

Vegetable Varieties investigation

Engaging youth in citizen science

VVi is an integrative hands-on approach to learning about biodiversity, data collection and connecting with community.

How does it work?

Participants interview gardeners about their opinions on vegetable varieties, and submit their findings to an online database. This online database serves as a library of vegetable varieties descriptions and accompanying reviews. The library is used by vegetable gardeners as well as plant breeders and horticulture researchers.

Why participate in VVi?

To provide youth with direct, genuine experience in:

- Science research
- Data collection
- Sharing findings online
- Interviewing skills
- Teamwork
- Connecting with others in the community
- Supporting biodiversity locally

Participants will also contribute to a nation-wide online library of vegetable variety data. Contributing to this library supports science research and promotion of biodiversity for healthy ecosystems, including our farms and gardens. Findings reported by VVi youth participants can influence plant breeding efforts and scientists' recommendations to home gardeners.

Youth Participants

- support biodiversity
- contribute to science research
- make a positive difference for people
- connect with their communities
- engage in real-world learning

FAQs: Is VVi a good fit for us?

Q: Who can participate?

VVi is geared toward middle and high school-aged youth groups, although anyone can participate. VVi is ideal for:

- Student environmental organizations
- Students seeking independent study options
- Advanced placement science students
- Youth/teens considering careers in science research, community development, or the horticultural industry
- Special interest teen/youth groups
- Faith-based teen/youth groups
- Boys and Girls Clubs
- Key Clubs
- Community service groups
- 4-H groups
- Scouts
- Any informal setting in which teenaged youth gather with the guidance of an adult leader.

Q: What is required to execute VVi?

- An adult leader to coordinate the project.
- The on-line VVi toolkit.
- Several hours of advance planning and 4-6 hours in active program execution.
- Youth participants and a meeting place with computers which have Internet access.
- Access to home or community gardeners.

Q: What can I expect from the VVi toolkit?

- comprehensive instructions
- templates and sample forms
- all materials needed to carry out program
- estimated time commitment
- contact information for support
- suggested resources and links

Q: My group likes to have fun. VVi seems like a lot of work. Will this feel like school?

Definitely NOT !!! It's true that VVi is about science, data collection, and there is learning that takes place. But it's FUN HANDS-ON LEARNING! Science does not have to be boring, and you'll see that first hand with your VVi experience.

Q: My 4-H group meets during the summer. Will VVi work for us?

Absolutely. The VVi program works very well during the summer. You will likely find that gardeners are most accessible during the summer months, especially through your local community gardens. Just be sure you begin planning as soon as possible, so you allow sufficient time for all the program stages (advance planning, orienting youth, field work, reporting data, follow up/evaluation).

Q: Our students meet during the school year. Can we still do VVi?

Yes!

FALL

Early autumn through harvest is an ideal time to interview gardeners for three reasons. First, many gardens are overflowing with ripe produce, ready for harvest, and visiting the garden spurs students' own questions. Second, gardeners' opinions of what they have grown during the season are fresh on their minds. Third, some gardeners may be willing to arrange for students to taste test ripe varieties right from the garden. This allows students to deepen their understanding of the work they are doing.

SPRING

Spring is also a good time to do VVi, as gardeners are planning their gardens for the coming season, and reflecting on what varieties have performed well in the past. A sample spring VVi program may begin planning in January/February, orient youth in March, and interview gardeners in April or May. Interviews at this time of year could take place in a newly planted garden.

WINTER

If visiting a garden setting is not a priority for your group, VVi can be executed any time of year, even in the middle of winter. The essential element of VVi is interviewing gardeners. Gardeners are around year round, even when their gardens are dormant! If you choose to do a winter program, allow extra time to identify your gardeners, or make connections with local community gardeners the preceding autumn. You might also consider planning a field trip the following growing season, to visit your gardeners' gardens.

Q: Our youth group meets monthly. Will VVi work with our schedule?

Yes. VVi is especially designed to be flexible and easily modified to suit the needs of your group. When you are creating your time line and program agenda, be sure to make the appropriate adjustments, and build in extra time to review information learned in previous sessions.

Q: Our group meets weekly. Will VVi work for us?

Yes. VVi works very well with a weekly schedule. Just be sure to design your VVi timeline accordingly.

Q: We meet regularly, but with different students each week. Can we do VVi?

VVi works best when students follow through from start to finish. Proper orientation prepares students for effective interviewing, and sharing data they collected themselves is a source of pride and essential for accurate reporting.

Q: Will VVi help students meet learning standards?

See *VVi in the Classroom* to find out how VVi fits together with Research, Science learning, and Assessment Tools.

“What vegetable varieties will grow best in my garden?” Gardeners have been asking this question for centuries. By conducting the Vegetable Varieties investigation with youth, you will help uncover some answers for today’s gardeners and scientists, while providing a rich learning experience for your students. You will also contribute to an online library of gardeners’ vegetable variety experiences which will serve as a tool for preserving knowledge and promoting biodiversity.

Few gardeners grow everything, but collectively gardeners across the world grow hundreds of crops and thousands and thousands of specific varieties. The knowledge gardeners have about vegetable varieties is astonishing, and plays a critical role in preserving biodiversity. Through the Vegetable Varieties investigation, you will use the interview process to gather gardeners’ opinions about specific vegetable varieties they have grown. You will learn about traits of specific varieties of vegetables and find out why gardeners grow some varieties and avoid others.

There are many different vegetable species, from asparagus and arugula to tomatoes and turnips, available for growing in home and community gardens. A *variety* is a kind or form of a given species or crop. For example, Jersey Knight and Martha Washington are varieties of asparagus, and Sungold and Brandywine are varieties of tomato. While varieties of a particular crop species share many common characteristics, each has slightly different features. These characteristics influence taste, yield, appearance, and also adaptability to environmental conditions like heat and moisture, and resistance to disease and pests. Many gardeners pay careful attention to the varieties of vegetables they grow because of successes or difficulties they’ve had in the past with specific varieties or personal preference for a particular taste or appearance.

By sharing your findings via the Vegetable Varieties Investigation website, you will contribute to an online library of vegetable varieties reviews that:

- assists scientists with understanding traits of specific vegetable varieties and how they perform in various regions and garden settings
- helps gardeners select appropriate varieties for specific growing conditions and desired outcomes
- compiles the experiences of gardeners from many locations and backgrounds
- serves as a tool for promoting biodiversity

Anyone Can Contribute. To get involved,

- Review and download the complete **Vegetable Varieties investigation Toolkit** from <http://vegvariety.cce.cornell.edu/vvi>
- Conduct the Vegetable Varieties investigation
- Submit data to <http://vegvariety.cce.cornell.edu/vvi>

In addition to all the youth interviewers who are essential to the success of this project, the team that helped bring this project together includes:

Cornell Cooperative Extension

Paul Treadwell – Information Technology Team Leader.

Leigh MacDonald – Education coordinator of Ithaca Children's Garden.

Department of Horticulture

Erin Martea – Assistant for project planning and development.

Lori Bushway - Project coordinator.

Craig Cramer - Website coordinator.

Department of Natural Resources

Marianne Krasney – Project advisor and Principle Investigator of Garden Mosaics.

Keith Tidball – Project advisor and National Program Leader of Garden Mosaics.

Related links

VVi

Local/ Regional

<http://www.csrees.usda.gov/Extension/>

Locate your CCE office for assistance in finding gardeners and other resources in your area.

<http://www.communitygarden.org/links.php#Gardens>

American Community Gardening Association. Community gardens listed by state, province and country

<http://www.usna.usda.gov/Hardzone/ushzmap.html>

Use this clickable USDA hardiness map to determine what the frost-free zone is for your area

Interview-related

<http://www.nksd.net/Schools/dms/advisory/activities.html>

Interviewing Activities. Select Active Listening, Interviewing the Teacher, or Student Interviews

<http://www.youthlearn.org/learning/activities/thinking/interview.html>

How to conduct an effective interview, by YouthLearn.

<http://www.youthlearn.org/learning/activities/howto.asp>

How to develop an inquiry based project

<http://www.youthlearn.org/learning/teaching/pairshare.asp>

pair share method

Biodiversity

http://wellnessways.aces.uiuc.edu/pdf/tg_CulturalDivFood.pdf

exercise to become familiar with Cultural Food Diversity

<http://research.amnh.org/biodiversity/center/living/Food/index.html>

Biodiversity and your Food

http://www.idrc.ca/en/ev-31631-201-1-DO_TOPIC.html

IDRC International Development Research Center: Facts and figures on food and biodiversity

<http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/EPdirect/EPRe0040.htm>

Sustainable Development Department, Food and Agriculture Organization of the United Nations

http://www.dbc.uci.edu/~sustain/bio65/lec11/b65lec11.htm#Food_Supplies

Values of Biodiversity. Specifically, look at Plants, under Food Supplies

<http://www.slowfood.com/sloweb/eng/dettaglio.lasso?cod=3E6E345B0f1d21C27AigVJE2804C>

article, "Biodiversity at Pollenzo" takes a look at the rewards of a community vegetable garden

<http://www.slowfoodfoundation.com/>

Slow Food Foundation for Biodiversity. 30,000 vegetable varieties have become extinct in the last century

<http://www.sustainabletable.org/issues/biodiversity/>

Sustainable Table, the issues of biodiversity. Look under 'Crops'

<http://www.pbs.org/wnet/nature/secretgarden/backyard.html>

PBS Nature. Backyard gardeners can play a role in saving some varieties from extinction

<http://www.gardenmosaics.cornell.edu/pgs/science/english/agbiodiversity.aspx>

Garden Mosaics agrobiodiversity page

Further study

<http://www.gardenmosaics.cornell.edu/pgs/science/mainscience.htm>

Garden Mosaics science pages – check out the biodiversity, agrobiodiversity, and any of the plant pages. Also use these science pages to explore areas of further interest.

<http://www.gardenweb.com/vl/#coop>

WWW Virtual Library Gardening Links