Wild World of Pest Management:
IPM For Youth

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Wild World of Pest Management

- An IPM program for youth (~25 min.)
  - Audience: 5th through 7th grades
  - Primary audience
    - 5th graders
    - Most receptive age and learning level

- “Wild World” content closely coincides with school programming
  - In natural sciences, biology
  - In history of U.S., geography
Delivery Settings
Day Camps / Shade Trees / Parking Lots / Classrooms / 4-H Camps
Presentation Approach / Delivery

- Highly Interactive with audience
- Incorporates many visual aids
  - Live Corn snake
  - Madagascar Hissing Cockroaches
- Includes “Lesson Plan”
  - Distributed to teachers at start
  - Teachers encouraged to reinforce teaching points later in the classroom
Topics Covered: Wild World of Pest Management

- What is a pest?
- Types or groups of pests (4)
- Nature’s pest controls (4)
- Optional methods (IPM – 6 methods) of pest management which includes pesticides
- Pesticide types – be responsible user
  - Naturally occurring
  - Synthetics
Setting The Stage: The Pest Discussion

- First, a question
  - Are pests dead or alive? Yes, alive.

- A pest is a pest because it does something that we do not like

- To students: describe some actions that a pest does that we do not like. Don’t name a pest.
Typical Pest Descriptions

- "Something that bites or stings"
- "They bother me"
- "Eat things"
  - Like what?
    - "Crops, garden vegetables"
- Can pests eat holes in your house? Yes!
- Conclusion:
  - You’ve defined a pest!!
  - A living thing that injures or annoys people, damages their property, or damages the environment
Types of Pests

- Today, we’ll talk about four large groups or types of pests
- What would be the name of one of these groups?
Insects are identified.
Student becomes a teacher
Student is handed container lid and cardboard pieces.
Instructor’s hand hides roach on shirt
Insects: sometimes tiny, sometimes quite large.
Let’s give a hand for our insect lady
What’s a second large pest group?

Animals
“It was cool this morning.
Example of an animal pest is in my shirt pocket.”
With a bit of flair, the mouse jumps out of my pocket among the students. We all laugh and all feel a bit silly about getting surprised by a fake mouse.
“There’s an answer in there (his head), I’ll describe a weed, you give me it’s name. Class, you may know the name, too, but you’re not going to tell him.” A dandelion is described.
Student Solicits Classmates To Name Other Weeds

Do you accept that weed for an answer?

What about corn? Growing in a soybean field?

Let’s give a hand for our weeds guy
Fourth Pest Group

- Something attacks plants, people
  - Plants – leaves become yellow, brown, die
  - People – we can get sick, too
- What am I referring to?
  - Students know “Diseases”
  - Sometimes worms mentioned by students
  - So, clarification occurs
Diseases caused by three types of living pests or germs
Student Solicits Classmates To Name Types of Germs

- Students know these
  - Bacteria
  - Viruses
  - Fungi
- Same germs affect people, plants, animals
Nature Helps to Control Pests

Natural Methods of Pest Control

1. Climate
2. Natural Enemies
3. Land and Oceans
4. Food Supply
What’s this? Yes, a coconut.
Do they grow in Nebraska? No!
Too cold in the winter? Yes!
Climate influences where crops can grow. Likewise, climate influences where pests can grow, too. Examples are discussed.
Natural Enemies

The owl is hidden from view. It swoops out in a “rush” as if its flying.
I need help with another example of natural enemies.
Student holds the cloth sack. Not the snake
Corn snake eats mice, rodents
Let's go back to the later 1700s, the Revolutionary War:
Colonists were fighting for their independence against what country?
Great Britain.

Hessian soldiers from Germany helped British fight against the colonists. German soldiers carried the insect to North America in straw bedding (for horses) on their ships, insect named after them - Hessian Fly
Pest in winter wheat in NE, KS, CO, OK, TX, etc.
Atlantic Ocean: served as a barrier until the insect was carried over it.
Lunch Box
- Represents “food supply” ....something inside influences pests
- To student: peak inside and inform classmates of contents
- It contains… it contains…
- NOTHING!!
- If there is no food or water for pests, pests will die
- Nature changes the quantity of food for pests
- Sometimes lots of food, then many pests
- Sometimes very little food, then fewer pests

Let’s give a hand for our lunch box lady
Methods That People Can Use To Control Pests

Optional Methods of Pest Control

1. Host Resistance
2. Biological Control
3. Cultural Control
4. Mechanical Control
5. Sanitation
6. Pesticides
The host (grass) resists the pest (fungi, etc.)

Students read this portion of the seed label
Biological Control

- What do you have at home that catches mice? A dog, cat?
  - Explain difference between natural enemy and biological control (management)
- Ladybug larvae may be introduced in garden to eat insect pests
  
  Catches & eats lots of insects.. because it has very fast yellow wheels
Cultural Control

- Identify the pest
- Then, change the culture or environment around the pest
  - Ex. Tillage – hand hoe or tillage implement, it stirs the soil, exposes roots to sunlight, changes the environment around the weed, weeds dies
• Cultural Control:
  • Mulch – to control weeds
  • This mulch – a special type
  • Listen very carefully
  • WOOF!!
  • It’s “bark mulch”
Mechanical Control
Sanitation

Use “clean” seed. Few weed seeds. Plant good quality grass seed. Don’t plant the weeds.
Pesticides

- Used only after the first five control methods are considered
- If they don’t work, then a pesticide may be considered (The IPM approach)
- If a pesticide is used, always use it according to the label
Naturally Occurring Pesticides

Mention those that are available on the market.
Pesticides Made in Factories

-- All of these pesticides have been approved by the Environmental Protection Agency (said for the benefit of the teachers / adult sponsors)
-- Ask students to name each one as shown
Important program goal:

Some pesticides are very common and are accepted for their pest control properties.

Examples:
- Clorox disinfectant bleach
- Pine-Sol cleaner
- Comet cleanser
- And, another example is...
A Common Pesticide

- When I go swimming…
- I don’t want to swim with your germs in the water
- And, you don’t want to swim with my germs in the water
- So, this pesticide (chlorine) is placed in the swimming pool (according to the label) so that you and I will have safe water to swim in
- Then, we won’t get sick from each other’s germs
If you use a pesticide, read and follow the label. The label may require you to use certain types of gloves or protective equipment when using a pesticide.
Wild World Stickers

An Option:
Sticker distributed to each student at end of session. Helps promote the program and lessons to others.
Wild World of Pest Management Audiences

- Fifth, Sixth, Seventh graders
  - Primarily fifth graders
    - Topics have greatest appeal for this age
  - Since program initiation in 1992
    - Reached over 30,000 students
    - Reached over 2,200 teachers, sponsors
  - Through pre / post tests, students have shown significant learning of program points and concepts

Now, other Extension Educator colleagues also assist in conduct of some sessions
Impact: Pre-Tests

Wild World of Pest Management

Pre-test

Cathedral of the Risen Christ School - 7th grade

1. Are pests living or dead? Circle one for your answer.
   - Living  
   - Dead

2. Name four general groups or types of pests that are in our world.
   - Bugs  
   - Mosquitoes  
   - Rodents  
   - Cockroaches

3. If you would decide to control a pest, what are some methods or things that you may use?
   - Poison  
   - Stepping on them  
   - Traps  
   - Catch them  
   - Kill them
Wild World of Pest Management

Cathedral of the Risen Christ School - 7th grade

1. Are pests living or dead? Circle one for your answer.
   Living  Dead

2. Name four general groups or types of pests that are in our world.
   Animals  Viruses
   Insects  Weed

3. If you would decide to control a pest, what are some methods or things that you may use?
   Pesticides   Enemies   Environment
   Stomping on Them  Sanitation  Lawn care
## Impact via Wild World of Pest Management

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<th>7th Grade</th>
<th>Class I (N = 65)</th>
<th>Class 2 (N = 45)</th>
<th>Class 3 (N = 44)</th>
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<td>Post</td>
<td>Pre</td>
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<td>Pest Control Methods (6)</td>
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Online “Wild World” Info
See http://PestEd.unl.edu/

Pesticide Safety Education Program
Select “Wild World of Pest Management”

In the News!
- Pesticide Record Keeping App Gets Update
- Pesticide Container Recycling Program
- Revisions to the Worker Protection Standard
- UNL Opens Bee Hotels
- Training For Private Pesticide Applicators Available From Ext
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