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<u>Literacy:</u> "I've taken students on sensory scavenger hunts, where they record what they saw, heard, smelled, and felt. When returning to a group, we discussed words to describe what we had recorded. Students then return to where they made their initial observations and document their



describing words. Later, students put their words into sentences to document their garden experience." –Growing Minds 2015 Participant

<u>Literacy and Math:</u> "To help teach literacy and vocabulary, I lead a tomato tasting and comparing lesson. First, we gather a variety of tomatoes, discussing their color and variety as we pick. Then, we bring the tomatoes to a shady area, and put them into labeled bowls by variety – and cut larger tomatoes into pieces. Then we brainstorm works to describe how they look, and how students think they might taste. Then, everyone gets a chance to taste all the tomatoes, and talk in pairs about how each one tasted – I ask which they liked best and why. Have pairs share out to the whole group and list all the new "juicy" words they came up with! For a math extension, tally their favorite kinds and create a graph." – Kirsten Johnson, Allis Elementary, Madison –Growing Minds 2015 Participant

<u>Literacy & Science</u>: "We started an outdoor classroom community garden journal. We prompted the children to put on their "scientist goggles" and find a spot to observe growth in the garden. We then asked them to draw and write what they observed. We encouraged children to use descriptive language, and told them that their writing would be added to our garden journal and would be available for them to come back and read as they grow and move on to different schools. This activity is accessible to classrooms to use and add to at any time." – Jessica Simanek, Lapham Elementary Garden Coordinator, Madison –Growing Minds 2015 Participant

<u>Literacy/ESL</u>: "With an ESL high school class, we read *Seed Folks* and then participated in helping prepare and plant a nearby vacant lot to convert it to a community garden. We worked with students in a biology class who had started seeds for the garden." –Emily Sonnemann, Teacher and Child Care Provider – Growing Minds 2015 Participant

<u>Literacy & Community Involvement</u>: "In a lesson called "Our Garden" writing, learners journal about their activities revolving around the garden such as planning it, building it, planting, experiencing it, harvesting, and working it. They will research different types of plants and become knowledgeable about gardens. They also write persuasive letters to get community members to support our garden." – Growing Minds 2015 Participant

<u>Literacy, Science, & Math</u>: "My first grade class was learning about sequencing (order of events) in reading, and measurement in math. We discussed how to use these skills in our salsa garden project. First, we sequenced the steps in raising our garden beds to prevent rabbits from eating the produce, and then we measured the

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beds with different tools to figure out how much lumber we would need to purchase. This was a small part of a year long project that incorporated science, math, and reading skills." – Becky Panzer, First Grade Teacher, The School for Agricultural and Environmental Studies (SAGES), Fox Lake – Growing Minds 2015 Participant



<u>Math & Community Involvement:</u> "This season, students from Manitowoc's Monroe Elementary Environmental Studies class spent the spring growing plants in their own terrariums. They were conducting experiments on different variables such as the amount of sun or water their plants received. At the end of this experiment the students visited Grow It Forward's community garden. I helped them figure out how many plants can go in the grow beds using a lesson where we calculate number of plants per square foot. The children were also amazed by the opportunity to view the garden, orchard, and evergreen trees!" -Amber Daugs, Grow It Forward, Inc., Manitowoc –Growing Minds 2015 Participant

<u>Math:</u> "With preschoolers, we did a vegetable taste tests to decide on seeds we wanted to plant. We shopped together for seeds, started seedlings, and planted our garden. We tend the garden weekly and take pictures with plants to measure growth with our own height." –Emily Sonneman, Teacher and Child Care Provider – Growing Minds 2015 Participant

<u>Math:</u> "As an extension to our second grade math measurement unit, my learners worked to measure newspaper strips that were later rolled into "plant starter" pots. This served as a formative assessment and practical practice for their measuring skills, and had a direct benefit for growing plants before the garden season." –Sheri Hicken, SAGES Agriculture Educator, Manitowoc –Growing Minds 2015 Participant

Social Studies: "For a history lesson, we took a field trip to Old World Wisconsin, where students explored replicas of the old Norwegian and German villages in out state. They learned talked about why the farming communities also had gardens (i.e. no grocery store down the street), and how they differed from modern gardens. They compared varieties of plants raised as well as the differing garden designs, and talked about how pioneers brought and adapted plant species from their home countries to Wisconsin. It was a great way to show that there were definitely similarities in gardening that spanned decades and generations." – Amanda Bolan, High Marq Environmental Charter School –Growing Minds 2015 Participant

<u>Social studies:</u> "For a social studies lesson, talk about different uses for plants in the garden. Not only are the a source of food for people and animals, some plant parts can be used as dyes or ink, while others can be made into baskets, or dried and used as decorations, instruments, or containers." –Growing Minds 2015 Participant

<u>Social Studies & Math:</u> "With middle schoolers, we have measured the school yard in preparation for making maps and planning garden space. We researched various

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methods and tools societies have used to measure land. Students decided on a measurement strategy and measured the property, then created maps to scale of their ideal garden and playground space." –Emily Sonneman, Teacher and Child Care Provider –Growing Minds 2015 Participant



<u>Art</u>: "As an art teacher, I have done art in the garden lessons with kindergarten through second graders. When the weather is warm, we go out into the garden and I lead them in a story about gardening and vegetables. Then I ask them to look closely at something they see in the garden and draw it. I've had them sketch with pencil, outline with marker, and then color in with crayon. We then show our art work to each other and have time to process afterwards." –Kimberly Wilson, Lapham Elementary, Madison –Growing Minds 2015 Participant

<u>Background knowledge</u>: "We did an agricultural engineering unit that focused on pollination and integrated pest management. Our school garden provided rich background knowledge and so many valuable connections that helped my first grade students understand the content." –Jocelyn Ritger, First Grade Teacher, Rockfield Elementary, Germantown –Growing Minds 2015 Participant

<u>Science:</u> "We were learning about the differences between sexual and asexual reproduction. After discussing life cycles and seeds, we grew seedlings in pots in the classroom. Later we took an ivy plant and made cuttings, rooted them in water, and potted them in soil. Everyone got to take a piece of the same plant home." -Sarah Williams, 7th grade teacher –Growing Minds 2015 Participant

<u>Science</u>: "We did a scaling activity that addressed multiple common core and NGSS standards. We began with a life form observation, by observing and sketching the largest life form in the garden – like a tree – and then proceeding to smaller and smaller forms. We then used magnifying glasses to go even smaller. You could use a microscope to go smaller still. You could also start with just the organisms living in the soil, and compare how many times larger organisms are when compared to each other." –Growing Minds 2015 Participant

<u>Matching and Sorting:</u> "Kindergarten students did color matching and size discrimination during and eight week flower planting and journaling lesson, in which we started seeds and added to the garden." – Tracy Bristow, Abraham Lincoln Accelerated Learning Academy, Monroe –Growing Minds 2015 Participant

<u>Potential Lessons:</u> "We currently do not have a garden at our school. However, we will be installing one this coming school year. Taking this class (Growing Minds) has shown me so many more ways, than I ever thought possible, that a garden can be interwoven with current curriculum as well as become its own curriculum for life. I am looking forward to using the garden as a sanctuary for learning and exploring. I imagine devoting many math lessons to the development and implementation of the garden; measuring the raised beds, calculating the number of seeds needed in each

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row, and measuring plant growth. I also see a lot of community building and sharing happening in our garden. What a great place for self-exploration!" –Growing Minds 2015 Participant

