

**Alaska Indoor Gardening Curriculum**

**Why Use This Curriculum?**

By Melissa Sikes, Alaska Ag in the Classroom Coordinator

A school garden is a powerful education tool to teach about many subjects including science, math, language arts, engineering, technology and even stewardship. With any type of garden, indoors or outdoors, students have an opportunity to engage in agricultural practices on a small scale, learning about the web of interactions among the living and nonliving players that sustain life. Students will develop a greater understanding of the natural world. For many children, a garden offers the only chance they have to get close to nature. Traditionally, the school garden is subject to a month or two of hands-on learning at the end of the school year with installation and preparation for summer. The students and staff will then dismiss for the summer and then either parents, some teachers and possibly the building maintenance staff is left to tend the garden or let it perish. The timing of the last frost in many areas of Alaska precludes much of the efforts of teachers to start a garden and incorporate gardening into their lessons. Indoor gardening can resolve this issue and obstacle.

Bringing gardening into classrooms, involves teachers, students and their families in hands-on STEM (science, technology, engineering, and math) activities, with real-world products (locally-grown food in their school meals). Indoor gardening will also enhance students’ perceptions of their relationship and agency to the environment and the contributions that they may make, at any age, to conservation and environmental stewardship.

Many Alaskan youth, even those who live in remote rural Alaska surrounded by relatively pristine wilderness replete with wild food sources, are disconnected from their food, with no real idea of its source, and with daily habits of eating highly processed, packaged food that is flown in from unknown places. Although most people throughout the United States consume food that travels great distance from farm to shelf, peppers from Mexico for example, this situation is particularly pronounced in Alaska, which imports 95% of its food (Crossroads Resource Center, 2014[[1]](#footnote-1)). While this dependency on imported food is most often viewed from the perspective of food insecurity and difficulties in securing sufficient supplies should the food supply chain be disrupted, the absence of connection between people and their food sources can have deleterious impacts upon people’s understanding of, and sense of belonging within their inhabited ecosystem (Irshad, 2010[[2]](#footnote-2)), and the conservation of its natural resources.

Research has revealed that participation in active gardening during childhood was the most important influence in explaining adult environmental attitudes and actions. Gardening programs for children can provide a strong enough connection to instill appreciation and respect for nature in adulthood (Collective School Garden Network, n.d.[[3]](#footnote-3)). Growing food thus reinforces, especially for young people, the perception of interconnectedness and independence by requiring some fundamental knowledge of water and soil chemistry and quality, a natural inclination towards a better understanding and maintenance of the environment.

The Alaska Indoor Gardening curriculum includes lessons specifically focused on building and running simple hydroponic and aquaponics systems in the classroom, as well as growing in soil on vertical shelving. These present simple to complex solutions, such as hydroponic, aquaponics, and vertical hydroponic plant growing systems. Each lesson has been designed to give teachers practical low-cost options to growing in their classrooms. This curriculum promotes agricultural literacy with an integrated STEM approach that meets both the Alaska and national NGSS content standards.

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1. Crossroads Resource Center. (2014). *Building Food Security in Alaska*, authors: Meter, K. & Goldenberg, M.P. [↑](#footnote-ref-1)
2. Irshad, H. (2010), *Local food – a rural opportunity,* Government of Alberta, Agriculture and Rural Development, retrieved from <http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/csi13484/$FILE/Local-Food-A-Rural-Opp.pdf> [↑](#footnote-ref-2)
3. Collective School Garden Network. (n.d.). Environmental Stewardship, retrieved from <http://www.csgn.org/environmental-stewardship> [↑](#footnote-ref-3)