

# THE GUIDE TO MICHIGAN 4-H YOUTH DEVELOPMENT



## PLANTS, SOILS & GARDENING

**W**ith food shortages around the world and growing concerns about the quality of our food supply and environment, Americans are slowly realizing that agriculture is one of our most important assets. In a 4-H crop and soil sciences project, kids can explore the basics – crop growth, fertilizers, seeds, pest control measures, equipment and cultural practices. Your group can learn about crop and soil sciences wherever your members can grow plants, whether it's in a basket, on a small garden plot or on an acre of land. A 4-H horticulture project can help kids explore plant growth, soils, plant varieties and gardening techniques. Introduce your group to the magic of the earth and help them harvest a bushel full of knowledge and experience.

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**KEEP THESE IN MIND . . . .**

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*As you work with young people, please keep these valuable resources in mind.*

**“Michigan 4-H Today”**

*Michigan 4-H Today* is a newsletter providing youth development news and event information for the Michigan 4-H community. Issues include an 8- to 12-page, tabloid-size publication (*Michigan 4-H Today*) published every fall and four topical newsletter supplements (*Michigan 4-H Today In Focus*) that are distributed online as inserts in county newsletters throughout the year. The newsletter, which is sent to volunteers across Michigan, features articles and photographs related to youth development issues, project news and activities, upcoming events and new 4-H resources. Visit *Michigan 4-H Today* on the Internet at <http://www.msue.msu.edu/cyf/youth/M4HTD/>.

**The Developmental Stages of Kids**

As you work with young people, it's important to keep in mind the many changes they're going through (including physical, thinking, social and emotional changes) and the kinds of issues these kids are facing in their everyday lives. Refer to these sections of the *Guide to Michigan 4-H Youth Development* to learn more about resources designed to help you provide learning environments that are safe, appropriate, healthy and fun:

- Five- to Eight-Year-Olds – the Kaleidoscope materials
- Early Adolescents (aged 9 to 14) – the Help Me – I'm Growing Up! Understanding Early Adolescents materials
- Older Youth (aged 15 to 19) – the Peer-Plus, Group Dynamite and Youth Experiencing Action materials

For insight into the needs and interests of young people, you can also visit *Ages and Stages of Child and Youth Development: A Guide for 4-H Leaders* on the Internet at <http://www.agcom.purdue.edu/AgCom/Pubs/NCR/NCR-292.html>. The guide discusses the physical, thinking, social and emotional characteristics that are common to children at each age level. “Ages and Stages” (NCR292) was written by Jeanne Karns, graduate assistant, and Judith A. Myers-Walls, Extension specialist, Human Development, Department of Child Development and Family Studies, Purdue University.

**Improving the Communications Skills of Young People and Adults**

People in a position to know – school officials, employers and employees – agree that good communications skills are essential for young people and adults. The *Communications Toolkit: Fun, Skill-Building Activities to Do With Kids* (4-H 1560) will help you help the young people with whom you work develop and improve their communications skills. The toolkit is designed for individuals who work with young people aged 12 and up and want fun, easy and meaningful communication activities to use with clubs and in classrooms, camps, after-school programs or other settings where kids come together. In the toolkit, you'll find background information for group leaders, hands-on activities, handouts and other resources that will help kids build on their skills in public speaking, writing, graphics, and video, media and technology. (172 pages, Michigan 4-H, 2000)

**4-H Club & Group Development**

Many 4-H experiences take place within the 4-H club or group setting. If you're interested in learning more about how clubs and groups can operate and the various officer and committee roles that young people can have within a club or group, refer to the Club and Group Development section of the *Guide to Michigan 4-H Youth Development*.

**Volunteer Development**

Volunteers can be positive role models for the young people they work with. If you'd like to learn more about fulfilling your potential as a volunteer, refer to the Volunteer Development section of the *Guide to Michigan 4-H Youth Development*.

## ■ PUBLICATIONS

### 4-H PUBLICATIONS

The following 4-H publications are available from your county MSU Extension office. They are listed in numerical order.

#### 4-H 1175 Selecting Vegetables for Exhibit Leader's Guide

This bulletin includes suggestions for selecting vegetables to exhibit and discusses how vegetables should be presented for exhibition and the number of each type of vegetable to use in an entry. (12 pages, Michigan 4-H, 1986)

#### 4-H 1279 Heritage Gardening – Vegetables

This publication promotes an awareness of the heritage of many vegetable varieties. It compares folklore and modern science, and old and new garden techniques. It tells how to plan a heritage vegetable garden and a North American Indian garden, and how to collect and store seeds. An entire section of the bulletin (illustrated with etchings from old seed catalogs) is devoted to heritage gardening activities such as plant prints and seed medallions. (48 pages, Michigan 4-H, 1992)

#### 4-H 1337 4-H Flower Gardening Project Guide

This project guide for 4-H members and leaders includes information on planning a flower garden and sections on annuals, perennials, wildflowers, ferns and bulbs. It also includes sections on project evaluation, contests and games, meeting ideas, references and a glossary. (44 pages, Michigan 4-H, 1992)

#### 4-H 1516 Michigan 4-H Guide to Herb Gardening Projects

This ambitious and beautifully illustrated bulletin will help 4-H'ers learn about herbs and their history, how to identify and grow herbs, how to design herb gardens, how to make herb crafts, how to play herb games and how to cook with herbs. (48 pages, Michigan 4-H, 1993)

#### 4-H 1578 Gardening A: See Them Sprout (43 pages)

#### 4-H 1579 Gardening B: Let's Get Growing (43 pages)

#### 4-H 1580 Gardening C: Take Your Pick (55 pages)

#### 4-H 1581 Gardening D: Growing Profits (59 pages)

#### 4-H 1582 Gardening: Leader/Helper's Guide (98 pages)

#### 4-H 1583 Gardening: Exhibit Guide (7 pages)

This series includes three activity guides for youth and a helper's guide. The activity guides are designed to give young people a variety of horticulture experiences – from flowers to herbs to vegetables to house plants and flower arranging. They were written for young people aged 9 to 18 who like to work outdoors, get their hands dirty, plant seeds and watch seeds grow. The helper's guide contains background information, easy-to-use reference tables, group activities and solutions to questions posed in the youth manuals. (Purdue [Indiana] 4-H, 1997)

#### 4-H 1584 Horticulture 1: Budding Gardeners (38 pages)

#### 4-H 1585 Horticulture 2: Branching Out (38 pages)

#### 4-H 1586 Horticulture 3: Digging Deeper (38 pages)

#### 4-H 1587 Horticulture: Group Helper's Guide (37 pages)

"Growing Fun for Growing Minds" is the theme of this curriculum for third- through twelfth-graders. Whether young people live in a high-rise apartment or have a large yard or garden, this curriculum has activities for them, including indoor and outdoor gardening, flowering arranging, composting and basic plant science. While developing horticultural skills, young people will practice life skills such as communication, decision-making, problem-solving and leadership, and can take advantage of opportunities for community service. The curriculum can be adapted for use in classrooms, youth groups, after-school programs and by individual members. (Illinois 4-H, 1996)

### EXTENSION PUBLICATIONS

The following Extension publications are available from your county MSU Extension office. They are listed in numerical order within categories.

#### *Crop and Soil Sciences*

#### E0498 Sampling Soils

#### E0896 N-P-K Fertilizers, Types, Uses & Characteristics

#### E1363 Guide to the Identification of Common Weed Seedlings of Michigan

#### E1419 Soybean Diseases II

#### E1420 Wheat Diseases I

#### E1421 Wheat Diseases II

#### E2188 Wheat – A Production Guide for Michigan

**PUBLICATIONS (CONTINUED)**


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*Fruit Gardening*

**E0852 Fertilizing Fruit Crops**  
**E2011 Highbush Blueberry Nutrition**  
**E2066 Hints on Growing Blueberries in Michigan**  
**NCR045 Disease of Tree Fruits**  
**NCR237 Growing Nuts**  
**NCR359 Insect Traps for Home Fruit Insect Control**

*General Gardening*

**E1784 Solar Greenhouse for the Home**  
**E1853 Hydroponics at Home**

*Home Gardening*

**E1077 Houseplant Problems**  
**E1267 Collecting, Pressing, Mounting & Storing Plants**  
**E1581 How to Recognize & Control Oedema in Ornamental Plants**  
**E2018 Houseplants: Common Insects & Diseases**  
**NCR211 Flower Arranging**  
**NCR252 Roses for the Home**

*Landscaping and Ornamentals*

**E0506 Management of Dutch Elm Disease**  
**E1592 A Guide to Identifying Plant Disease Systems**

**E1814 Promotion & Prevention of Fruiting in Woody Plants**  
**E1936 Selecting Ornamental Plants for Michigan Landscapes**  
**E1983 Gypsy Moth in Michigan – Guide for Home & Woodlot Owners**  
**E2024 Diagnosing Problems of Ornamental Landscape**

*Plants*

**NCR356 Fertilizing Garden & Landscape Plants & Lawns**

*Lawns and Turfgrass*

**E1329 Smut of Turfgrass**  
**E1544 Fairy Ring**  
**E1545 Pythium Blight in Michigan**

*Vegetable Gardening*

**E0760A Home Vegetable Garden Variety Recommendations**  
**E1696 Home Storage of Fruits & Vegetables**

## ● RESOURCES

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### OTHER MSU RESOURCES

*The following material is available through the MSU department listed.*

#### **Agricultural Engineering Department**

Plan Service Secretary  
Michigan State University  
216 Agricultural Engineering Bldg.  
East Lansing, MI 48824-1323  
Phone: 517-355-4720  
• Index of Publications

#### **Animal Science Department**

Michigan State University  
1290 Anthony Hall  
East Lansing, MI 48824-1225  
• **Utilizing Waste in the Cropping Program** – Describes the effect of manure on soil tilth, plant growth and erosion. Also discusses ways to utilize for optimal value. (32 slides, tape, YVPS\*)

#### **Department of Crop & Soil Sciences**

Michigan State University  
278 Plant and Soil Sciences Bldg.  
East Lansing, MI 48824-1325  
• **Canola Production in Michigan** – Describes a new alternative crop for Michigan

#### **Department of Horticulture**

Michigan State University  
A288 Plant and Soil Sciences Bldg.  
East Lansing, MI 48824-1325  
Phone: 517-355-5191  
• Horticulture careers brochures

### OTHER RESOURCES

*The organizations listed below may provide more information in this project area.*

#### **Brooklyn Botanical Gardens**

1000 Washington Ave.  
Brooklyn, NY 11225  
• Membership magazine, educational materials

#### **Chicago Board of Trade**

LaSalle at Jackson  
Chicago, IL 60604

#### **Dow Chemical Company**

Consumer Relations  
Midland, MI 48640  
• Pesticide information

#### **Federal-State Agriculture Reporting Service**

315 W. Allegan  
Lansing, MI 48933  
• Michigan crop statistics

#### **Michigan Bean Commission**

P.O. Box 22037  
Lansing, MI 48909  
• Information and journals on bean production and quality

#### **Michigan Crop Improvement Association**

P.O. Box 21008  
Lansing, MI 48909  
• Articles, newsletters, brochures and information on crop varieties and seed production, availability and quality  
• Office personnel, field and laboratory inspection staff for certifying seed quality of Michigan field crops

#### **Michigan Department of Agriculture**

Ottawa Office Bldg.  
Lansing, MI 48909  
• Information on farming in Michigan

#### **Michigan Farm Bureau**

7373 E. Saginaw  
Lansing, MI 48917  
• Statistics, prices, marketing information, speakers

#### **Michigan Potato Industry Commission**

500 N. Homer  
Lansing, MI 48912  
• Potato information and recipes

## ● RESOURCES (CONTINUED)

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### **National Gardening Association**

180 Flynn Ave.  
Burlington, VT 05401  
Phone: 802-863-1308

• **Growing Ideas** gardening newsletter especially for teachers; also publishes manuals, **Grow Lab: A Complete Guide to Gardening in the Classroom** and **Grow Lab Activities for Growing Minds**.

### **National Junior Horticulture Association**

401 N. Fourth St.  
Durant, OK 74701-4101  
405-924-0771

• Information on Young America Horticulture Contests and other useful information for youth aged 6 to 19

### **Ortho Chevron Chemical Company**

200 Bush St.  
San Francisco, CA 94120

• Educational materials

### **Sunset Series Book**

Lane Marketing and Book Co.  
Menlo Park, CA 94025

• Educational materials

### **U.S. Soil Conservation Service**

Offices in most counties, check the U.S. government listing in your phone book

• Information on soil science and conservation

## ▲ THE INTERNET

When you're looking for resources related to your kids' interests, remember to check the Internet. Each section of the *Guide to Michigan 4-H Youth Development* contains suggested search words and terms you can use at an Internet search engine site to begin locating resources. One great starting point for your visit to the Internet is the Michigan 4-H Youth Development site:

<http://www.msue.msu.edu/msue/cyf/youth/index.html>

Some sections of the Guide list specific World Wide Web sites for you to visit. The URL (Universal Resource Locator) or address of each site is given in brackets < > after the site name. The listings that contain URLs or addresses for Web sites were accurate at the time of this writing, but URLs, like most things on the Web, change constantly. If a URL doesn't work, use a search engine to find the site's current location. Remember, this information is for education and fun only! Reference to commercial products or trade names does not imply endorsement by Michigan State University Extension or bias against those not mentioned.

If you don't have ready access to a computer and modem, check with your local library, school or community college, computer user groups, computer stores or your county MSU

Extension office. They may be able to help you find a way to connect your 4-H group to the online world. Ask the kids you work with, too! Chances are they're already in touch with "cyberspace."

### HELP KIDS BE SAFE ON THE WEB

*You click on something, and then on something else, and before you know it, you're somewhere altogether different...*

The World Wide Web and other parts of the Internet can be fun, fascinating and informative. But there are parts of the Internet that aren't appropriate for kids. You can help protect the kids you work with as they venture online by monitoring their computer use, visiting the Web sites they visit and staying in touch with what they're doing.

### Staying Street Smart on the Web

URL: <<http://www.yahooligans.com/docs/safety/index.html>>

This page of the popular "Yahooligans" site contains Web safety advice for kids and parents, and a pledge for Web-surfing kids. It links to several sites that allow you to download software to filter out objectionable material on the 'Net.

### KEYWORDS & SEARCH TERMS

*The following terms could help you start a search of the Internet related to working with young people in this project area:*

- Ag in the Classroom
- Annual plants
- Bedding plants
- Crop science
- Crops
- Floriculture
- Flower gardening
- Flowers
- 4-H Children's Garden
- Fruit
- Garden
- Gardening
- Heirloom seeds
- Heritage gardens
- Horticulture
- House plants
- Ornamental horticulture
- Perennial plants
- Plant science
- Plants
- Seeds
- Soil
- Soil testing
- Vegetables
- Weeds