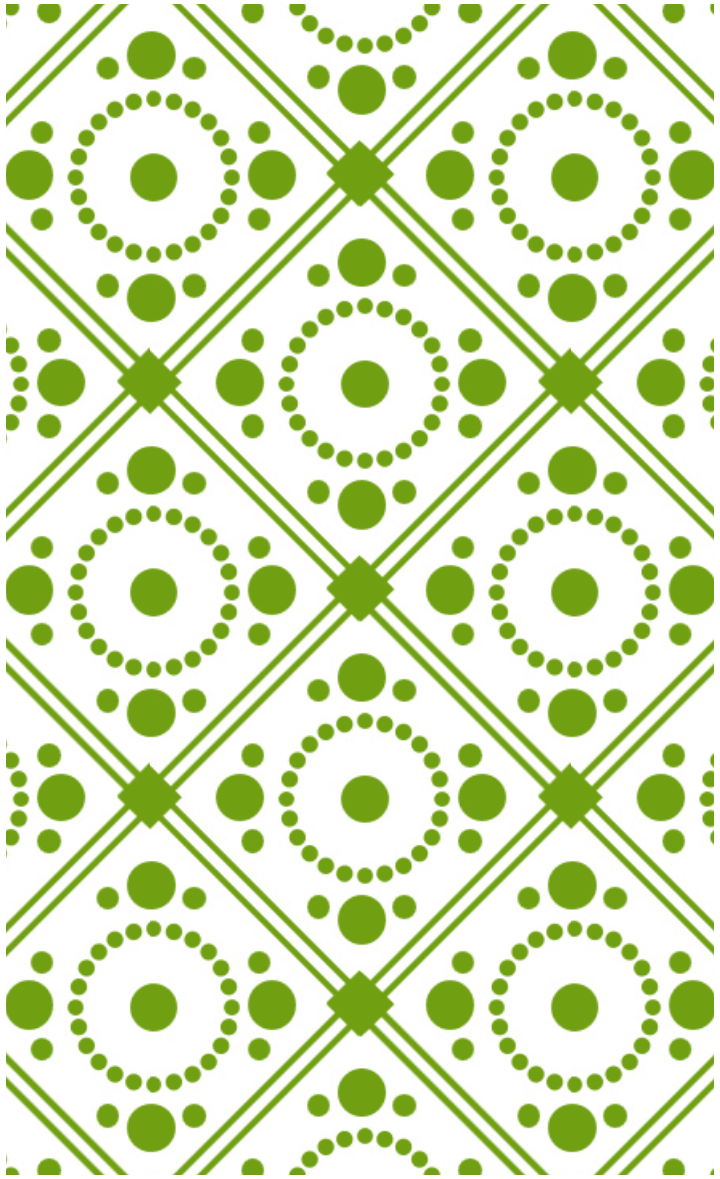
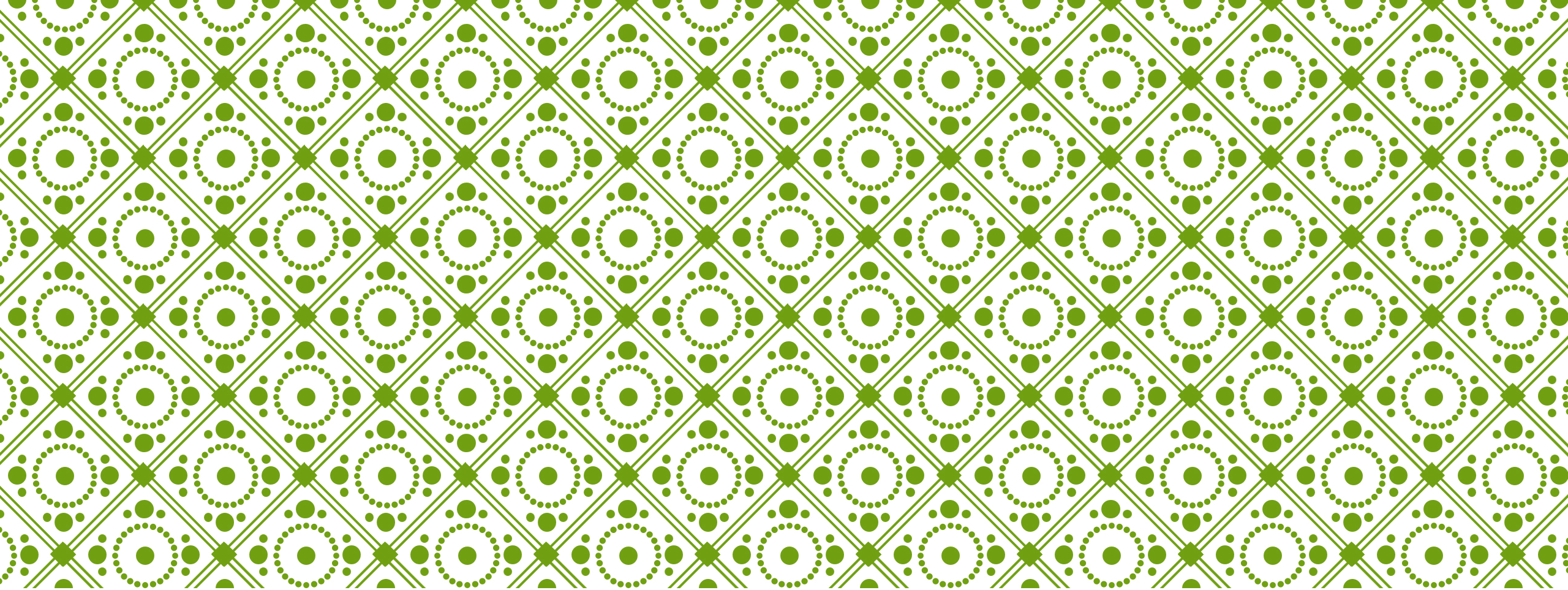


FINAL PORTFOLIO

By Jennifer Buteau

Planning a Successful School & Community Garden Program



1. INTRODUCTORY STATEMENT

JOURNAL #2

1. HOW WAS YOUR EXPERIENCE USING THE LOGIC MODEL FOR YOUR PLANNING PROCESS? HOW WAS THIS DIFFERENT IN HOW YOUR PAST APPROACHES TO PROGRAM PLANNING?

I liked using the logic model. I found it is not unlike traditional lesson planning I use to plan my lessons for the classes I teach at the high school. The logic model requires much less writing as it is a graphic organizer that guides you through thinking of the goal, the necessary ingredients and activities to undertake to reach the goal. It also allows and encourages short-term and long-term planning. Its simple format actually made thinking about my plans seem less formidable. I appreciate that as I have so much flexibility in the garden projects as the teacher and the creator. All of the design and activities are up to me.

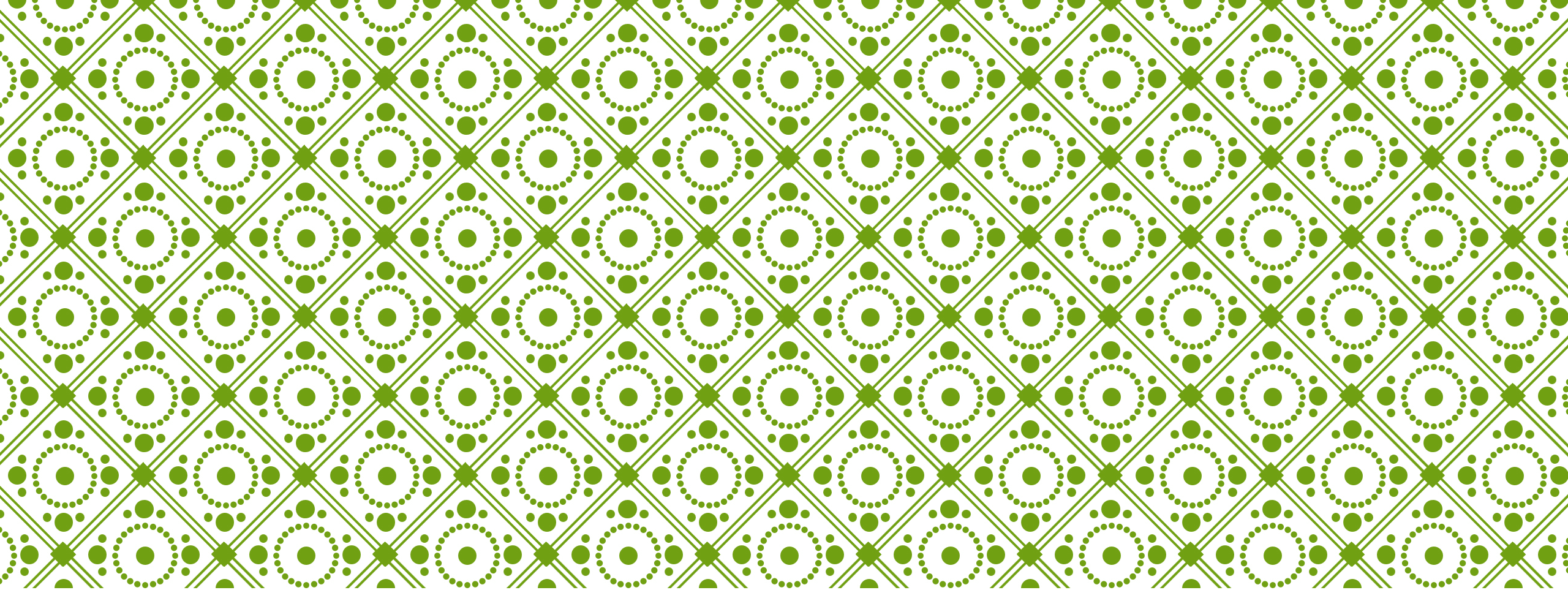
2. YOU MAY NOT HAVE AN ANSWER FOR THIS ONE YET BUT NOW IS A GOOD TIME TO START THINKING ABOUT HOW YOU CAN DETERMINE WHETHER OR NOT YOUR OUTCOMES ARE ACCOMPLISHED. WHAT ARE SOME OF THE WAYS YOU WILL MEASURE YOUR SUCCESS?

There are several ways I will measure the success of this school year's gardening efforts:

- Student participation—it should grow over time not shrink!
- Student feedback
- Garden expansion—I hope to double the size of the garden we started last summer
- Variety—we will plant earlier and grow a greater variety of vegetables and herbs
- Inter-disciplinary collaboration—we look for opportunities to collaborate with other classes, teachers and clubs

3. DRAFT AN INTRODUCTORY STATEMENT OR YOUR FINAL PORTFOLIO, WHICH WILL BE A MORE DETAILED INTRODUCTION DERIVED FROM YOUR SITUATION STATEMENT ON YOUR LOGIC MODEL.

After-school enrichment STEM garden club 1 hour each week during the school year and a four-week summer enrichment program: Students need a safe, social outlet and venue to learn and practice new skills. Increasing student awareness and knowledge of nutrition, wellness, and life skills, as well as enhancing knowledge gained in core subjects during the traditional school year is of essential importance for all students. Students collaborate, plan and learn together to make the garden a success.

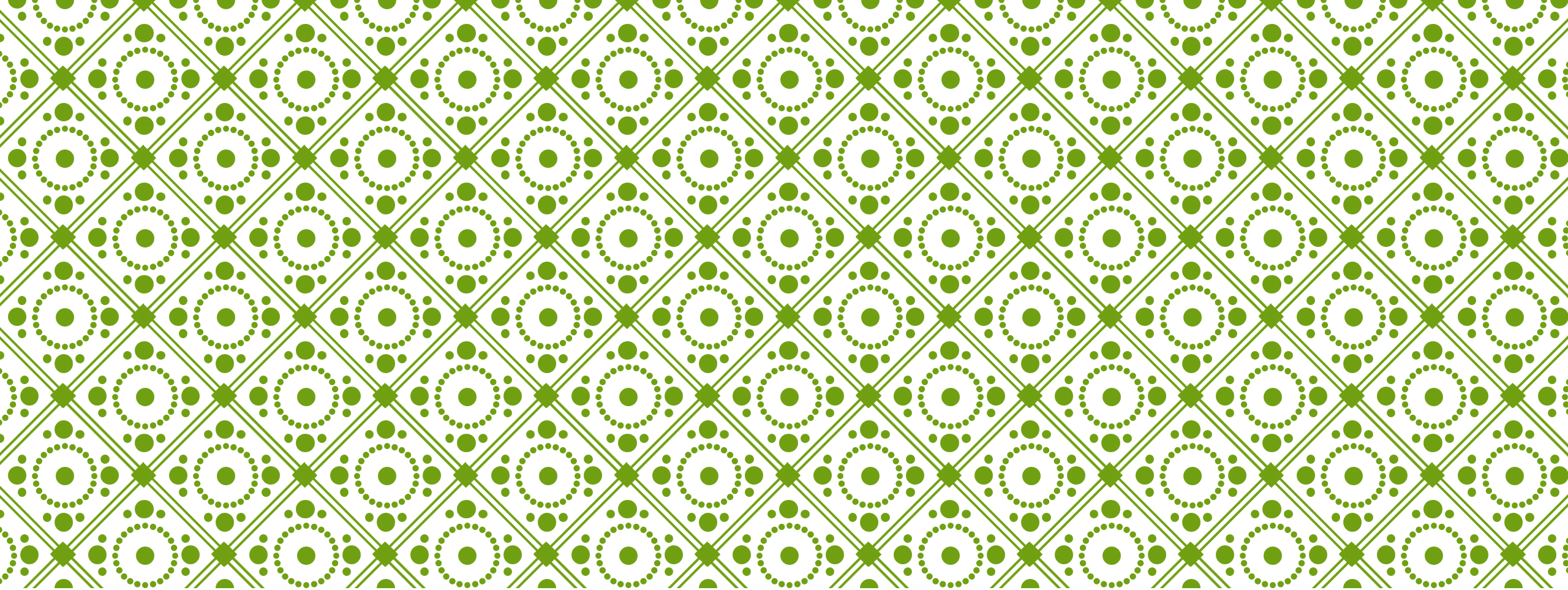


2. PROGRAM GOALS

ASSIGNMENT 2.1

1. The garden project I am working on is part of the Biology class I teach in my school's summer enrichment program. Teachers and counselors recommend students for this program, and we also promote the enrichment program in the school and on social media. Learning achievements, community building and social connections are the top priority for the enrichment program gardens. Less important foci would be nutritional awareness, environmental awareness and health and wellness. We do not really teach life skills as that is a focus of a different summer program which runs concurrently.
2. I like the Template for the Garden-Based Learning Logic Model on page 19 of *Getting Started with Garden-Based Learning: An Introductory Guide for Program Leaders/Educators* best. It seems clear and the layout is easy to follow.

3. A successful garden program for our high school enrichment program would mean we will have established a permanent garden on campus. The garden would be created with student input and teacher supervision in the after-school enrichment program. We will need a team of dedicated students to take the lead, with teacher supervision, in maintaining and caring for our garden. The garden would be utilized by a wide variety of students in culinary classes, science classes, art classes, substantially separate special education classes and perhaps even our on-campus preschool academy. The garden could possibly provide an outlet for students with an interest in the outdoors or agriculture but were not able to attend a vocational school. We would like to connect with community members outside of our school, such as local farms and garden groups; building more bridges with the greater community is always a goal in our school activities. Our hope also is to expand this gardening effort to our two middle schools so they might have similar gardens on their campuses.

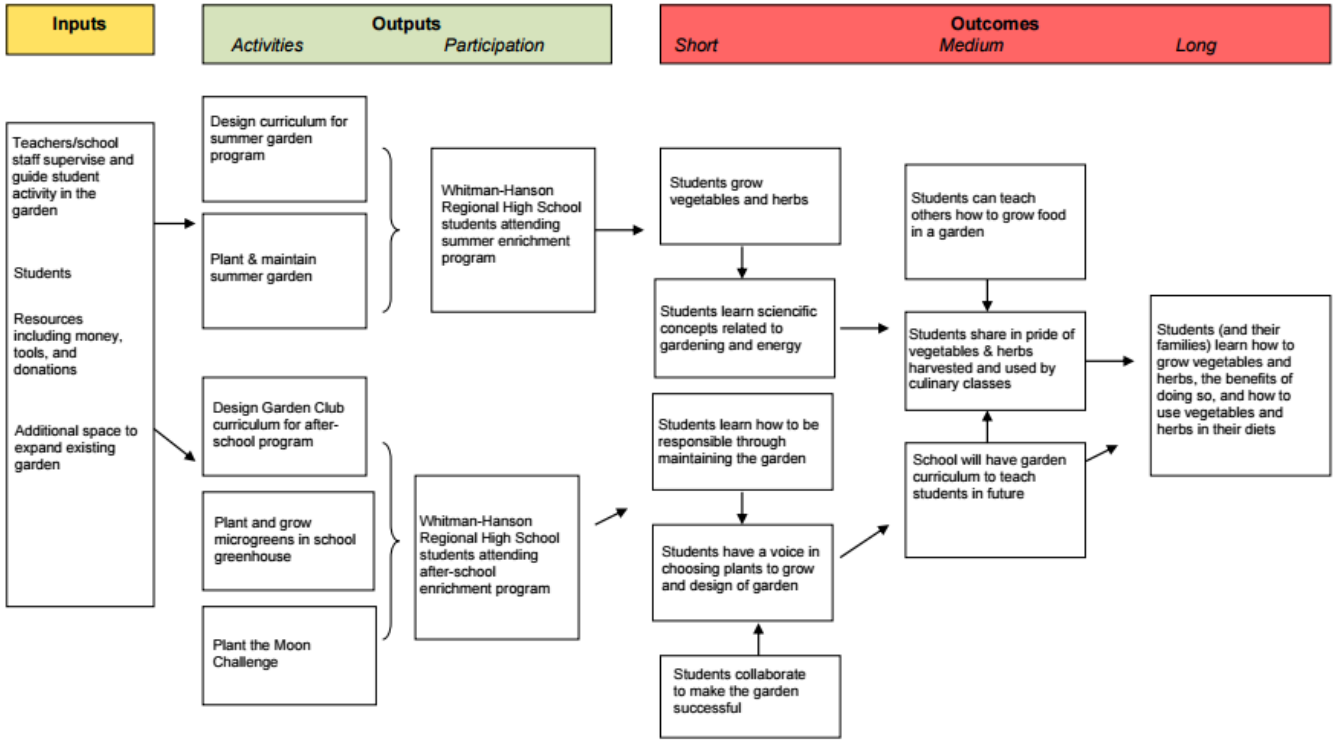


3. LOGIC MODEL

ASSIGNMENT 2.2

Program: Whitman-Hanson Regional High School Enrichment Garden **Logic Model** (add/change boxes and arrows as needed)

Situation: Students need a safe, social outlet and venue to learn and practice new skills.Increasingstudent awareness and knowledge of nutrition, wellness, and life skills, as well as enhancing knowledge gained in traditional core subjects during the traditional school year is of essential importance for all students, but especially for at-risk students.



Assumptions

Students will be available and interested in participating in the after-school garden club and summer enrichment program

Staff will be available to supervise and lead garden activities

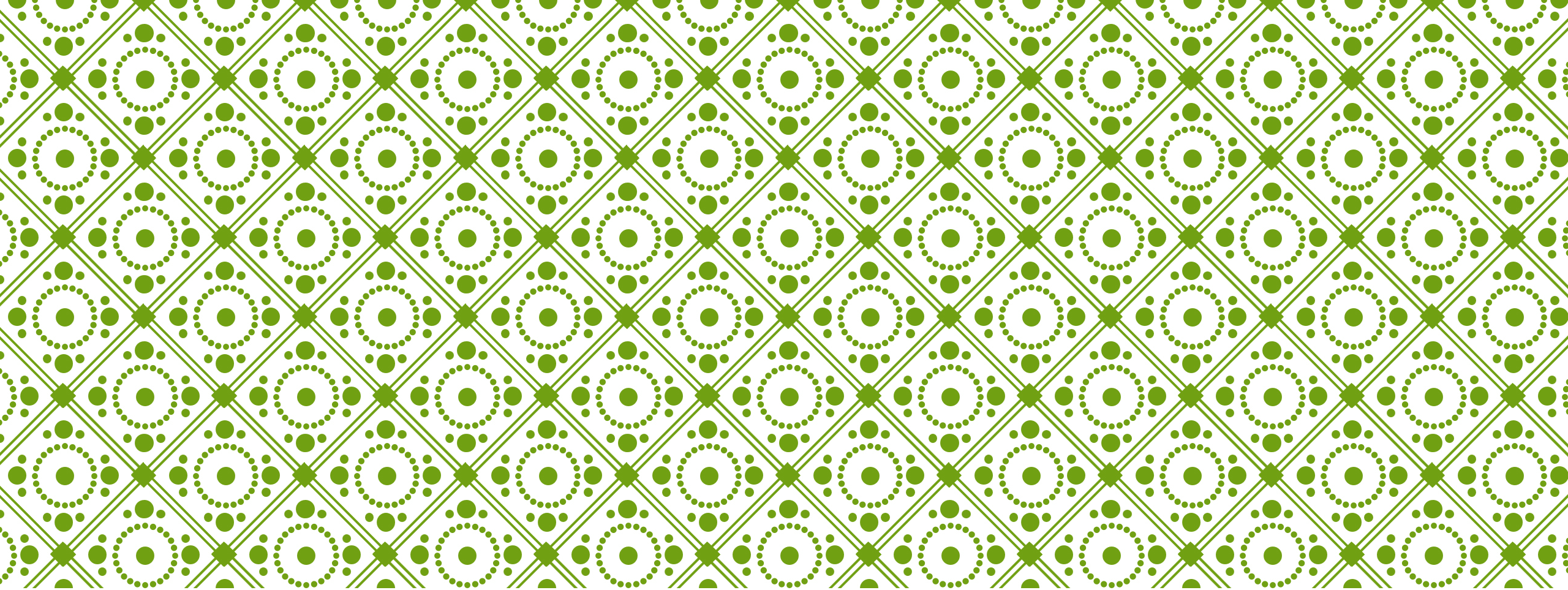
External Factors

Funding to purchase needed supplies

Funding to pay for staff to supervise garden club and enrichment activities

Weather conducive to gardening

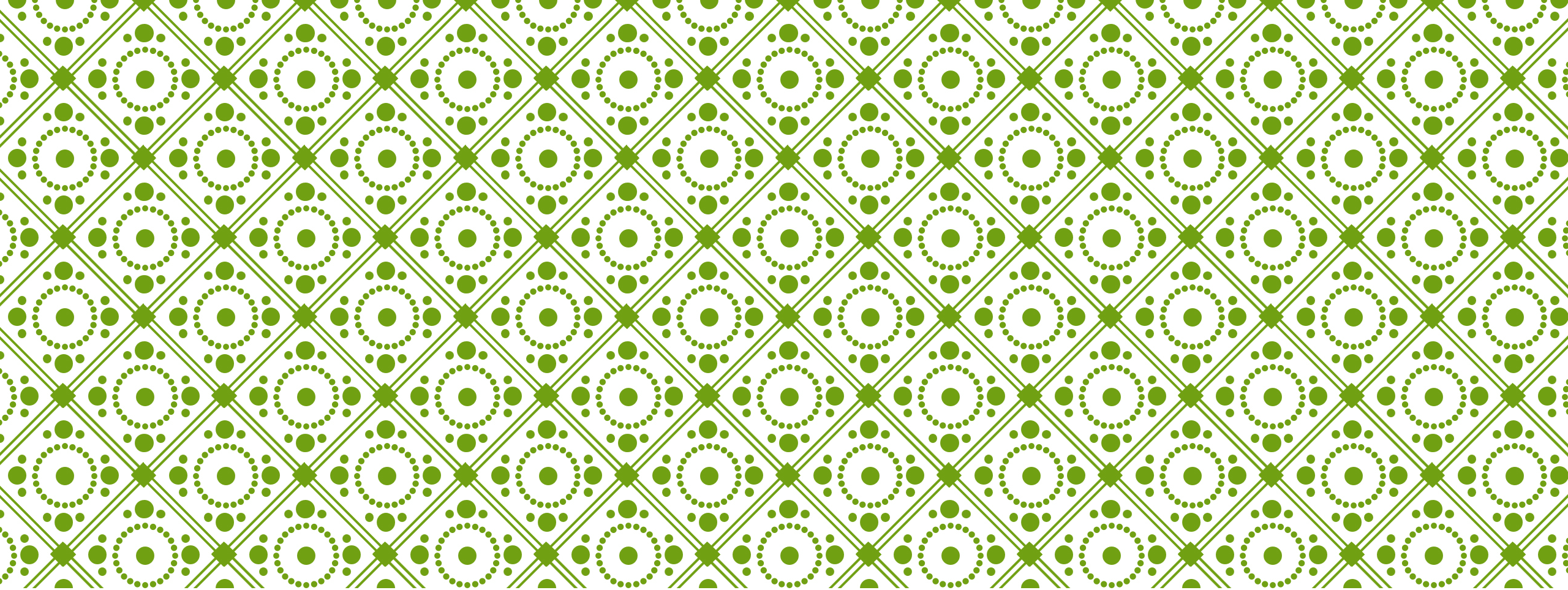
http://www.uwex.edu/ces/pdande/evaluation/evallogicmodelworksheets.html revised 7/09



4. ELEVATOR SPEECH

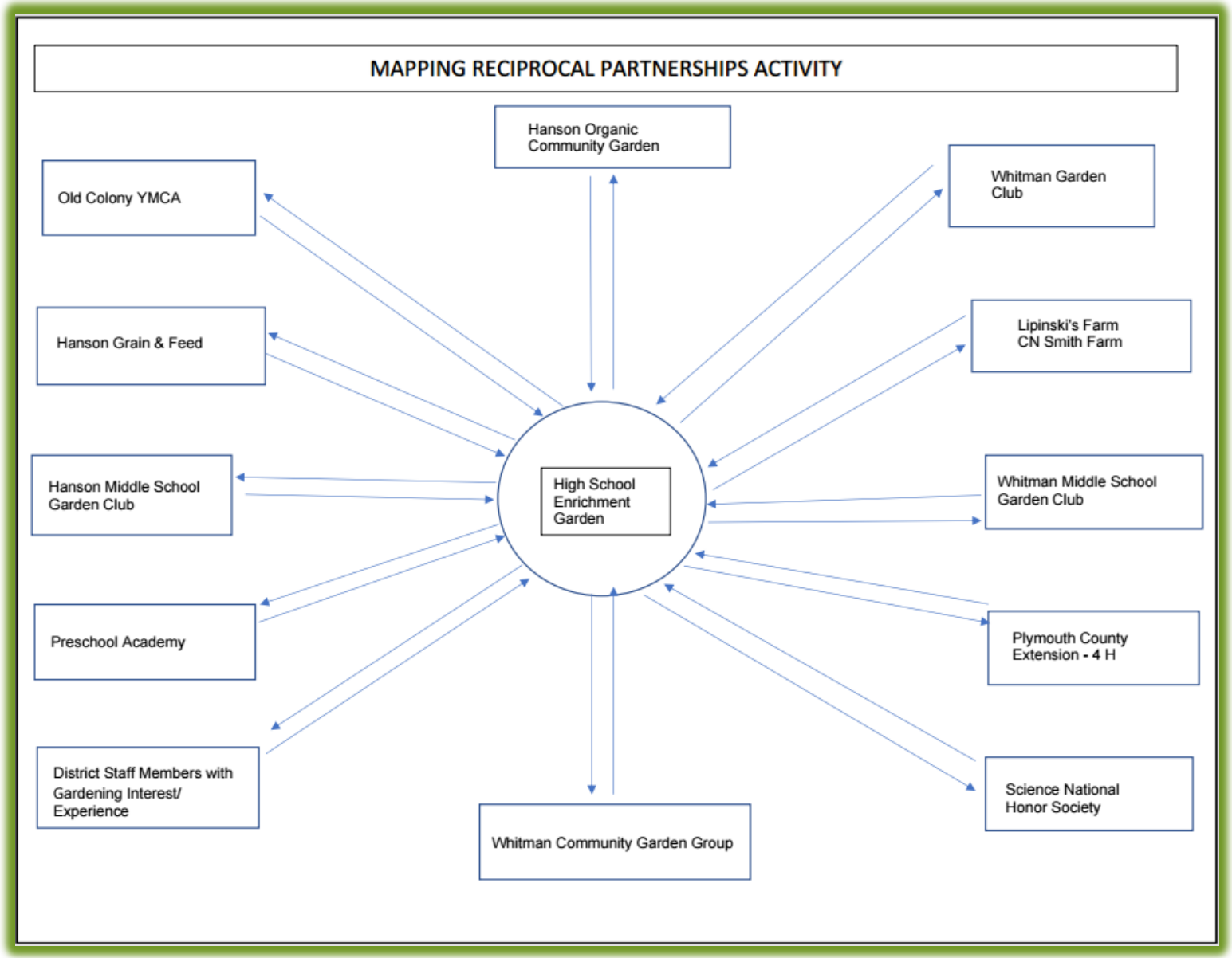
ASSIGNMENT 5.3

“Hello, my name is Jennifer Buteau. I am a special education and science teacher at Whitman-Hanson Regional High School. I lead our After School Enrichment Program’s STEM/Garden Club during the school year. During the summer I teach biology in our Summer Enrichment Program. Last year, during the summer enrichment program, we started a school garden. We started small, with a 10 x 10 plot behind the school building, near the Preschool Academy. It was really well-received by students and staff, and they requested we make it bigger this year, so we are planning to double it in size. Our plan is to collaborate with the high school’s culinary and art classes, as well as possibly the preschool academy, high school science classes, and our substantially separate classes. We are looking for supplies, ideally free or discounted, to help us in our effort.”



5. POTENTIAL PARTNERSHIPS

MODULE 1 ASSIGNMENTS


MAPPING RECIPROCAL PARTNERSHIPS ACTIVITY
Hanson Organic Community Garden
Old Colony YMCA
Whitman Garden Club
Hanson Grain & Feed
Lipinski's Farm
CN Smith Farm
Hanson Middle School Garden Club
High School Enrichment Garden
Whitman Middle School Garden Club
Preschool Academy
Plymouth County Extension - 4 H
District Staff Members with Gardening Interest/ Experience
Science National Honor Society
Whitman Community Garden Group

BRAINSTORMING SCHOOL GARDEN ROLES

I. Planning Stages/Garden Committee

Skills needed?

Knowledge about gardening
Willing to collaborate and work as a team
Willingness to learn

Volunteer roles?

planning layout of garden
planning and gathering supplies

Ideas for individuals/groups to include as volunteers?

II. Garden Construction

Skills needed?

spatial relations
physical strength
ability to use gardening equipment
creativity
willingness/comfortable working outside and getting dirty

Volunteer roles?

tilling soil
planting

BRAINSTORMING SCHOOL GARDEN ROLES

III. Garden-Based Learning/Education

Skills needed?

garden knowledge
experience teaching/educating

Volunteer roles?

teacher/advisors

IV. Garden Maintenance

Skills needed?

garden knowledge
comfortable outside, working in garden
good team player

Volunteer roles?

water and fertilize plants
harvest vegetables
weed garden as needed

V. Promotion

Skills needed?

marketing / PR skills
Canva; social media
artistic/creativity

Volunteer roles?

social media manager
PR

Ideas for individuals/groups to include as volunteers?

VI. Fundraising

Skills needed?

PR/marketing
writing grants
experience fundraising

Volunteer roles?

grant writer
fundraising activity team member
PR for fundraisers

JOURNAL #1

Prompt: Reflect on different ways that you might expand the base of support for your garden project. Did you gain any new insights or ideas from this week's readings and exercises?

Creating partnerships is going to be essential to the success of my school district's gardening program. I began the high school's gardening program during summer enrichment last year and am also now helping develop the middle school garden club program as well. It is imperative that the staff involved collaborate to both support each other and the fledgling gardens. At the moment, there are only two of us—a paraprofessional at one of our middle schools and me.

This module has encouraged me to reach out to the entire staff at my school to search for possible volunteers and allies in our gardening effort. From there, I may contact the two middle schools as well. I also may try connecting with some of the local farms for guest speakers or visitors to our summer enrichment program.

At Donna's recommendation and in looking over the resources, I also am considering using the Seeds to Salad curriculum/plans to help prepare for the upcoming growing season and to find a way to keep the garden club alive and active during the winter months.

6. CHECKLIST FOR SUSTAINABLE GARDEN SITE

ASSIGNMENT 3.1

Cornell Cooperative Extension
Cornell Garden-Based Learning

Checklist For a Sustainable Garden Site

Does your garden have:

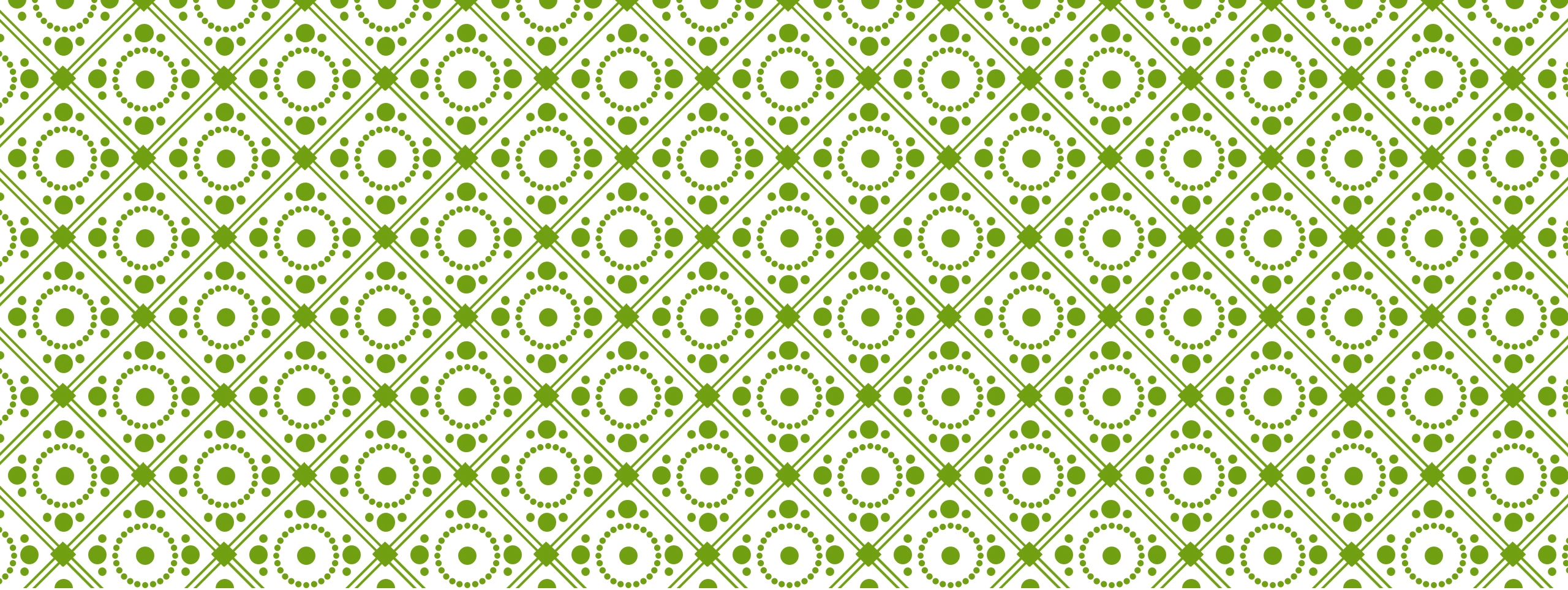
☒Well-drained soil, free of heavy metals such as lead Seems to be good soil but we should test It
☒Full sun and protection from wind Lots of sun, trees on one side at a distance, school blocks wind
☒ Proximity to a water source Spigot about 150 feet away
☒ Nearness to classrooms or meeting place with seating and shade We have to go In for shade
☒ Storage space for tools and equipment Indoors; would be nice to have a shed!
☒ Availability of additional space for composting, pathways, improvements, expansion
☒ Security from theft and vandalism (do people who could watch over the site live nearby?) It Is behind the school. There Is some chance of vandalism but there are cameras
☐ Anything else?

Other things to consider:

☒ Are there on-site materials that need to be removed, such as blacktop or debris? No, just tilling to expand garden
☒ Should you perform a soil test before planning? If so, contact your local Cooperative Extension Office. We will explore this In the after school Garden Club very soon!
☒ Will you build raised garden beds or plant directly into the ground? direct In ground
☒ Is the site location safe for participants? (Will motion-sensor lights be needed, and can they be installed?) the water spigot Is locked so a staff member will be there
☒ Will you need a fence to prevent unwanted wildlife from entering? yes, we have one but need more
☒ Is there a "garden guardian" who lives nearby who can watch over the site to help prevent theft or vandalism? No
☒ Will you have a garden sign (or numerous signs) to educate visitors when no one is available to answer questions? We can work on this!
☒ How can you ensure the site is accessible to all? I believe It Is accessible to all students
☒ Are there public restrooms nearby? No
☒ Is the site easy to get to? Accessible by public transportation? Is parking available? Does it have a bike rack? It Is a school garden accessible by car or on foot. There Is parking/a bike rack
☒ Have you communicated with the groundskeeper of the site? yes
☒ For school gardens, are there any requirements and/or restrictions by the principal, school district, etc.? We have obtained approval from the principal
☒ For community gardens, any ordinances or local restrictions/requirements by local municipality? NA
Notes:

Revised December 2024
Donna Alese Cooke

Cornell Garden Based Learning



7. EVALUATION PLAN

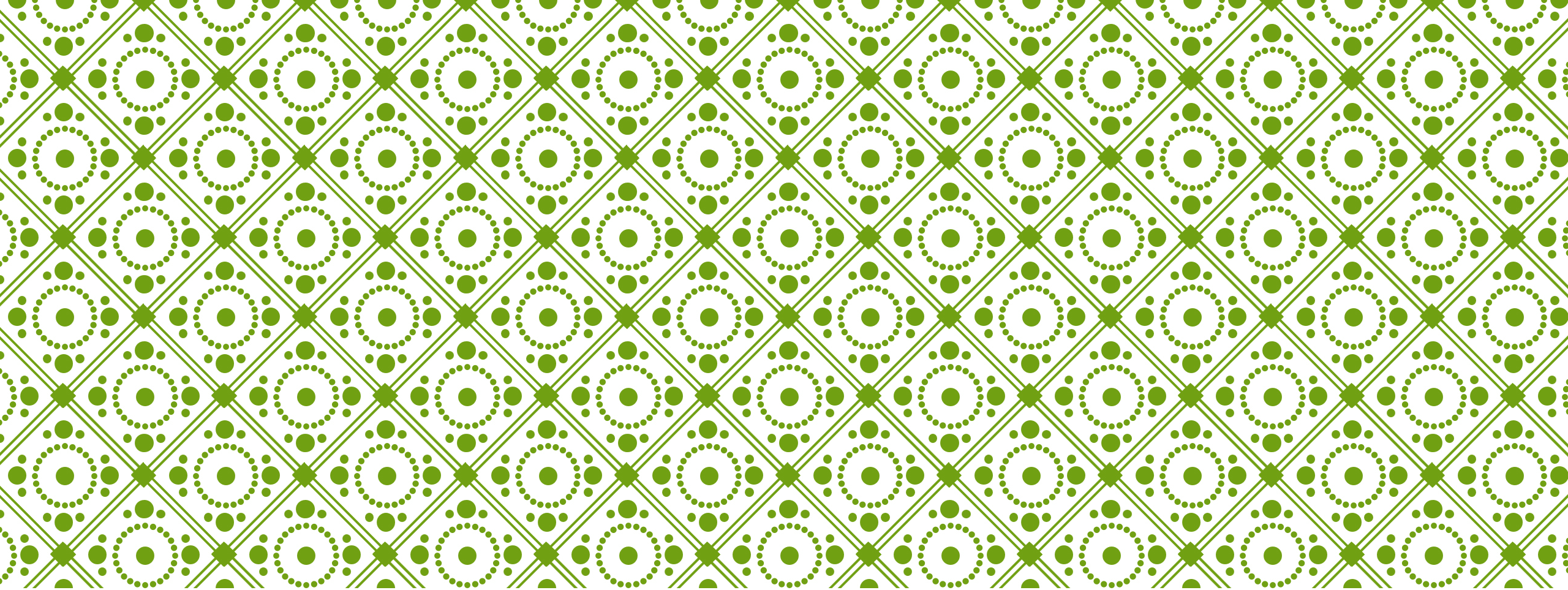
ASSIGNMENT 4.1

I would like to do a qualitative evaluation, to keep track of the number of participants and also how much grows (how many vegetables, etc). This evaluation would help confirm another desired outcome, that students grow vegetables and herbs. We keep track of the number of participants on a daily basis throughout the academic year after-school program and during the summer enrichment program. Similarly, we will track vegetables/harvested daily when the program participants attend. The teachers track attendance for the after-school and summer enrichment program. I will oversee the students counting the harvest this summer.

I will create a pre-test and post-test for our summer enrichment participants to see what they learn about gardening and how to grow plants. The post-test will aid me in evaluating one of the major desired outcomes of our gardening program -- students gaining knowledge of the scientific concepts taught regarding gardening, energy production through photosynthesis and geochemical cycles. The pre-test will be given on the first day of the summer enrichment program and the post-test will be given on the second-to-last day to ensure a maximum number of responses. I will create the pre-test and pro-test and as the teacher of the biology class during the summer enrichment program, I will administer the pre- and post-tests with support from my assistant.

A third way I will evaluate the garden program is to create a survey for students to answer at the end of our summer enrichment biology/garden course in late July/early August. This will give me some direction on which teaching activities were both effective and enjoyable for the students and which were less interesting. Last summer, I created a survey which was given to students at the end of the program. The students who attended enrichment were required to take part in the Biology/garden class. Some did not enjoy it, some were indifferent and some really enjoyed it. Nearly all learned something about photosynthesis and plants. I will create the survey and have students answer it during their biology class with me during summer enrichment.

Evaluation is always part of my lessons plans, so I can determine how well I was able to share information with the students, determine knowledge gained and retained, and which activities were successful and which should be revamped or replaced.



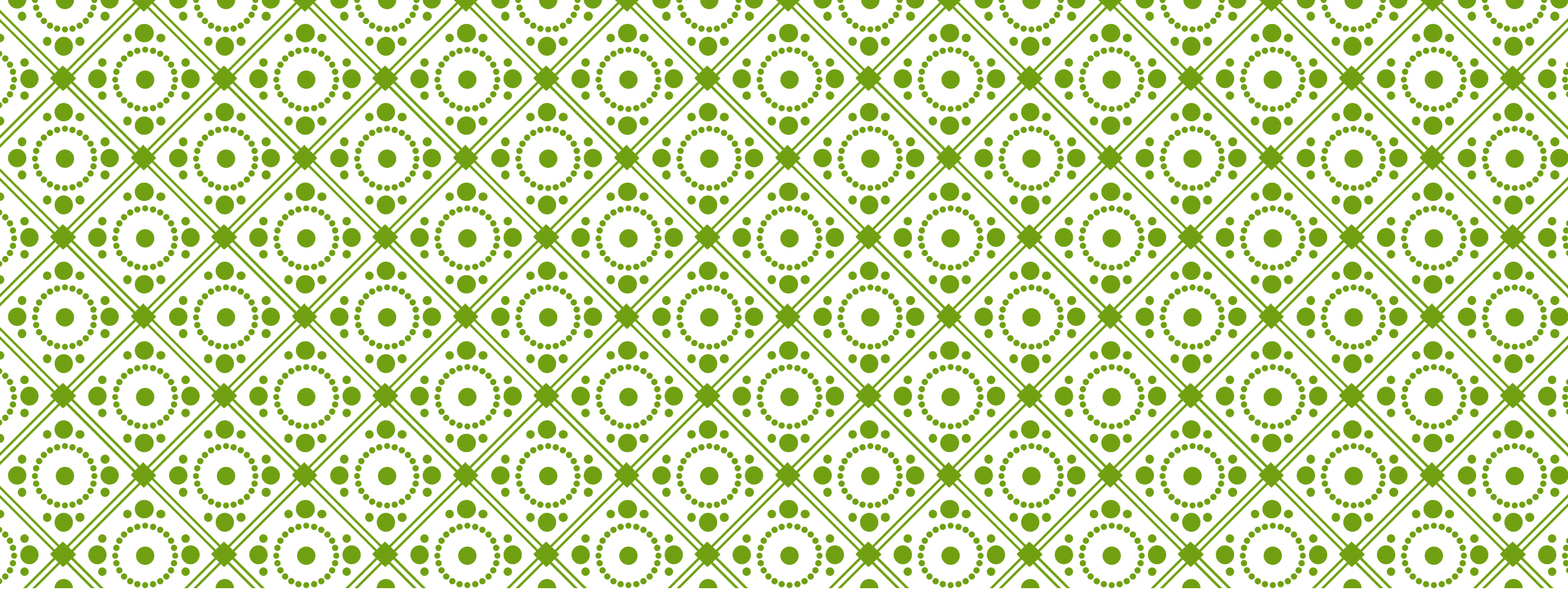
8. CURRICULUM OR CONCEPT MAP

ASSIGNMENT 4.3

Curriculum Map

The garden should not be an "add on" or one more thing on your plate. Instead, it integrates all that you are teaching to maximize learning for students, to bring the curriculum to life, and to make your job a little bit easier. Use this template as a way to look, at a glance, at the curriculum and some ways in which garden-based learning integrates with all that you are teaching. We suggest you start small — that is, take one unit or set of lessons, and consider how this integrates with the garden.

The Big Idea What should students know, understand, be able to do?	**Content** Connections to learning standards, curriculum objectives, etc.	**Processes/Activities** Lessons, hands-on activities, other experiences in and around the garden.	**Processes/Activities** Lessons, hands-on activities, other experiences in and around the garden.	**Assessment** Evidence of learning, opportunities for reflection for teacher and students.	**Other, such as timeline, special considerations...**
How to start a garden	> Consider environment where garden is located > What do plants need? >What resources does the garden need to thrive	> pre-test > seed germination > effects of fertilizer > explore garden invertebrates	>plant garden > water/fertilize > weed > harvest	> post-test > quantity of harvest	This is being undertaken by after school enrichment students and supplemented by 4 week summer enrichment students
Transformation and Transfer of Energy	> Biochemical steps of photosynthesis > Cellular respiration > Decomposition > Cycling of matter > Food webs & chains	> make compost > worm bin > barf bag lab (fermentation vs aerobic respiration)	> food chain activity > food web activity (mobiles?) > trophic levels activity	mini formative assessment built into activity such as Kahoot food web mobile	This is a summer enrichment topic; unit in the 4 week program
Geochemical Cycles	> Carbon Cycle > Nitrogen Cycle > Phosphorous Cycle > Water cycle	> What is your phosphorous footprint? > Phosphorous Fact or Fiction Activity > Water cycle: rain gauge or terrarium	> diagram the cycle of a tomato - production, transportation and consumption > test for plant-available soil nitrogen; learn how to adjust nitrogen level	mini formative assessment such as white board Q & A	This is a summer enrichment topic; unit in the 4 week program
Using Pigments and Produce	> What pigments are in plants? > What can you do with the pigments? > What can we make with our harvest?	> color with chlorphyll > leaf chromatography > explore red plant pigment differences > cooking with veggies		art made with plant pigments	



9. SUSTAINABILITY/SUPPORT PLAN

ASSIGNMENT 5.1

Getting Organized:

1. Who is taking the lead/overseeing the garden: volunteers, teachers, parents, staff, and maintenance? *I am taking the lead overseeing the garden. I am a special education and science teacher at the high school.*

2. Garden Committee Chairperson or co-chairs *We do not have a committee at this time.*

3. Sub committees
   a) Fundraising
   b) Volunteer coordinator
   c) Documentation/ handbook (to update to hand down to future volunteers/staff)
   d) In-service & Education
   e) Other

4. Do you have funding? If yes, where is the funding from? *In the summer, some of the funding comes from a 21st Century Community Learning Center grant. We also have a small grant from Massachusetts Agriculture In the Classroom*
   X National Grant
   [] Local Grant
   [] School Budget
   [] PTA
   X Local Civic Organization
   [] other

Keeping the Garden Growing Year after Year
Volunteer Retention

1. Volunteer Plan- who will coordinate this? *This Is something I am working on; I need to develop a core of student and family volunteers*

2. How will you recruit more people, teachers, volunteers, etc. for each school year? *We can advertise on our school news and our social media channels*

3. Who will oversee this? *For the foreseeable future, I am the person overseeing this effort.*

Participation

4. Garden Clubs / community service (before, during, after school? summer?) *The activities are after school during the school year and during the school day In the summer program which takes place each July*

5. Scouts- Gold/Eagle Awards

6. How could or will the garden be used in the summer or by after-hours staff programming? *We need to work on this*

7. Others?

Maintenance

8. Yearly Maintenance plan- who will create and implement this? *We need to work on this as well. We need a core of volunteers and steady funding.*

9. Summer Maintenance Plan- who will care for the garden?

10. What kind of documentation or handbook will be written, who will create it? If it's an ongoing process, who will oversee it?

Funding & the Future

11. Future funding sources *Our county extension office has recommended some sources for funding, Including Home Depot and Lowes*

12. Future projects- expansion of the garden *Yes! We will expand (double the size) this spring/summer. More to come, I hope*

10. FUNDRAISING PLAN

ASSIGNMENT 5.2

So far, I have a brief project abstract which I submitted when I began the project one year ago. I am attaching it to this assignment. I can modify it to be more current and provide a bit more detail; it is a good place to start the one-page project description.

I am missing after-school the other items listed but will work on obtaining them. It should not be too hard for me to obtain an endorsement letter from the Coordinator of our 21st Century Community Learning Center, so I will start with that item first. Next, I can work on the list of needs and garden plan. I can advertise our garden on our school news to develop a list of volunteers and will have our after-school enrichment garden volunteers work on drawings and/or provide quotes. One student is keeping a photo record of some of our Plant the Moon garden efforts in the greenhouse, so we may be able to use her photos too.

This checklist gives me a good to-do list as we head into spring planting season

Mini Grant Project Budget/Expenses			
Amount Requested:	$1,500.00	**Total Cost:**	$1,565.56
Project Name	The Garden		
Breakdown of Projected Expenses			
Item	**Quantity**	**Per Item Cost**	**Total Cost**
Six 8-foot long 2x6 boards of water resistant untreated lumber	6	6.62	$39.72
6-inch exterior wood screws - 1 box	1	$47.97	$47.97
3 cu. ft. Peat Moss	6	$23.97	$143.82
2 cubic feet vermiculite	4	$42.97	$171.88
1 cu. ft. Black Kow Composted Manure	9	$6.47	$58.23
Corona ComfortGEL Extended Reach Garden Hoe and Cultivator	3	$17.98	$53.94
Anvil 47 in. L Wood Handle 14-Tines Garden Bow Rake	3	$14.98	$44.94
43.3 in. L Wood Handle Digging Carbon Steel Shovel	3	$9.98	$29.94
Garden Weasel 12.75 in. Comfort Non-Slip Grip Hand Garden Trowel	9	$11.14	$100.26
Worth Garden			
Carbon Steel Combo Hand Digger and Hoe with Comfort Handle	6	$16.99	$101.94
Plants & Garden 2 Gal. Plastic Watering Can, Blue (3-Pack)	1	$32.39	$32.39
72-Cell Self-Watering Greenhouse Seed Starter Kit	3	$21.97	$65.91
seeds	15	$2.98	$44.70
Vigoro 200 ft. Green Jute Twin	1	$5.98	$5.98
Fiskars 5/8 in. Cut Capacity Steel Blade with Non-Slip Grip Bypass Hand Pruning Shears	2	$10.98	$21.96
Everbilt2-1/4 in. x 2-1/2 in. x 4 ft. Green Steel Fence U Post with Anchor Plate	20	$5.98	$119.60
GARDENEER By Dalen 3 ft. x 50 ft. Plastic Fencing	2	$31.89	$63.78
Gardener's Blue Ribbon 42 in. H Galvanized Steel Grow Cage	8	$34.98	$279.84
Vigoro 3 ft. Plant and Garden Stake Value Pack (4-Pack)	12	$7.98	$95.76
12 ft. x 15 ft. 0.95 oz. Floating Row Cover Garden Fabric Plant Cover	2	$12.20	$24.40
4 ft. x 6 ft. Easy-Plant Weed Block Garden Weed Berrier Landscape Fabric with Planting Hole 4 in. Dia	3	$6.20	$18.60

MINI GRANT PROJECT BUDGET FOR WH GARDEN

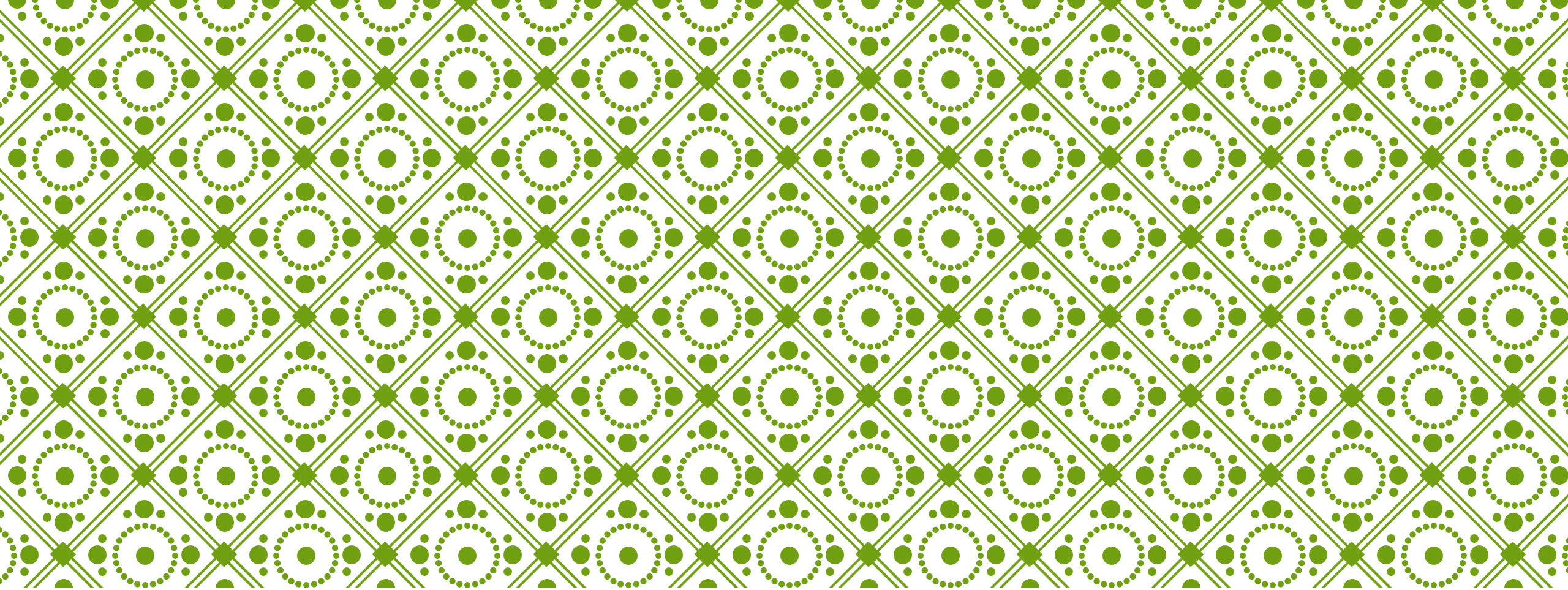
ABSTRACT FOR GARDEN MINI GRANT PROPOSAL

Each summer, Whitman-Hanson Regional High School has an enrichment program funded by a 21st Century Community Learning Centers grant. The program has an academic component for a few hours in the morning which includes English, math, and biology, and then an electives component in the afternoons which may include culinary, art, e-sports and games. In the biology portion of the program, we frequently use plants to examine various topics in biology, such as photosynthesis, cellular respiration, and macromolecules. Growing a garden could serve as an interdisciplinary project that could be used by nearly all components of our enrichment program. Given our limited resources, we would try to collaborate with local resources and businesses to make the garden project feasible. Our use of the garden would continue during the school year. The after-school enrichment program will be able to work in the garden, and the academic culinary classes can utilize the produce.

11. GARDEN DEVELOPMENT / ACTIVITIES TIMELINE

ASSIGNMENT 6.1

Date	Task	Action steps	Contact Person	Date Completed
March	Recruit volunteers		Jen Buteau	
March/April	Begin to work on garden	Clean up garden (weed, rake, etc)	Jen Buteau	
March/April	Plan volunteer schedule	Find out availability of volunteers Make schedule	Jen Buteau	
March/April	Expand garden plot	Double size of garden & amend soil	Jen Buteau	
March/April	Start spring plants	put plants In garden	Jen Buteau	



12. GOING FURTHER CHECKLIST

ASSIGNMENT 6.1

Before Going Further Checklist

Consult each step below to make sure your garden project begins and continues successfully.

Before Going Further, Have You:

Getting Started

- X Ensured that there is demonstrated interest in the project?
- X Secured permission to carry out the garden program?
- ☐ Identified a core, committed advisory/planning group?
- ☐ Ensured community-based representation in this group?
- ☐ Defined roles: planning, maintenance, funding?
- ☐ Identified partners?
- X Spoken with administrators?
- ☐ Looked into insurance matters?
- X Looked for an adequate site?

Garden Design

- X Consulted resources for ideas about the best type of garden design?
- ☐ Addressed accessibility issues for individuals with special needs?
- ☐ Considered a fully engaging activity program appropriate for all?
- ☐ Developed an inclusive garden design?

Maintenance

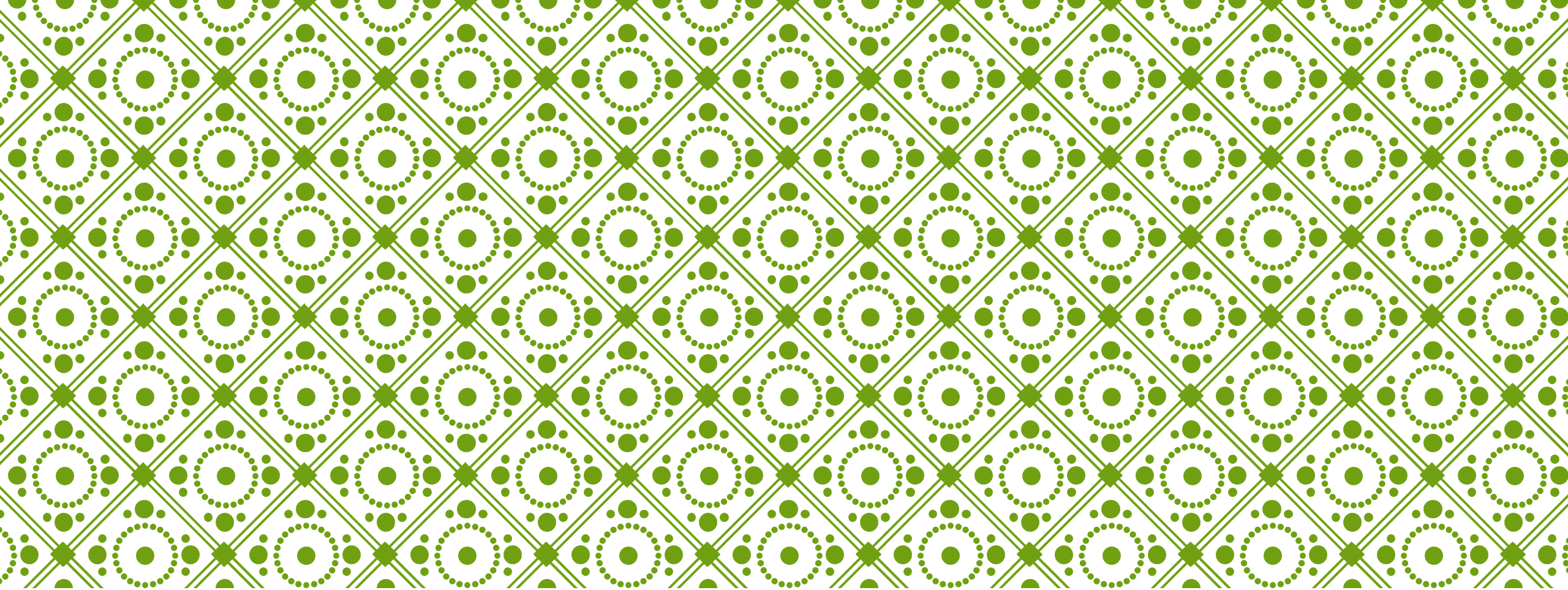
- X Evaluated the need for and taken steps to organize a volunteer
- ☐ program?
- ☐ Developed a maintenance plan?
- X Established how to utilize the garden during the summer?

Sustainability

- X Welcomed interested individuals to the project?
- ☐ Taken steps to create ownership?
- X Had open lines of communication and kept partners in the loop?
- ☐ Enlivened your project with a creative name?
- ☐ Developed plans for fundraising?
- ☐ Documented your efforts?
- ☐ Showed your appreciation to supporters?
- X Taken time for evaluation and reflection?

Most Importantly

- ☐ Included the community (children, adults, and families) in each phase of the process?



13. 3 OR MORE GOALS

ASSIGNMENT 6.1

THREE GOALS

1. This school year, we will get organized and start the garden in early spring to achieve maximum harvest and collaboration with our in-school partners. We will begin planting in the next two to three weeks and hopefully harvest some vegetables before the end of the school year, to be used by the school's culinary classes.

2. This school year, we will double the size of the garden. We will create a garden twice the size of our existing garden to leave more space for greater quantity and diversity of plants.

3. This school year, we will research how to make our garden more accessible and inclusive for all students and determine what supplies and resources we need in order to achieve this.

ADDITIONAL INFORMATION

WHRHS ENRICHMENT GARDEN

OUR FIRST SUMMER IN THE SCHOOL GARDEN