle the tools you will use at this site:
soil probe, cup cutter, magnifying lens, trowel or shovel, Identification books,
sweep net, collecting jar, soapy water and bucket

Scientific observations of this site:____________________________________________
_________________________________________________________________________

Insects found:                                                                  Weeds found:
Now, use the Integrated Pest Management steps at this site!

**Step #1  Proper Identification:**
Choose one insect or weed pest you found and use the IPM steps to learn about it.

We chose:_____________________________________________________

**Step #2  Learn Pest/Host biology:**
During what part of this pest’s life cycle does it cause damage or become unwanted?
________________________________________________________________________

**Step #3  Sample environment for pest population:**
An IPM Scout would take time to carefully count pests. We don’t have that much time, so ask the IPM crew member to help you make an estimate.

**Step #4 Determine action threshold:**
The threshold for any pest is the number present that is going to actually cause damage or create a problem. What population of this pest can you tolerate at this site?

We believe there IS IS NOT enough of a pest population to take action.

**Step #5 Choose a tactic:**
If your pest is over threshold, you will have to choose a treatment tactic or combination of tactics.

Our tactics would be:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

**Step #6 Evaluate results:** Always evaluate your actions so you will be able to make good IPM decisions in the future.

Choose someone in your group to tell the class about the pest you found and the IPM steps you took.

The members of this group are: _____________________________________________
________________________________________________________________________
________________________________________________________________________
IPM Step #1
Proper identification

IPM Step #2
Learn the pest biology

IPM Step #3
Sample for pests
IPM Step #4
Determine action threshold

IPM Step #5
Choose management tactics

IPM Step #6
Evaluate results
Pesticides are not something to use carelessly. Should you use or touch pesticides like those used to stop insect pests? Only an adult who has read the label should use it and only when absolutely necessary.

Pesticides help reduce pests that cause damage or disease in plants and people. They can also be harmful if not used properly, or used too often.

Pesticides that are created just to use on insects are called insecticides.

Pesticides used on weeds and other plants are called herbicides.

Pesticides used on fungal diseases are called fungicides.

How can using IPM help the environment?

________________________________________________________________________
________________________________________________________________________

The IPM Interview:
Now, we request you share your knowledge. Below, write down three questions to ask. Use your book as a reference. Think of what you’ve learned about pests and how to manage them. Interview a family member, using these questions.

1. ______________________________________________________________________
   ______________________________________________________________________

2. ______________________________________________________________________
   ______________________________________________________________________

3. ______________________________________________________________________
   ______________________________________________________________________
Post Survey

1. What is a pest?

2. Are all insects pests?  ___ yes  ___ no

3. Is it necessary to correctly identify a pest before you decide what to do with it?
   ___ yes  ___ no

4. Name two ways to get rid of an insect pest:

5. Name two characteristics that make something an insect:

6. Draw in the correct number of legs on this ant illustration:

7. Circle the insects:
8. Circle the antennae on this insect:

9. Are all weeds pests? ____ yes  ____ no

10. Name two ways to get rid of a weed pest:  __________________________________________
    ________________________________________________________________________________

11. Name one way that weeds spread: _________________________________________________
    ________________________________________________________________________________

12. I enjoy being outdoors:     ____yes  ____no

13. Besides recycling, what is one way to care for the environment?
    ________________________________________________________________________________
    ________________________________________________________________________________

14. I would like to learn more about plant and insect science
    ____ yes  ____ no

15. Name a job or career that involves learning about plant or insect science:
    ________________________________________________________________________________

16. This is the most interesting thing I learned about:
    ________________________________________________________________________________
Using my knowledge of Integrated Pest Management, I will do my best to be an
ENVIRONMENTAL ADVOCATE.

I pledge to: ______________________________________

________________________________________________

________________________________________________

signed ___________________________

Congratulations!
from the IPM crew:
Jennifer Grant, Joann Gruttadaurio,
Carolyn Klass and Debra Marvin

Make an environmental pledge! Fill out one of the cards below, and encourage your family members and friends to do it too.