INTRODUCTION

Gardens teach children responsibility, a caring for nature, and an understanding of agriculture, science, relationships, and life processes. If your school already has a garden, then you know this first hand. And if you are thinking about starting a garden at your school, then you are probably wondering how to get started.

This guide includes worksheets to help you plan, organize, and manage your garden. We encourage you to reach out to the community to make your garden a success.

It is suggested that you also use one or more of the many excellent books available on gardening with children.

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Developed by Kerry Martens and Virginia Knight, Cornell University students
KIDS GROWING FOOD
Goals The main goals of Kids Growing Food are to increase appreciation and understanding of agriculture, nutrition and the food system by getting students involved in food gardening at school and to create “garden classrooms” that provide authentic experiences and help educators meet state and national Learning Standards.

Kids Growing Food participants agree to:
- Make links to agriculture, food systems and good nutrition
- Integrate the garden into the core curriculum
- Grow mostly food-producing plants
- Involve the school and community
- Attend one Spring workshop
- Publicize the garden
- Produce a Final Report
- Actively participate in the KGF Network

What’s Involved?
Annually, teachers are invited to submit garden mini-grant proposals. Schools receive a cash award to help them establish or maintain a food garden. Additionally, grant recipients are offered workshops at two or three sites each year. They are provided education and gardening materials and become part of the Kids Growing Food Network. Schools are welcome to join the network without receiving a grant.

Now in its 9th year, Kids Growing Food has awarded nearly 300 garden grants in New York. It is estimated that Kids Growing Food teachers involved over 50,000 students in hands-on food gardening educational experiences in 2005. Funding sources currently include New York Ag in the Classroom funds through the NYS Department of Ag & Markets, the Ag Tech Prep Program, private donations, and specialty agriculture license plate fees.

Kids Growing Food (KGF)
- 1998: 52 grants awarded to New York elementary schools for food gardens.
- 1999: 48 grants awarded to New York elementary schools for food gardens.
- 2000: 34 grants awarded to K-12 New York schools for food gardens.
- 2002: 21 grants awarded to K-12 NY schools.
- 2003: 44 grants awarded to K-12 NY schools.
- 2004: 32 grants awarded to NY schools.
- 2005: 12 new KGF gardens established in NY.
- 2006: 15 new KGF gardens established in NY.
- Starting in 2001: Several High School partnership gardens started with Ag Tech Prep funds each year.
- All Years: Regional KGF workshops held for teachers and garden partners.
- All Years: Grant recipients’ Final Reports demonstrate strong community connections to the gardens.
- All Years: Final Reports demonstrate a wide variety of student benefits from the gardens.
- All Years: Kids Growing Food receives recognition in local, state and national publications.
- All Years: KGF continues to seek financial support, in-kind partnerships and collaborations.

New York Agriculture in the Classroom Kids Growing Food Program
Cornell University College of Agriculture & Life Sciences
Department of Education/106 Kennedy Hall, Ithaca, NY 14853 Contact: (607) 255-9252
www.cerp.cornell.edu/aitc
KIDS GROWING FOOD ON THE WEB

http://www.cerp.cornell.edu/aitc/KGF.html

VISIT THE KIDS GROWING FOOD WEBSITE OFTEN!

Connect to NY Ag in the Classroom site for Agricultural Literacy resources, Empire Educator newsletter, Be Aware of NY Agriculture Contest, Lesson Plans, Ag Literacy Day, and more.

Current Highlights
Check back often to find grant applications in the fall, workshop announcements, and other highlighted information.

See the Gardens!
View photos and learn about highlighted Kids Growing Food gardens. Send us photos of your garden to post!

List of Garden Sites
Find out which schools in your area have received Kids Growing Food grants since 1998 (the year KGF started).

Resources page
A list of links to other sites with useful information, resources, and lessons.

Grants and Awards page
Link to the National Gardening Association site and information on other grants and awards.

Electronic Mailing List sign up
Interested teachers and volunteers can sign up for the New York AITC electronic mailing list. Let us know if your e-mail address changes.
LOCAL SCHOOL RECEIVES CORNELL UNIVERSITY  
KIDS GROWING FOOD GARDEN GRANT

Students to connect to agriculture by growing food at school!

<Your Town>, NY—Among this year’s new Kids Growing Food garden grant recipients, who will serve as the school’s garden Project Director, is <Your Name> at <Your School>. Since 1998, Kids Growing Food, a New York Agriculture in the Classroom program, has helped create and support over nearly 300 school food gardens, providing K-12 students throughout New York with hands-on food growing experiences.

Kids Growing Food gardens help raise teachers’ and students’ agricultural awareness by making links to agriculture, food systems and good nutrition. The garden also serves as a “garden classroom.” Garden-based lessons are integrated into regular classroom studies such as math, science, language arts, and history, helping teachers meet core curriculum requirements. Growing food at school helps students gain an understanding of how the local food system works and serves as a link to local farmers, businesses, and others involved in agriculture.

Kids Growing Food garden grant recipients are awarded $500 as “seed” money to help purchase whatever is necessary to get their gardens growing. In addition, recipients receive educational resources, workshop opportunities and access to a growing network of school food gardeners through the Kids Growing Food Network.

Kids Growing Food garden sites participate in the NYS Department of Agriculture & Markets New York Harvest for New York Kids Week, which promotes New York and locally-grown food and healthy food choices in school cafeterias. In addition, all Kids Growing Food gardens are asked to grow extra food and donate the produce to a local food bank, soup kitchen or service organization, as part of the Garden Writers Association Plant a Row for the Hungry program.

For more information about the Kids Growing Food school garden program, visit the NY Ag in the Classroom website at www.cerp.cornell.edu/aitc/. New York Agriculture in the Classroom is a partnership of Cornell University, NYS Department of Agriculture & Markets, NYS Education Department, and NY Farm Bureau, and works with cooperative extension educators, teachers, and Farm Bureau volunteers throughout the state to foster an awareness, understanding, and appreciation of the total food and fiber system.

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For more information, call New York Agriculture in the Classroom within Cornell University’s Department of Education: (607) 255-9252, visit the web site: www.cerp.cornell.edu/aitc or send e-mail to: ptd7@cornell.edu.
January 2007   For immediate release

Contact:    <Your Name>
            <Your Contact Information>

LOCAL SCHOOL RECEIVES CORNELL UNIVERSITY
KIDS GROWING FOOD GARDEN GRANT

Students to connect to agriculture by growing food at school!

<Your Town>, NY—Among this year’s new Kids Growing Food garden grant recipients, who will serve as the school’s garden Project Director, is <Your Name> at <Your School>. Since 1998, Kids Growing Food, a New York Agriculture in the Classroom program, has helped create and support over 275 school food gardens, providing K-12 students throughout New York with hands-on food growing experiences. A generous private donor donated the funds to support the school garden project at <Your School>.

Kids Growing Food gardens help raise teachers’ and students’ agricultural awareness by making links to agriculture, food systems and good nutrition. The garden also serves as a “garden classroom.” Garden-based lessons are integrated into regular classroom studies such as math, science, language arts, and history, helping teachers meet core curriculum requirements. Growing food at school helps students gain an understanding of how the local food system works and serves as a link to local farmers, businesses, and others involved in agriculture.

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LOCAL SCHOOL RECEIVES CORNELL UNIVERSITY KIDS GROWING FOOD GARDEN GRANT

Students to connect to agriculture by growing food at school!

<Your Town>, NY—Among this year’s new Kids Growing Food garden grant recipients, who will serve as the school’s garden Project Director, is <Your Name> at <Your School>. As part of a mentorship effort funded by New York Ag Tech Prep program out of SUNY Cobleskill, this school’s partner teacher is <Partner’s Name> at <Partner’s School>. The high school students will work with the younger students to create a school garden. Since 1998, Kids Growing Food, a New York Agriculture in the Classroom program, has helped create and support nearly 300 school food gardens, providing K-12 students throughout New York with hands-on food growing experiences.

Kids Growing Food gardens help raise teachers’ and students’ agricultural awareness by making links to agriculture, food systems and good nutrition. The garden also serves as a “garden classroom.” Garden-based lessons are integrated into regular classroom studies such as math, science, language arts, and history, helping teachers meet core curriculum requirements. Growing food at school helps students gain an understanding of how the local food system works and serves as a link to local farmers, businesses, and others involved in agriculture.

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KIDS GROWING FOOD/NY AGRICULTURE IN THE CLASSROOM
PERMISSION SLIP FOR USE OF IMAGES

(Please Print)

Name of Participant: ______________________________________________

Address: _______________________________________________________

Name of Parent/Guardian: _________________________________________

I, the undersigned, hereby consent and authorize the use or reproduction by Kids Growing Food/New York Agriculture in the Classroom of any and all photographs, slides, film, digital images, sketches, and any other audiovisual materials taken of myself/my child during any authorized Kids Growing Food/New York Agriculture in the Classroom event or activity for publicity, advertising, promotional printed material, educational activities, websites, or any other use by Kids Growing Food/New York Agriculture in the Classroom programs.

Signature: ________________________________________________________

Date: ___________________________________________________________
FINAL REPORT GUIDELINES

KGF Final Report Requirements

THE BASICS!
- 2-3 page summary of KGF garden
- 3 color photos of garden and students
- Newspaper, magazine articles, audio, and video reports
- Write project director’s name, year you received the grant, school name, school address, telephone number, e-mail, school website, current date on all items
- Send items both electronically and via hard copy
- Deadline: March 1, 2007

THE DETAILS
- Maximum 3-page summary of Kids Growing Food activities. Use only one side of page.
- Include the following information in a centered heading on both pages:
  - School or KGF garden site name and location (school, city, district, county)
  - Project Director’s name and contact information (phone, e-mail)
  - Current date
  - Date of grant cycle (if you received the grant in 2006, you are in the 2006 grant cycle and are writing a KGF Final Report 2006)
  - KGF garden site name
  - School or KGF garden site web site (if available)
- Minimum 3 color photos of the KGF garden and KGF participants (digital preferred with identifiable name of file)
  - Write approximate dates, school name, city, state, Project Director’s name, phone, e-mail and any caption information on each image or in a separate document. While this may be tedious, it is extremely important. We get many photos and other items and need to ensure that all items are properly identified in the event they become separated from other KGF Final Report materials.
  - Photo release permission slip for all students in pictures
- Original copies of all KGF-related newspaper, magazine or journal articles (must include name of publication and date of article)
- We discourage fancy, bulky notebooks, photo books and scrapbooks because they are difficult for us to file. Simple photos or images that we can keep together with your summaries and news articles, etc., work best!

KGF Final Report Tips
- Use a good camera – digital images are great for sharing
- If students are identifiable in photos parental release is needed for us to use the photo
- Have a talented parent or volunteer take photos
- Send entire newspaper, magazine or journal page or pages. This way we will have all masthead titles and article dates that are needed for professional reproduction.

KGF Final Report Uses
KGF Final Reports are essential to the sustainability of Kids Growing Food. We may use the written materials and images for student and academic research, in academic and popular publications, in presentations, on our web site, and for future funding purposes. In other words, they are of great importance to the future of school food gardening!
FINAL REPORT GUIDELINES

KGF Final Report Guidelines
At a minimum, please detail the following subjects in your summary:

- Overview - How KGF garden met initial goals:
  - Increasing agricultural literacy. Provide specific examples of impact.
  - Linking KGF garden to curriculum and learning standards, including garden-related lesson plan activities you used or created.
  - Send at least one lesson you developed.
- Student numbers, involvement, roles and impacts. We need numbers! Please provide the number of students, teachers, and classrooms that were involved with and impacted by the garden.
- How the garden met your expectations
- Successes and challenges (lessons learned)
- Type of garden and crops planted
- Different groups and numbers of people reached, such as:
  - School personnel involvement, roles and impacts (other students, teachers, administrators, custodians, grounds keepers, food service professionals)
  - Community support and involvement (Master Gardeners, Cooperative Extension, 4-H, FFA, Scouts, Parent Teacher Organizations, local businesses, local farmers, etc.)
- Summer maintenance: how accomplished
- Planting activities and celebrations
- Harvest news (what you did with your KGF garden produce. Examples: class events, school events, food sales, harvest soups and salads, use in school cafeteria, donations to food pantries, homeless shelters, etc.)
- Nutrition links and connections made to the cafeteria, including participation in NY Harvest for NY Kids Week
- Special topics or themes, such as links to Native American agriculture
- How grant met budget needs
- Other grants and funding support received
- KGF garden-related news
- Plans to sustain and continue your KGF garden in the future
- Include at least one lesson that you developed that integrates the garden and agricultural literacy into the curriculum and addresses standards
- How the connection to NYAITC’s Ag Tag Specially License Plate program was publicized

KGF Final Report Ownership
KGF Final Reports become property of Kids Growing Food.

KGF Final Report Permissions
KGF Project Directors must get permission from students’ parents or guardians to share images. We will not identify students by name, but we do sometimes use images for publicity purposes and may identify the school. We will assume that we can use the images unless you notify us otherwise. We do not need the permission slips, we only need to know that you have received permission to share the images and that you have access and ownership of permission slips. If you cannot secure permission, then send photos in which individual students cannot be identified.

KGF Final Report Return Addresses: Send It Back!
KGF Final Reports must be sent back BOTH electronically and via regular mail if possible.

Send electronically to: nyaitc@cornell.edu
Send Hard copy to: Kids Growing Food/FINAL REPORT, Cornell University Department of Education, NYAITC, 106 Kennedy Hall, Ithaca, NY  14853
Research that Supports our Work
From The Cornell Department of Horticulture Garden-Based Learning Website
http://www.hort.cornell.edu/gbl/index.html

One of the realities of working within the world of garden-based learning is that inevitably, you may need to write a proposal to support a program or help you initiate a new project. Fortunately, there is research that you can draw on to bolster up and advocate for your efforts. The following is a summary of research findings that you can cite in proposals, share with your board of directors, and use in countless other ways to support the important work that you are carrying out. Know of a great article that’s missing? Please send it along to us.

1. Children’s garden consultants is a new model designed to give teen-aged youth the opportunity to actively research children’s garden design and educational programming, then present recommendations to an adult audience. Surveys, observations, and discussions with youth, adults in attendance, and program organizers indicated the approach was highly valuable and worth repeating. It provided a new learning opportunity for youth, and it also gave adults new perspectives on gardens. (Lekies, Kristi S., Marcia Eames-Sheavly, Kimberly J. Wong, and Anne Ceccarini. 2006. Children’s Garden Consultants: A New Model of Engaging Youth to Inform Garden Design and Programming. HortTechnology 16(1): 139-142.)


3. A study on a youth gardening program in Detroit reports that after gardening, kids have an increased interest in eating fruit and vegetables, possess an appreciation for working with neighborhood adults, and have an increased interested for improvement of neighborhood appearance. In addition, they made new friends, and showed increased knowledge about nutrition, plant ecology, and gardening. (Pothukuchi, K. (2004). Hortiliza: A Youth “Nutrition Garden” in Southwest Detroit. Children, Youth and Environments. 14(2): 124-155.)


5. “Gardens are often the most accessible places for children to learn about nature’s beauty, interconnections, power, fragility, and solace.” (Heffernan, M. (1994). The Children’s Garden Project at River Farm. Children’s Environments. 11(3): 221-231.)


7. Both passive and active interactions with plants during childhood are associated with positive adult values about trees. However the strongest influence came from active gardening, such as picking flowers or planting trees as a child. (Lohr, V.I. & Pearson-Mims, C.H. (2005).)
Children’s Active and Passive Interactions with Plants influence Their Attitudes and Actions toward Trees and Gardening as Adults. *HortTechnology* 15(3): 472-476.

8. Students in a one-year school gardening program increased their overall life skills by 1.5 points compared to a group of students that did not participate in the school gardening program. The gardening program positively influenced two constructs: “working with groups” and “self-understanding.” (Robinson, C.W. & Zajicek, J.M. (2005). *HortTechnology*. 15(3): 453-457.)


10. As early as 1909, Montessori had identified several benefits to children’s gardens: enhances moral education, increases appreciation for nature, increases responsibility, develops patience, and increases in relationship skills. (Montessori, M. (VI 964). *The Montessori Method*. Schocken.)


15. Parents who are highly involved at school are more likely to be involved in educational activities with their children at home. (National Center for Educational Statistics, (1997). Fathers’ Involvement in Their Children’s Schools. Government Printing Office: Washington, D.C.)


20. Horticulture is a profession deeply rooted in community involvement and activity-based learning, both of which are key elements to the development of children. McCormick reports that students tend to learn more and better when they are actively involved in the learning process. (McCormick, F., D. Cox, and G. Miller. (1989). Experiential Needs of Students in Agriculture Programs. *The Agriculture Education Magazine*. 62(4): 11-12, 23)


School Gardens Measure Up
What Research Tells Us

Author: National Gardening Association Staff

"The science concepts and skills students gained from our garden project were impressive, but perhaps more significant was the self-esteem that flourished," reports special education teacher Joan Gould from Athens, GA.

Educators in growing classrooms have little doubt about the benefits students reap from living garden laboratories. Students' comments, behaviors, and products; photos and portfolios; teachers' observations; and parent reports also speak volumes about how students are growing. Nevertheless, for many funders, policymakers, and others, "hard" data often carries more weight. We have scoured the country in search of results of school gardening research studies that might help fuel your arguments and proposals. Following are some highlights from which to draw.

Underachievers Grow Literacy Skills and Self-Esteem
"I was concerned about how to support underachieving students' emotional and cognitive growth," reports teacher and doctoral student Barbara Sheffield from Columbia, SC. Intrigued by the concept of using gardens as learning tools, in 1992 she launched a third and fourth grade summer school project that used a whole language approach with gardening as the central theme. "Beyond offering rich language arts opportunities, the garden was a natural context for science inquiries, math problem solving, and developing social skills such as working together to puzzle out problems," says Barbara.

The Results
Results of formal pre- and post-tests of achievement (Peabody Individual Achievement Test), self-esteem (Coopersmith Self-Esteem Inventory), and attitudes toward school (School Attitude Measure) indicated greater gains in all three areas than control classes made. The most significant student gains were in self-esteem and achievement in reading, reading comprehension, spelling, and written expression.

"Of course," says Barbara, "there were many additional qualitative indicators of student motivation and attitudes toward school that were not part of what we formally measured." She explains that students routinely came in early, stayed late, and had no absences. Parents also reported that their children had never been so excited about school, and that they were anxious to get back in the fall to continue tending to and showing off their garden.

Note: Take care not to generalize results of any study to other audiences, contexts, and curricula.

Gardening Improves Environmental Attitudes
Watching a seedling unfurl, witnessing the death of a neglected plant, raising a garden for butterflies -- such experiences help students acquire a direct, personal understanding of what living things require to thrive, and how they how they adapt and interact. These connections serve as a vital foundation for developing a lifelong ethic of environmental stewardship.

Texas A&M graduate student Sonja Skelly designed Project Green, in which second and fourth grade teachers used a cross-disciplinary gardening curriculum for one semester. The project goal was to integrate environmental education using gardening as a vehicle. Sonja conducted pre- and post-tests with 237 children using the Children's Environmental Response Inventory to assess environmental attitudes.

The Results
Students in gardening classrooms scored significantly better than those in control classrooms on measures of appreciation for the environment and concern about human impact. The results also revealed that second graders had a greater change in positive environmental attitudes than the fourth graders -- certainly a case for starting early.

The Gardening/Nutrition Link
Another study conducted at Texas A&M by graduate student Sarah Lineberger examined how a 16-month gardening program affected third and fourth graders' nutritional attitudes and behaviors. The researcher used a fruit and vegetable preference questionnaire and a 24-hour food recall journal to measure students' attitudes and behaviors at the beginning and end of the gardening program.

The Results
Results indicate that student attitudes toward vegetables significantly improved, as did their preferences for fruit and vegetable snacks.
GrowLab Program Scores


The Results

GrowLab classrooms scored significantly higher than control classrooms in students’ understanding of key life science concepts and science inquiry skills. Students in fifth grade classrooms in the same study scored significantly higher than control classes on attitude scales measuring "concern for the environment" and "confidence in ability to do science."

When 300 teachers were asked in a related survey what significant gains students had made as a result of the GrowLab program, a majority spontaneously reported improvement in each of the following areas:

- responsibility
- cooperative behaviors
- enthusiasm, interest, initiative and love for plants and science
- environmental awareness and concern
- understanding of life science concepts
- science process, problem solving, and math skills
- pride, confidence, and self-esteem
- language arts skills

Self Esteem, Social Skills, Behavior

-- Gardening teachers overwhelmingly report that these are some of the most prominent benefits their kids reap. Here are two research-based highlights.

- In Laurie DeMarco’s 1997 study at Virginia Tech of teachers who had integrated gardening into the curriculum, 75 percent reported that student behavior often or always improves when the garden is a learning context.

- Researchers at Our Lady of the Lake University in San Antonio, TX, conducted a three-year school garden study (1995-1997) of 12 third grade classrooms. They found that self-esteem in gardening classrooms increased in year one and remained high during the next two years. Students in gardening classrooms also exhibited a greater increase in social concerns (e.g., feeding the hungry) and improved relationships with other students and parents than did students in control classrooms.

Research results aside, real student voices and products speak volumes about what kids harvest from gardening laboratories. Document them when you can. This gem was written by a young gardener in a California juvenile facility.

As I lay in the grass
I hear my conscience pass

telling me to continue to take my garden class
so that I can learn how to plant a flower

take over the world and have all the power

I'm not talking about the power that gives out pollution
I'm trying to come out with a new solution
that can start a new way of thinking
and stop the world from sinking
'cause the clock's ticking
and I'm tweaking
so what I'm trying to say is stop the pollution
and start a sustainable revolution

Gardening Meets Special Needs
"Over and over we've found that kids who have been labeled behaviorally disturbed, learning impaired, and so on, make great strides in our garden program. When they have an opportunity to create a garden, become 'experts,' and share their expertise with others (often in a role reversal), their skills and confidence soar."

-- Karen Williger, New Orleans, LA

"A season after initiating a therapeutic garden for adolescents, I was floored by their enthusiasm and ability to focus on tasks. It was also amazing to see how fast group cohesion, trust, and self-esteem grew."

-- Amy Stein, Yardley, PA

© 2004 National Gardening Association
www.garden.org, www.kidsgardening.com
GARDEN PLANNING
WORKSHEET 1: DEVELOPING A MISSION AND VISION STATEMENT

Setting goals is an important part of any plan. In addition to **thinking** about what goals you may have for your garden, it is essential to write them down. This will organize your thoughts and remind you later to stick to your goals. Below, write your mission and vision: two key elements in goal setting.

**Your Mission:** Write a few sentences about how this garden will help your school and the larger community surrounding your school. More specifically, include whom the garden will benefit, how it will benefit them, and how many students will be exposed to these benefits.

**Your Vision:** What exactly are you planning to do with this garden? What do you imagine your garden will look like? Write down whether you plan on doing a themed garden (such as an Herb, Salad, Orchard, Three Sisters, or Pizza Garden, etc.) or some other type of project, such as a container garden or hydroponics.
WORKSHEET 2: CURRICULUM GOALS

Garden activities will be geared towards specific curriculum goals. Setting curriculum goals for your garden will give your garden focus and direction for your students. It also aids in justifying the use of a garden in your school setting. Furthermore, garden-based activities can be a basis for meeting academic standards in your instruction. Below, list several curriculum goals you have for your garden, and how these goals will be achieved. How will you integrate agricultural concepts?

Resources can be accessed at http://www.cerp.cornell.edu/aitc/.

An example of a goal may be to teach your students about life cycles as a part of a science lesson. Plant and insect life cycles are easily visible in the garden. List some possible goals below.

1.  

2.  

3.  

4.  

5.  

6.  

7.  

8.  
WORKSHEET 3: YOUR GARDEN NECESSITIES

Use this checklist as a reference when determining what materials are needed for your garden. Some items may already be available to you, and some may need to be purchased or donated. Grants and support from local businesses can help to reduce costs to your school, but it is important to recognize the resources required. Check off the items you already have, and start thinking about where you could obtain the items needed. Finally, think about items that can be purchased in later years: which do you think may be included in future plans? Add other needs and wishes to both lists.

**Needed for Year One:**
- ___ Plants, Seeds
- ___ Soil
- ___ Sunlight (duration 6 hours)
- ___ Source of water (watering cans, irrigation system, hose)
- ___ Beds, Pots, Containers
- ___ Basic garden tools (shovels, rakes, hoes, trowels, cultivators)
- ___ Garden Calendar (to keep track of plant dates, harvest dates, maintenance responsibilities)
- ___ Garden activities

Rate the following items in order of priority.

**Future Years:**
- ___ Tool shed
- ___ Composting area
- ___ Wheelbarrows
- ___ Trellis, Arbor
- ___ Fencing for pests, vandalism
- ___ Sign for your garden
- ___ Worktables
- ___ Handicap accessibility
- ___ Indoor grow lights
- ___ Greenhouse
- ___ Garden Art
- ___ Seating, benches, teaching area
- ___ Other: ______________________________________________
A Five Year Plan can lend great stability to your gardening plans. It will give your garden further focus, and will keep you on track from year to year. Write out your goals for each year, keeping in mind what you have already accomplished and what you want to accomplish in the future. Remember, this will evolve and grow just like your garden and your students’ vision.

Year One:

Year Two:

Year Three:

Year Four:

Year Five:
WORKSHEET 5: DESIGN YOUR GARDEN

Sketch out your garden in the box below. Make this your dream garden, but keep in mind limitations such as space, sunlight, money, and water restrictions. Indicate whether the plants are in a raised bed, in pots, or directly in the ground. Draw in any tool sheds, benches, paths, themed gardens (butterfly garden, herb garden, etc.), arbors or trellises, and composting areas. Also, include existing features such as trees and buildings. Use graph paper for more detail, and to draw to scale.

Garden Design for ____________________________________________
(school name)

Location:______________________________________________________
FOR STUDENTS: DRAW YOUR GARDEN

What is your dream garden? Does it have a lot of flowers, or vegetables? Do you picture your garden with paths, bushes, benches, and trees? Where do you want your garden to be? Draw your ideal garden in the box below. Make sure you include details such as what kinds of plants you would have and where you would plant them. Things to keep in mind: Do the plants you want need lots of space around them, or can they be close together? Can they be in the shade, or do they need lots of sun?

Garden Design for ____________________________ (school name)

Location: ___________________________________
WORKSHEET 6: HOW TO CHOOSE PLANT VARIETIES FOR YOUR GARDEN

Choosing which plant varieties you will put in your garden is a key step to the success of your project. Avoid discouragement from your students if plants aren’t successful because they don’t get enough light or water, by rating each plant candidate on its needs. In the comments section write any special needs the plant may have such as extra fertilization or trimming. Do this for each plant, and then analyze whether the plant will be able to thrive in your garden location, or if special arrangements can be made for them. Cornell University’s Department of Horticulture provides a Vegetable Variety Citizen Science guide at [http://vegvariety.cce.cornell.edu](http://vegvariety.cce.cornell.edu) Gardening fact sheets can be found at [www.gardening.cornell.edu/factsheets.html](http://www.gardening.cornell.edu/factsheets.html)

<table>
<thead>
<tr>
<th>Plant Name:</th>
<th>Water Requirements:</th>
<th>Sun Requirements:</th>
<th>Space Requirements:</th>
<th>Comments:</th>
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<th>Space Requirements:</th>
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<th>Plant Name:</th>
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FOR STUDENTS: CHOOSING PLANT VARIETIES

Choosing what types of plants to put in your garden is crucial to success. You cannot plant a type that needs tropical weather and expect it to grow well in New York State. You must choose plants that can be successful in your garden, according to how much sun, how much rain, and what type of soil you have at your garden site.

Do a little bit of research first. What type of climate does your region of New York State have? Refer to a book, website, or Cornell Cooperative Extension to determine the rainfall, temperature range, and growing season to expect in your area. An excellent source of information is the Cornell University Garden Resource site at www.gardening.cornell.edu.

Now, you can choose the plant varieties you want.
Use this guide to create a list of your garden’s key contacts.

School Principal: ______________________________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Contact at County Office of Education: ____________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Building Maintenance Supervisor: _________________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Curriculum Coordinator: _________________________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Cornell Cooperative Extension Master Gardener: _________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

PTA/PTO Representative: _________________________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Cornell Cooperative Extension Educator: _________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Local farmer: __________________________________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________

Key Community Volunteer: _______________________________________
Address: ______________________________________________________
Phone: ____________ Fax: ____________ Email: _________________
Comments: ____________________________________________________
WORKSHEET 7: GARDEN CONTACT LIST

Other contacts:

Name/Title: _____________________________________________
Address: ________________________________________________
Phone: _____________ Fax: _____________ Email: ____________
Comments: ______________________________________________

Name/Title: _____________________________________________
Address: ________________________________________________
Phone: _____________ Fax: _____________ Email: ____________
Comments: ______________________________________________

Name/Title: _____________________________________________
Address: ________________________________________________
Phone: _____________ Fax: _____________ Email: ____________
Comments: ______________________________________________

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Address: ________________________________________________
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Address: ________________________________________________
Phone: _____________ Fax: _____________ Email: ____________
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Comments: ______________________________________________

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Phone: _____________ Fax: _____________ Email: ____________
Comments: ______________________________________________

Name/Title: _____________________________________________
Address: ________________________________________________
Phone: _____________ Fax: _____________ Email: ____________
Comments: ______________________________________________
Support from parents will make your gardening endeavors much easier. To gain their support, you may want to send a letter home with each child stating your goals for the garden, the work it will take to achieve those goals, and why it will be beneficial for them to help you with the garden (You may use the sample letter provided on the next page as a guide).

You may also want to hold a parents’ meeting, where you can talk to them face to face and learn their ideas or concerns. Take down contact information for the parents who would be willing to have a hands-on role with the garden. Ask if any of your volunteers have experience with gardens, and tell them to feel free to make suggestions. Use the chart given to record the parents who have given you a response, their contact information, and any resources they might be able to offer.

It is most important to let each parent know the value a garden will have for his or her child, and how they can help. Parents can be a big help with maintenance during the summer, transportation, and garden celebrations and events. These can be critical areas of concern when planning and operating your garden. They can also do a lot by encouraging their kids about gardening activities.

Complete the following prompts before talking to the parents to organize your thoughts.

**Gardening Plans:**

**Benefits of a Garden at school:**

**Why they should help:**

**How they can help:**
<Date>

Dear Parent,

Your child’s school needs your help! We would like to design and build a school garden for your child to use and learn from. Gardens can teach children through hands-on experiences lessons in science, math, and literature. In addition, a garden brings the school community closer by involving school staff, the children, their parents, and local businesses and neighbors.

I would like to invite you to help us with planning our garden. A meeting will be held <Meeting Date> at <Location> You are encouraged to attend and to share your opinions or concerns with us. If you cannot make it to this meeting, but would like to offer your help with planning and maintenance of our garden, please fill out the below information and have your child return it to <Teacher/Garden Director>. Thank you.

Sincerely,

<Signature>

Fill out this form and send back with your child:

In which area would you most like to help?
__Planning
__Maintenance
__Special Activities

Name: ____________________________________________________________

Phone: _______________________ Email: ___________________________

Child’s Name: ___________________________________________________

Opinion of making a garden available to this school district:

How would you be willing to help?
### WORKSHEET 8: GAINING SUPPORT FROM PARENTS

Parent Responses:

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<th>Comments</th>
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WORKSHEET 9: VOLUNTEERS

You can use the poster on the following page to attract volunteers for your garden project. Classroom doors and bulletin boards are a few good places to start.

**Working With Volunteers**

Every gardening project requires committed volunteers. Volunteers often join because they care about the project and its participants. They may want to be more involved in their communities, meet new people, and “make a difference.” Perhaps they become involved because their children are in the program, or they want to be associated with a worthy community effort. Before you can effectively manage volunteers, it helps to know their motives, in order to sustain a fruitful relationship that builds your program while meeting their needs as well.

Whatever their reasons for becoming involved, the following are the major components to ensure success with volunteers, as identified by the National 4-H Foundation. Before embarking on any program requiring significant volunteer activity, address each of the following points:

- Identify and recruit people with the competence and attitudes essential to accomplishing the goals of the program
- Select and place volunteers in roles that meet their needs, and yours
- Orient volunteers to the goals of the project and the role that they will play
- Train volunteers in the specific skills, knowledge, and attitudes necessary for them to successfully accomplish their tasks
- Utilize volunteers’ time and skills effectively
- Recognize and appreciate volunteers’ contributions
- Evaluate volunteers’ performance and provide useful feedback
- Supervise supportively, helping volunteers to reach desired goals

— from *Sowing the Seeds of Success*, by Marcia Eames-Sheavly
You can make a difference...

Simply by donating your time, efforts, or materials to

____________________

School Garden.

We need:

___________________________________________
___________________________________________

Please contact:

_____________________________
WORKSHEET 10: DONOR RECORD

This is a record to keep track of any donations made to your garden by businesses, parents, and organizations. Keeping this record is extremely important, so that you can track what was donated in your budget, as well as send thank-you letters. Keep a separate donor record for each year you receive donations.

Name__________________________________________________

Company________________________________________________

Address________________________________________________

City____________________________State_______Zip_________

Phone________________Fax______________E-mail____________

Item donated_____________________________Date__________

Value of item__________________________Thank you letter sent ____

Name__________________________________________________

Company________________________________________________

Address________________________________________________

City____________________________State_______Zip_________

Phone________________Fax______________E-mail____________

Item donated_____________________________Date__________

Value of item__________________________Thank you letter sent ____
WORKSHEET 10: DONOR RECORD

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____

Name__________________________________________________

Company_______________________________________________

Address________________________________________________

City________________________________________State_______Zip_________

Phone_____________Fax_____________E-mail_____________

Item donated_________________________________________Date__________

Value of item_____________________Thank you letter sent _____
Certificate of Appreciation

This certificate is awarded to

________________________

for your generous support of our garden at

________________________

Signature: ___________________________ Date: ____________
WORKSHEET 11: SENDING THANK YOU LETTERS

Sending thank you letters shows that you appreciate the help that was given to you. Every time someone does your school garden a favor, by either donating their time or a needed material, having the students write them a simple thank-you will tell them that their help was welcomed and greatly appreciated. Feel free to use the sample letter below as a format for your own.

Date
Name
Title
Address
City, State, Zip Code

Dear __________:

We would like to thank you sincerely for your contribution to our school’s garden project. *(Your school’s name)* would not be able to offer our students this wonderful opportunity to learn from a garden, where they can gain real world connections, without support from donors like you.

This garden means a lot to our school and our children, and your donation of ______________ has had a wonderful effect of ___________________ on our garden.

Again, thank you!

Sincerely,

_______________
WORKSHEET 12: COMMUNITY AGRICULTURAL RESOURCES

Below is a list of organizations that may be used as resources for information, or as garden mentors or community partners.

**American Farm Bureau:**  [www.fb.org](http://www.fb.org)
**New York State Farm Bureau:**  [www.nyfb.org](http://www.nyfb.org)
Check out both of these sites for information from one of the Country’s largest farm organizations.

**FFA:**  [www.ffa.org](http://www.ffa.org)
**New York FFA:**  [www.nysffa.org](http://www.nysffa.org)
FFA is a student-oriented leadership organization that strives for agricultural education. FFA may be a great help to your school garden with planning or maintenance if you have a chapter in your district.

**Master Gardener:**  [http://www.gardening.cornell.edu/education/mgprogram/index.html](http://www.gardening.cornell.edu/education/mgprogram/index.html)
The Master Gardener Program is a corps of volunteers in New York State who are trained by Cornell Cooperative Extension in the science and art of gardening. See if your county has a Master Gardener Program.

**4-H:**  [www.4husa.org](http://www.4husa.org)
**New York 4-H:**  [http://nys4h.cce.cornell.edu/](http://nys4h.cce.cornell.edu/)
4-H is a youth development program that has a focus on agriculture, leadership, and community service. 4-H volunteers may be the perfect way to keep up your summer maintenance!

**Cornell Cooperative Extension:**  [http://www.cce.cornell.edu/gardening/](http://www.cce.cornell.edu/gardening/)
CCE has countless resources for gardens. This website contains endless links that will be helpful to you. Check with your county’s CCE office to see if there are Extension Educators who can help or if resources are available. [http://www.cce.cornell.edu/in_your_community.php](http://www.cce.cornell.edu/in_your_community.php)

**Gardening Clubs:**

**Community Groups:**  Senior Groups, Boy/Girl Scouts, and other youth groups
Remember, this list is just a short compilation of the resources that may be available for you! And the more community programs you involve, the closer the connection your school will make to the community.

**Service Learning Projects:**
Most schools with gardens donate produce to their local food bank or other community organizations. To find local food banks, check out the America’s Second Harvest site at [http://www.secondharvest.org](http://www.secondharvest.org).

**Plant a Row for the Hungry**
We encourage Kids Growing Food gardens to participate in the Garden Writers’ Association Plant a Row for the Hungry program. [http://www.gardenwriters.org/par](http://www.gardenwriters.org/par)
If your school needs the start-up capital to make your garden a reality, then you may consider applying for grants. One good source of information about garden grants is the National Gardening Association website at http://www.kidsgardening.com/grants.asp

Each grant that you apply for will have a specified format with specific information required from you. In order to make applying for grants easier, you must gather together all of the information needed for the application.

Information that might be required on your application:
- Mission and Vision Statement
- Curriculum Goals
- Supplies needed for your garden
- A 5 Year Plan
- A Drawing of your Garden
- Well thought out Budget

Hopefully, you have already completed some of the worksheets that guide you through much of the information listed above. However, the most time-consuming aspect of your application may be putting together a detailed budget for your garden. For your budget, you will need to list the materials needed for your garden and how much they will cost. Knowing the grant amount will help you, because then you will know how much you can ask for. Whatever is not covered by the grant will have to be covered by your school, or with money you raise (such as donations from local businesses). It might be wise to do some price comparisons between different stores and suppliers.

Below is a sample budget, which can serve as a guide to format your own.

<table>
<thead>
<tr>
<th>Items</th>
<th>Total Cost</th>
<th>In-Kind Amount</th>
<th>In-Kind Supplier</th>
<th>Supplier</th>
<th>Grant Request</th>
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<tbody>
<tr>
<td>Fencing</td>
<td>$50</td>
<td>$10</td>
<td>Jack’s Supply</td>
<td>Home Depot</td>
<td>$40</td>
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<tr>
<td>Soil</td>
<td>$75</td>
<td></td>
<td>Garden Store</td>
<td></td>
<td>$75</td>
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<tr>
<td>Seeds</td>
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<td>$30</td>
<td>Garden Store</td>
<td></td>
<td>$0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$155</strong></td>
<td><strong>$40</strong></td>
<td></td>
<td></td>
<td><strong>$115</strong></td>
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</table>
GARDEN MANAGEMENT
Your garden is planted, you have watered and weeded, and now you see growth. Your kids are probably excited to see the first beginnings of the seeds they planted turning into plants. Take advantage of their excitement by turning their observations into a math and science lesson. Assign each student a plant to observe through its growing cycle. Have your students observe their plants grow, using measurements and simple observations, and record their findings in the worksheet provided below. Have them fill out part of the worksheet every week from the time you see a sprout, until the plant has reached maturity. At the end of completing this project, students will have used math (measuring height and counting the number of flowers or seeds) and science (signs of pests, did the plant grow vertically or horizontally?).

Keep a weekly record for yourself to keep track of how your plants are progressing. This will help you recognize problems on a weekly basis, such as watering, sun, pests, or fertilizer issues. In this way, you will not only be able to monitor how well your class is observing their plants, but also will be able to keep track of what improvements must be made in the garden.

Finally, at the end of the season, take a few minutes observing each class. This can be done as the class is making their own final observations. You may also consider asking those who did most of the maintenance to fill out the form, since they know the complete history of the plants. This way, at the end of your planting season you will know which plants did the best, and whether you need to make improvements on watering or pest management for next year. Perhaps you might consider eliminating certain plants that did not grow well in your location.

To learn more about Integrated Pest Management (IPM), go to: http://nysipm.cornell.edu/teaching_ipm/default.asp
FOR STUDENTS: PLANT EVALUATION FORM

Name: _____________________ Plant Assigned: _____________________

General Plant Information:
Scientific Name of your Plant:________________________________
When was your seed planted?________________________________
Date you first saw growth above ground:_______________________

Observations:
WEEK ONE: Date_____________ Height (cm):_________
Color of sprout:

WEEK TWO:  Date_____________ Height:__________
How many centimeters did your plant grow in one week?_________
Color of sprout:
Number of leaves:
Is your plant growing vertically or horizontally?__________________

WEEK THREE:  Date___________ Height:__________
How many centimeters did your plant grow since last week?_______
Color:
Number of leaves:
Are there any holes in your leaves, or jagged edges where bits have been taken out of
the leaf? _____  This is a sign that a pest has been eating your plant.

WEEK FOUR:  Date___________ Height:__________
How many centimeters did your plant grow since last week?_______
Color:
Number of leaves:
Is your plant growing strong and tall? _____  If it looks weak, yellow, or is wilting,
check to see how much water has been given your plant.

WEEK FIVE:  Date___________ Final Observations
How tall did your plant grow?
On average, how many centimeters did your plant grow per week?_______
Were there any signs of pests during growth?____________________
What kind of pest do you think it was?___________________________
How many leaves does your plant have?
FOR TEACHERS: GARDEN EVALUATION CHART

Fill out the chart below during your planting season, maybe once a week as your class completes their observations for their Student Plant Evaluation Worksheet. Include in the chart, each major plant variety you have planted in your garden. Consider as you fill out the chart whether your plants are growing well from week to week, whether they are a healthy color (which is an indication that they were not deprived of sun, water, or fertilizer), and whether there are any signs of pests.

Date: ______________

<table>
<thead>
<tr>
<th>Variety Name</th>
<th>Height</th>
<th>Healthy Color?</th>
<th>Signs of Pests?</th>
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END OF SEASON GARDEN EVALUATION FORM

Evaluator’s name:__________________________________________

Garden Location:__________________________________________

Date planted:___________________ in garden or container? (circle)

Record things you want to do differently next year:
By the end of the year, making full use of your garden means completing projects with your students about plant science, agriculture, life cycles, etc. Keeping track of those assignments will be very helpful to you, especially in planning the next year’s lessons. Was the project successful? Did your class enjoy the project? Answer the following questions about each project and then rate the project on a scale of 1-10. A score of 10 indicates that the lesson was well carried out and received by your class and that you would definitely keep the project for future years.

**Project:**

Did the project/lesson meet curriculum standards? (Indicate which standards)

Did the class complete the project to your satisfaction?

Did your class enjoy the lesson?

How well did the project tie into the curriculum?

Overall Rating: 1 2 3 4 5 6 7 8 9 10

**Project:**

Did the project/lesson meet curriculum standards?

Did the class complete the project to your satisfaction?

Did your class enjoy the lesson?

How well did the project tie into your curriculum?

Overall Rating: 1 2 3 4 5 6 7 8 9 10

**Project:**

Did the project/lesson meet curriculum standards?

Did the class complete the project to your satisfaction?

Did your class enjoy the lesson?

How well did the project tie into your curriculum?

Overall Rating: 1 2 3 4 5 6 7 8 9 10
WORKSHEET 15: PROJECT EVALUATION FORM

**Project:**_____________________________________

Did the project/lesson meet curriculum standards?
Did the class complete the project to your satisfaction?
Did your class enjoy the lesson?
How well did the project tie into your curriculum?

Overall Rating: 1 2 3 4 5 6 7 8 9 10

**Project:**_____________________________________

Did the project/lesson meet curriculum standards?
Did the class complete the project to your satisfaction?
Did your class enjoy the lesson?
How well did the project tie into your curriculum?

Overall Rating: 1 2 3 4 5 6 7 8 9 10
WORKSHEET 16: SHARING YOUR PROGRAM WITH THE COMMUNITY

One of the goals of the *Kids Growing Food* program is to help facilitate connections between schools, the community, and the food system through school gardens. Gardening provides many ways to remind people that the program is alive and well, as well as opportunities to get people involved. Send a bouquet or a food basket to a new business in town, a nursing home, or the Chamber of Commerce. Offer to take tasty bite-sized fresh vegetables or fruits to a community event, and have the students help prepare them. A meaningful way of reminding people of the gardening program is to plant extra plants for the hungry, and donate to a local soup kitchen or food pantry. The students might even prepare a meal or festoon the tables with flowers. Be sure that anything harvested from your garden to be donated is top quality and represents your garden to the community well (no baseball bat-sized zucchini or tired out lettuce).

Members of the community will be interested in learning about your school garden. Maintain a garden that students, teachers, and administrators can be proud of. Display a *Kids Growing Food* or other garden sign. Develop a relationship with local media outlets (local newspapers, radio & TV stations) and have the students develop press releases. Be sure to invite media representatives to special events.

**When you contact the media:**
Contact or send releases to a specific person. Find out who covers education or community stories.
Develop a relationship with local media staff.
Spell check and proofread press releases.
Focus on who, what, where, when, why, and how.
Keep press releases and pitches for stories short and concise. Include contact information.
Return calls promptly.
Send out press releases early.
Make sure information is newsworthy.
Start with a brief description of the news, then distinguish who announced it, not the other way around.
Make sure the first 10 words are effective – they are the most important.
Avoid the use of excessive adjectives and fancy language.
Deal with facts.
Provide as much contact information as possible: individual to contact, address, phone, fax, e-mail, website address.
Worksheet 16: Sharing Your Program with the Community

Format:

FOR IMMEDIATE RELEASE

Contact: provide contact information

Heading or Title for Story in bold

Hometown (the name of your town), NY – Date – Start article here

Use short paragraphs and short sentences. Start out with something that is catchy and newsworthy. Describe who is involved in your garden and how it is impacting the students and community. Acknowledge donors and community partners. Highlight connections to the community, NY Ag in the Classroom, and Kids Growing Food.

Indicate the end of the story by placing ### in the middle of the page after the last line.

Ideas from Sowing the Seeds of Success by Marcia Eames-Sheavly and the National Gardening Association, and the Florida Ag in the Classroom Media Handbook
Celebrate your garden harvest with special events.

**New York Harvest for New York Kids Week**

New York Harvest for New York Kids Week is the first week in October. Work with Food Service to highlight New York State foods during this week and plan special harvest activities. For more information, visit the Cornell Farm to School web site at http://media.cce.cornell.edu/hosts/farmtoschool

**National Agriculture Week**

The third week in March is National Agriculture Week. This is a great time to let your community know that your students are learning about agriculture, caring for the land, and growing and harvesting food through their school garden. Post posters in your classroom and in the halls of your school so that your students recognize how agriculture has touched their lives. You might also take advantage of this week to plan another lesson or two regarding agriculture in New York State.

Work with the Food Service Manager in your school to highlight New York State foods on the menu during this week.

On the following page is a poster that you might hang in your classroom or in the halls. Feel free to blow it up to larger sizes, or to add colorful pictures to personalize the poster for your school. Or, have the students create their own!
National Agriculture Week

The third week in March is National Agriculture week. This week was created to recognize agriculture in our lives. Agriculture produces our food and clothes.

Here at ____________________ School, we are growing a garden in order to learn more about agriculture, nutrition, and the caring and harvesting of food.
AGRICULTURAL LITERACY
http://www.cerp.cornell.edu/aitc

VISIT THE NYAITC WEBSITE OFTEN!

Connect to the Kids Growing Food site for information on school gardening.

Current Highlights
Check back often for current contests, activities, and information.

Link to the National Resource Directory and National Ag in the Classroom websites
Link to the web-based National Ag in the Classroom Resource Directory. Over 1000 resources searchable by grade level, academic subject, agricultural or natural resources content, and media type. The national site includes sites for teachers, kids, and teens, along with other resources, such as the Growing a Nation program for high school American History teachers.

Empire Educator newsletter
Download or read the quarterly Empire Educator newsletter to learn about upcoming events, ag literacy resources, and ideas for teaching.

Lesson Plans
Download the K-3 NY Ag in the Classroom lessons in Math, Social Studies, Language Arts, and Science. NYS Learning Standards included.

Ag Literacy Resources page
Find links to other sites with lessons and resources, information on the NYAITC Bluebird Project, Book lists with agricultural themes, and Ag Literacy Quizzes.

Be Aware of NY Agriculture Contest
This contest for pre-K – 6th grade students is a fun way to learn about agriculture. Teacher guides and student WebQuests (2nd-6th grades) are available on the web, along with the guidelines and entry form. Entries due mid-April.

Ag Literacy Day
Watch for information about the second NY Ag Literacy Day that will be celebrated on March 20, 2007.
WORKSHEET 19: SOURCES OF LESSONS AND RESOURCES

NY Ag in the Classroom website
http://cerp.cornell.edu/aitc/

National Ag in the Classroom website (includes National Resource Directory)
http://www.agclassroom.org/

New York Farm Bureau Foundation for Agricultural Education
http://www.nyfbfoundation.org/

Cornell Farm to School Program
http://www.cce.cornell.edu/farmtoschool/

Cornell Gardening Resources for Youth
http://www.gardening.cornell.edu/education/youth/index.html

NYS IPM (Integrated Pest Management) Program K-12 Education
http://www.nysipm.cornell.edu/teaching_ipm/default.asp

NY Harvest for NY Kids Week
http://www.prideofny.com/Farm_to_School.html

Discovering the Food System: An Experiential Learning Program for Young and Enquiring Minds, Available from: Division of Nutritional Sciences and Department of Horticulture, Cornell University
http://www.hort.cornell.edu/foodsyst/

Food and Fiber Systems Literacy Lessons
http://food_fiber.okstate.edu/curriclm.htm

Kids Gardening (National Gardening Association)
http://www.kidsgardening.com

Northeast Regional Food Guide
http://www.nutrition.cornell.edu/foodguide/archive/index.html

USDA National Agricultural Statistics Service lessons

Listening to the Prairie: Farming in Nature’s Image
http://www.cerp.cornell.edu/aitc/pages/listening.asp

Ten Things Kids Want to Know About Farming
Lesson Plans for Grades 4-6 (video and lesson plans booklet from American Farm Bureau)

NYS Ag & Markets
http://www.agmkt.state.ny.us/agfacts.html

NY Ag Statistics Service
http://www.nass.usda.gov/ny/ (Go to Top 10 Commodities and Kids Page)

New York Apple Country (fact sheets, lessons, activities)
http://www.nyapplecountry.com/teacherkits.htm

Center for Ecoliteracy
http://www.ecoliteracy.org
WORKSHEET 20: FOOD AND FIBER SYSTEMS LITERACY GUIDE

The guide on the following pages, and accompanying lessons, can be found online at http://food_fiber.okstate.edu

America's food and fiber systems determine the nation's general welfare and standard of living. Today, nearly ninety percent of the population is two or three generations removed from direct contact with food and fiber production. As a result, youth know little about agricultural production, processing, marketing, distribution, regulation, or research.

The National Research Council established the Committee on Agricultural Education in Secondary Schools in 1985. This committee recommended that “beginning in kindergarten and continuing through twelfth grade, all students should receive some systematic instruction about agriculture.” Since this report, many instructional materials have been developed to help youth learn about agriculture. However, educators and agriculturists have been slow to develop a K-12 systematic curriculum framework for food and fiber systems literacy.

The Guide to Food and Fiber Systems Literacy is composed of a compendium of standards, benchmarks, explanatory narrative, and sample instructional materials for kindergarten through twelfth grade. It is intended to provide a road map for infusing Food and Fiber Systems knowledge into core academic subjects and across grade levels. This Guide summarizes what America’s youth should know about Food and Fiber Systems to be agriculturally literate by the time they graduate from high school.
WORKSHEET 21: EXTENDING CLASSROOM LESSONS

Agricultural fairs are a great way to extend the concepts of what students learn in a school garden project. Students may choose to participate in a county fair showing what they have grown in their school garden. Another idea is to take a field trip to a fair or encourage families to attend agricultural fairs. Local farmers markets are another way for students to meet individuals in agricultural careers. The following sites provide ideas for extension activities, possible field trips, or to assist students and their families in finding agricultural businesses in your community.

http://www.agmkt.state.ny.us/fairshome.html New York State Department of Agriculture and Markets site listing current events. County fairs are a great way to extend what is learned in the classroom and to allow students to experience agriculture in action.


http://www.nyfairs.org/ New York State Association of Agricultural Fairs

http://www.nysfair.org/state_fair/2006/ New York State Fair

If kids want to see lots of farm equipment and learn more about agriculture, families can visit the Empire Farm Days in Seneca Falls in August http://www.empirefarmdays.com/, or visit the Eastern States Exposition (The Big E) in West Springfield, Massachusetts in September http://www.empirefarmdays.com/

http://www.prideofny.com/member_search.asp A search tool to find areas where agricultural commodities are grown and produced. This may lead to sources of speakers and or field trip contacts

http://www.ams.usda.gov/farmersmarkets/states/newyork.htm A listing of farmer’s markets in NY

http://www.nyfarms.info/ NY Farms! is an organization devoted to building farmer and consumer connections in New York State. Watch for information about the I Love New York Agriculture Challenge next summer. It is an agricultural scavenger hunt for families and classrooms.
It is never too early to encourage students to think about careers. There are many food and fiber systems careers that students may not associate with the field of agriculture. Although less than 2% of our population is involved in food production, about 20% work in jobs somehow related to the food system. This resource list includes links that allow students to learn about careers in agriculture and the food system. Also included are a game and quiz students can use to explore agricultural careers.

http://www.albany.edu/twoyear/careerplan/plans.html NY career planning guide to aid students in thinking about careers in all grade levels

http://careervoyages.com/students-elementary.cfm Includes a video on agricultural science and a brief description on some of the topics scientists in this field study.

http://www.khake.com/page64.html A list with links to many agriculturally related careers.

http://www.alfy.com/Scripts/go.asp?url=http://stats.bls.gov/k12/html/edu_over.htm&purl=/Teachers/Teach/Thematic_Units/Careers/Careers_1.asp A great site organized by students’ interests. From the highlighted interests, there are links to associated career profiles.

http://www.ars.usda.gov/is/kids/scientists/scientistsframe2.htm A USDA Agricultural Research site with careers associated to science in agriculture.

http://nmml.afsc.noaa.gov/education/science/workwmm.htm A site about careers involving working with marine mammals.

http://www.acrnetwork.org/parents/careeraware.htm#1 America’s Career Resource Network for elementary students and links to other grade levels. Site encourages students to work hard in school showing how a good education is connected to what they think they might want to do as an adult.

http://erg.usgs.gov/isb/pubs/booklets/scientists/back.html This USGS site shows people in different agriculturally related careers sorted by field of study

http://www.uga.edu/~lam/kids/day/default.html A day in the life of a veterinarian

http://mapping-your-future.org/MHSS/ Mapping Your Future- Steps to follow for planning for your future career for middle and high school students

http://www.usoe.k12.ut.us/stc/ccc/home.htm A great career site organized by grade with lesson ideas/plans linked to careers

http://www.nycareerzone.org/graphic/clusters.jsp;jsessionid=00014XY3Qoijyv62OklQOMgTMdGO:-1?cluster=6 NY Ag careers page associated with jobs in the agricultural field

http://www.agriculture.purdue.edu/USDA/careers/index.html USDA Living Science site for information about Food, Agriculture, and Natural Resources Careers
Career Bingo

Grade Level: K-3

Approximate Length of Activity: 45 minutes

Objectives:

Teacher:
1. Provide information on a variety of ag-related careers.
2. Have students work cooperatively on an activity.

Students:
1. Become familiar with careers related to agriculture.
2. Match careers with definition of jobs.

Illinois Learning Standards: 15.A.1b; 15.C.1a

Introduction:

Agriculture is the production of food and fiber through growing crops and raising animals. The agricultural industry is made up of all the people who help feed and clothe other people in the world. So, can you live a day without agriculture? Think about it. It's the food we eat, the clothes we wear, the cars we drive, the homes we live in, and much, much more! This is why the agriculture industry is our nation's largest industry.

There are many areas for employment opportunities in agriculture. These areas are production; social service professionals; education and communication; managers and financial specialists; scientists, engineers and related specialists; and marketing, merchandising, and representatives. All of these jobs are important to the economy of our state, country, and world. There are over 250 career areas available and 22 million people working in agriculture, and this is just in the United States. In Illinois, one out of every five to six people are employed in an agricultural career.
Materials Needed:

- Agricultural Careers worksheet for each student
- Career Bingo Game Card sheet for each student
- Career Bingo Pictures sheet for each student
- Scissors
- Glue
- Markers for Bingo Cards (corn, soybeans, candy corn, etc.)

Activity Outline:

1. Discuss with the students the various careers in agriculture. Use the Agricultural Careers worksheet to get ideas.
2. Give each student a copy of the Career Bingo Game Card and Career Bingo Pictures worksheet.
3. The students should cut out the pictures on the Career Bingo Pictures worksheet and glue the pictures into the various boxes on their Career Bingo board. Each student should design their own bingo board so no two are alike.
4. Hand out markers for the bingo cards. The markers could be corn kernels, soybeans, candy corn, etc.
5. Use an extra copy of the Career Bingo Pictures worksheet to call out careers during the bingo game.

Discussion Questions:

1. What kind of career or job do your parents have? Is it related to agriculture?
2. What type of job would you like to have? Is it related to agriculture?

Related Activities:

1. Interview someone in the agriculture field.
2. Invite a guest speaker to the classroom to tell about their role in agriculture.
3. Take a field trip to an ag-related business.
### Agricultural Careers

#### Science and Research
- Chemist
- Animal Nutritionist
- Soil Scientist
- Plant Breeder
- Biotechnologist
- Economist
- Equipment Tester
- Food Packager
- Lab Technician
- Food Scientist/Technologist
- By-Product Developer

#### Business & Industry
- Feed Mill Operator
- Fertilizer Salesperson
- Seed Plant Supervisor
- Seed Sorter
- Pharmaceutical Representative
- Manufacturer for Combines, Planters, Tractors
- Implement Dealer
- Construction Worker for Buildings
- Farm Supplier (fences, feeders, grain bins)
- Trucker, Barge Operator, Train Engineer
- Farm Manager
- Loan Officer
- Credit Analyst
- Grain Broker
- Salesman for Feed, Seed, Equipment
- Grain Marketer
- Country Elevator Manager
- Cheese Maker
- Bread Maker
- Grocer
- Butcher
- Wholesale Food Salesman
- Milk Delivery Driver
- Produce Cleaner

#### Ag Communications
- Farm Newspaper Editor/Writer
- Farm Radio Broadcaster/Technician
- Television Weather Reporter/Director
- Magazine Writer/Publisher
- Photographer for Newspaper & Magazine
- Advertising Executive/Writer
- Exhibitor at Agriculture Trade Shows
- Market Reporter

#### Ag Education
- High School Ag Teacher
- Extension Advisor
- College Professor
- Government Worker
- Health Teacher

#### Environment and Conservation
- Conservationist
- Recycling Manager
- Environmentalist
- Land Use Planner
- Irrigation Consultant

#### Ag Services
- Veterinarian
- Farm Accountant
- Inspector for Feed & Seed
- Mechanic
- Parts Manager
- Welder
- Surveyor
- Electrician
- Ag Pilot
- Inspector for Food
- Food Broker
- Ag Lawyer
- Meat Inspector
- Restaurant Owner
- Waiter/Waitress
- Safety Inspector

#### Production Agriculture
- Beef Producer
- Corn Grower
- Dairy Farmer
- Fruit Grower
- Lamb and Wool Producer
- Soybean Grower
- Swine Producer
- Vegetable Grower
- Wheat Grower
- Poultry Producer

---

To be used with: 
*Career Bingo*

Name: ____________________________
Career Bingo Game Card

FREE
To be used with:  
*Career Bingo*

# Career Bingo Pictures

<table>
<thead>
<tr>
<th>Corn Farmer</th>
<th>Food Inspector</th>
<th>Mechanic</th>
<th>Ag Pilot</th>
<th>Ag Reporter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Teacher</td>
<td>Trucker</td>
<td>Ag Photographer</td>
<td>Veterinarian</td>
<td>Seed Salesman</td>
</tr>
<tr>
<td>Conservation Officer</td>
<td>Sheep Farmer</td>
<td>Researcher</td>
<td>Newspaper Writer</td>
<td>Elevator Manager</td>
</tr>
<tr>
<td>Landscape Architect</td>
<td>Tractor Salesman</td>
<td>Dairy Farmer</td>
<td>Chemist</td>
<td>Vegetable Grower</td>
</tr>
<tr>
<td>Hog Farmer</td>
<td>Accountant</td>
<td>Restaurant Manager</td>
<td>Dietician</td>
<td>This space intentionally left blank.</td>
</tr>
</tbody>
</table>
Career Quiz
Utah Social Studies

Objective

1. Students will locate professionals from the resource list to come into the classroom.
2. Students will relate their interests to three possible careers within agriculture.

Materials

| Copies of worksheet A, one for each student |
| Worksheet B (overhead form) |
| Copies of worksheets C-E, one for each student |

Background

Most people want to spend their work time doing something they enjoy. Many people have a hard time deciding what type of job they would enjoy.

The Holland Theory is a way to evaluate what types of activities you enjoy and match these to the jobs you might enjoy. By answering a few questions, people may find out which agriculture careers might match their talents and capabilities. People enjoy working in environments that allow them to associate with like-minded individuals.

There are six different types of working environments: realistic, investigative, artistic, enterprising, social, and conventional. Many people are a combination of types and may consider working in careers that combine two or more types.

Activity Procedures

1. Hand out worksheet A. Have students answer the questions on the worksheet.
2. Hand out worksheet C. Using the overhead of worksheet B, go through the answers to worksheet A. Have each student indicate which characteristics they’ve chosen by making tally marks on worksheet C.
3. At the conclusion of the questions, have the students add the number of tallies after each characteristic.
4. The students should have one or two characteristics that have more tally marks than the others. Have them color these areas on worksheet C.
5. Hand out worksheet D or E, depending on which characteristic had the most tally marks.
6. These worksheets include areas of study and career possibilities that may interest persons with these characteristics.
7. Have each student choose one career from the career possibilities list that interests him or her.
8. Each student should research the career he or she chose and list job responsibilities, education requirements and how it relates to production agriculture.

**Ag. Journal Questions**

1. Did the jobs under your category correspond with your interests?
2. Did you discover career opportunities that you hadn’t considered “agriculture careers?”
3. Would you be interested in a career in agriculture?

*Adapted from Kansas Agriculture in the Classroom.*
Career Quiz

1. Do you enjoy working outdoors?
   □ Yes
   □ No

2. Do you prefer to work with:
   □ Things
   □ Alone
   □ Ideas
   □ People
   □ People and Ideas

3. Do you like to work with tools and machines?
   □ Yes
   □ No

4. Do you enjoy investigating what makes things the way they are?
   □ Yes
   □ No

5. Mark which of the following skills you possess: (mark all that apply)
   □ Athletic ability
   □ Mathematical and scientific
   □ Artistic skills
   □ Leadership and speaking
   □ Clerical or numerical
   □ Social skills

6. Do you like to solve problems?
   □ Yes
   □ No

7. Do you have a good imagination?
   □ Yes
   □ No

8. Are you interested in human relationships?
   □ Yes
   □ No

9. Do you like to help others with problems?
   □ Yes
   □ No

10. Are you interested in economics and politics?
    □ Yes
    □ No

11. Do you like to try to convince people?
    □ Yes
    □ No

12. Do you enjoy working with words and numbers?
    □ Yes
    □ No

13. Do you carry out tasks in detail?
    □ Yes
    □ No

14. Do you follow through on others’ instructions?
    □ Yes
    □ No

15. Do you enjoy creating original work?
    □ Yes
    □ No

16. Mark which of the following best describe you:
    (mark all that apply)
    □ a) I like to do what people expect of me. I am truthful and practical. I like to save my money. I don’t like to brag about myself.
    □ b) I like to question and find out about things. I like to work by myself and do a good job, but I don’t brag about how good I am doing.
    □ c) I like to work by myself and come up with new ideas. I sometimes do things differently than others would. I am creative.
    □ d) I like to help others. I am friendly, patient and understanding. People can trust me.
    □ e) I am outgoing and popular. I think that everything will turn out for the best. I like to explore and have lots of energy.
    □ f) I like to do what people expect of me. I like to save my money. If something doesn’t work the first time, I will try again until it does work.
Answers to Career Quiz

1. If you answered yes, put a mark by Realistic.
2. If you marked Things, put a mark by Realistic.
   If you marked Alone, put a mark by Investigative.
   If you marked Ideas, put a mark by Artistic.
   If you marked People, put a mark by Social.
   If you marked People and Ideas, put a mark by Enterprising.
3. If you answered yes, put a mark by Realistic.
4. If you answered yes, put a mark by Investigative.
5. If you marked Athletic Ability, put a mark by Realistic.
   If you marked Mathematical and Scientific, put a mark by Investigative.
   If you marked Artistic Skills, put a mark by Artistic.
   If you marked Leadership and Speaking, put a mark by Enterprising.
   If you marked Clerical or Numerical, put a mark by Conventional.
   If you marked Social Skills, put a mark by Social.
6. If you answered yes, put a mark by Investigative.
7. If you answered yes, put a mark by Artistic.
8. If you answered yes, put a mark by Social.
9. If you answered yes, put a mark by Social.
10. If you answered yes, put a mark by Enterprising.
11. If you answered yes, put a mark by Enterprising.
12. If you answered yes, put a mark by Conventional.
13. If you answered yes, put a mark by Conventional.
14. If you answered yes, put a mark by Conventional.
15. If you answered yes, put a mark by Artistic.
16. If you marked a, put a mark by Realistic.
   If you marked b, put a mark by Investigative.
   If you marked c, put a mark by Artistic.
   If you marked d, put a mark by Social.
   If you marked e, put a mark by Enterprising.
   If you marked f, put a mark by Conventional.
**Six Career Interests**

**INVESTIGATIVE**—People who like to observe, learn, investigate, analyze, evaluate or solve problems.

**REALISTIC**—People who have athletic or mechanical ability, prefer to work with objects, machines, tools, plants or animals, or to be outdoors.

**CONVENTIONAL**—People who like to work with data, have clerical or numerical ability, carry out tasks in detail or follow through on others’ instructions.

**ENTERPRISING**—People who like to work with people, influencing, persuading, performing, leading or managing for organizational goals for economic gain.

**SOCIAL**—People who like to work with people to enlighten, inform, help, train, or cure them, or are skilled with words.

**ARTISTIC**—People who have artistic, innovative or intuitional abilities and like to work in unstructured situations using their imagination and creativity.

*Utah Agriculture in the Classroom*
Agriculture Careers

My name is_____________________________

My career characteristics indicate that I am
_____________________________________

I am interested in a career as
_____________________________________

Realistic
DOERS

Appliance Mechanic
Aquaculturist
Automobile Body Repairer
Automotive Engineer
Automobile Mechanic
Baker/Chef
Carpenter
Construction Worker
Diesel Mechanic
Electrical Engineer
Farm Equipment Manager
Farmer
Farm Manager
Forester
Groundskeeper
Industrial Supervisor
Instrument Repair and Maintenance
Laboratory Technician
Machinist
Maintenance Repairer
Mechanical Engineer
Oceanographer
Truck Driver
Water Quality Specialist

Investigative
THINKERS

Agronomist
Biochemist
Biologist
Cartographer
Chemical Engineer
Chemical Technician
Chemist
Computer Engineer
Computer Programmer
Computer Systems Analyst
Ecologist
Economist
Electrical Engineer
Hazardous Waste Technician
Horticulturist
Industrial Arts Teacher
Management Consultant
Marketing Research Analyst
Research Analyst
Software Engineer
Statistician
Technical Writer
Veterinarian
Web Site Developer

Artistic
CREATORS

Advertising Art Director
Advertising Manager
Copywriter
Graphic Designer
Journalist/Reporter
Landscape Architect
Photographer
Writers/Editor
Agriculture Careers

Worksheet E

Social HELPERS
College Professor
Community Planner
Dietician
Elementary School Teacher
Family and Consumer Sciences Teacher
Family and Consumer Scientist
Home Economist
Homemaker
Occupational Therapist
Park Naturalist
Personnel Recruiter
Personnel, Training or Labor Relations Specialist
Public Health Educator
School Principal-Administrator
Secondary School Teacher
Special Education Teacher
Teacher’s Aide
Business Teacher
Vocational Agricultural Teacher

Conventional ORGANIZERS
Abstractor
Accountant
Administrative Assistant
Bank Teller
Budget Analyst
Computer Operator
Cost Accountant
Financial Analyst
Internal Auditor
Safety Inspector
Tax Consultant
Telephone Operator
Typist

Enterprising PERSUADERS
Advertising, Marketing or Public Relations Manager
Advertising Sales Representative
Financial Planner
Financial Manager
Buyer
Computer Operator
Cook/Chef
Credit Analyst
Credit Manager
Educational - Training Manager
Educational Administrator
Food Service Manager
Foreign Service Office
Industrial Engineer
Interpreter
Journalist
Lobbyist
Manufacturer’s Representative
Office Manager
Public Relations Representative
Restaurant Manager
Retail Sales Person
Retail Store Manager
Sales Manager
Sales Representative
Stockbroker
Tax Accountant

My name is ________________________________
My career characteristics indicate that I am ___________________________
I am interested in a career as ________________________________

Utah Agriculture in the Classroom