



Clifton Elementary School
Learning Garden Committee

Grade-Level Coordinator
Handbook

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1. Welcome!

Thank you for volunteering to be a grade-level coordinator for the Learning Garden committee! This handbook is designed to guide you through the various tasks of coordinating one of the gardens of the Learning Garden project. In general, as a garden moves from planning and planting in its first year or two and more into “maintenance” mode, the primary tasks will require 1-2 days in the fall for clearing dead plant debris, composting, and mulching, and 1-2 days in the spring for starting seeds and planting seedlings. On occasion, there may also be the need to replace plants (perennials, shrubs, and/or evergreens) that have died and/or reposition or divide plants that have grown too large for their space. This handbook will discuss what is necessary for you as a coordinator to manage one of the gardens and to plan and lead a “garden” day with the students. **Please remember that these are the students’ gardens and every effort should be made to have the students do as much work as possible.**

At the beginning of each school year, the Committee Chair will discuss the plans for each garden with the teacher team for that grade. All effort will be made to include the grade-level coordinator at that meeting. In addition, the Committee Chair will try to meet with the grade-level coordinators to go over each garden and its plants, the expectations for the year, and the supplies that are available in the courtyard storage closet as well as what will be provided by the Committee Chair. The Committee Chair will also distribute a list of the supplies to each of the coordinators.

2. Conducting a Garden Work Day

2.1. *Setting a Date*

The coordinator should work with the teachers to set up a day and time for the garden tasks that are necessary. In general, try to set aside at least 1 to 1.5 hours depending on the task. In general, it is easiest to pull students in small groups to work in the garden. Some teachers might prefer to have the whole class out in the garden at once – that might be possible depending on the task and how many parent volunteers are on hand to help, but smaller groups tend to be more manageable.

Try to set a date so that you have enough time to round up parent volunteers to help. The teachers may have solicited parents at Back to School night to sign up if interested in helping with the garden. If you do not get enough volunteers that way, ask the room parents from each of the classes to send out an e-mail notice to all parents announcing the date and plans. In addition, the Learning Garden Committee Chair may have additional volunteers who signed up using the PTA Volunteer Form at the beginning of the year.

Please notify the front office secretary when you will be in the courtyard. You will want to avoid being in the courtyard at the same time as another grade. This is especially of concern at the end of the school year when the courtyard is being used for end-of-year celebrations. Please notify the Committee Chair in case there are any supplies that you need (mulch, etc.) and she will arrange to have them ready in advance.

Helpful hints –

- It may help to call the work day a “garden” day.
- Inform parents that they will be supervising while students are doing the work.
- Indicate that younger children are welcome to attend.
- If necessary, ask interested parents to bring extra tools if they have them.
- Ask interested parents to arrive 10-15 minutes early so you can explain the plans.

2.2. Setting up

- Arrive 20-30 minutes early to get set up. You will need to get tools, gloves, and other supplies out of the utility closet (you may need to bring extra tools from home). Ask the staff in the front office to unlock both sets of courtyard doors and the utility closet and to supply the key to the water faucet if it is not already there.
- If it is very wet in the gardens, lay down plastic bags (available in the courtyard utility closet) for the students to walk on.
- Ask parents to come 10-15 minutes early so that you can explain what will be happening and what is expected of them.
- Prior to starting the actual work, go in to each of the classrooms to explain the project and answer questions.

2.3. Instructions to Students

Try to arrange with the teachers time to speak to students as a whole in each classroom prior to conducting the tasks in small groups. Spend about 3-4 minutes with each class to explain the project and answer questions. This will prevent you from having to repeat the same thing for each group and many questions will get answered all at once. (Of course, let them know they can always ask questions outside and encourage them to do so!)

- At the beginning of the year, explain about the Learning Garden project in general and the specifics of their grade-level garden and how it ties into the curriculum.
- Please don't assume that the teachers have talked about the garden in any way.
- Explain the tasks to be conducted on this day and show the students the tools they will be using and the gloves they will be wearing (if necessary).
- Explain that the students will be coming out in small groups (if they will be) and that they need to be quiet in the halls (1st graders may require being chaperoned)
- Explain about wearing gloves, and cleaning up at end (wiping hands and feet so as not to track dirt into school).
- Explain about tool safety (no running with tools or pretending to be weapons, etc.)
- Explain that the gardens are not a playground but just another classroom that happens to be outdoors. They should act appropriately and watch and listen when not working.
- On garden days at the end of the school year, tell the students that volunteers are required over the summer to maintain the gardens and that flyers will be sent home if they are interested in signing up.
- Take a short amount of time to answer students' questions.

2.4. Working with Students

Certain tasks, such as planting seedlings, will require more parents and smaller student groups. Some tasks such as starting seeds in pots for indoor germination can be accomplished with 2-4 parents and small student groups. Other tasks such as spreading compost or mulch can be accomplished with a small number of parents and bigger groups of students. Tasks such as clearing out dead plant debris and planting seedlings will require more parents and smaller groups allowing for closer supervision. (The younger grades might always require more parents.)

Try to avoid situations where some students are busy and others are roaming around the courtyard. If some students have finished their task and are waiting to go back to class, you can talk to them about the purpose of the garden and what some of the plants are or you can have them weeding in their garden or in areas of the courtyard that are not part of a grade-level garden.

Once the students are outside, remind them what they will be doing, break them up into smaller groups if necessary and assign them to a parent supervisor. Remember that the students are doing the work with parents only showing them how and monitoring.

- Remind the students to be careful of where they are walking so as not to step on plants (especially when they are planting seeds/seedlings).
- Ask the students to return their supplies to the appropriate place – they should not leave them on the ground.
- As students are finishing their task and waiting to go back inside, ask for questions, explain more about what they are doing, and talk about various plants in relation to the curriculum (e.g., look for caterpillars or butterflies, smell or touch sensory plants, etc.).
- Make sure the students wipe their feet and hands before heading back inside.
- Please thank them for their good behavior and for taking care of “their” garden.

2.5. Cleaning up

- If plants have been planted, please water thoroughly.
- Please clean the tools and return all supplies to the utility closet.
- Please return the water faucet key to the front office.
- If there is any weedy yard waste, it can be dumped outside of the school across the street from the entrance to the blacktop. All non-weed yard waste can be put into the wire compost bin.

2.6. Garden Work Day Follow-up

There are a few items that need to be completed after a garden day.

- Please send a thank-you e-mail to the parent volunteers (this project wouldn't work without parent volunteers!).
- Please send a note to the teachers indicating how the session went and explaining any necessary follow-up (e.g., seed care instructions, reminders to water ...).

- Please let the Committee Chair know who volunteered so that their names can be listed in the Clifton Courier.
- Please submit any expenses to the Committee Chair so that he/she can make a Reimbursement Request to the PTA Treasurer.
- Please let the Committee Chair know of the details for your garden day so that they can be recorded in the Learning Garden Journal (e.g., how many bags of mulch used, which seeds planted, how many seedlings survived to be transplanted, ...)

3. General Tasks for All Gardens

3.1. *Clearing Plant Debris/Spreading Compost and Mulch*

In general, fall is a good time to weed, clear dead plant debris and to spread compost and mulch. It will be easier to spread the compost and mulch once the dead annuals have been removed and the perennials have been cut back. It is recommended to wait until after the first frost (this may not be until November in this area), but late October/early November is a good time for these tasks.

Prior to clearing the plant debris, **students should collect seeds** from annuals that will be planted in the following spring. Seeds can be collected in plastic bags or in plastic cups (available in the courtyard utility closet) and marked appropriately.

After the seeds are collected, **students should remove the dead plant debris**. This handbook has a section for each garden listing the specifics of the plants for that garden (annuals vs. perennials vs. shrubs/evergreens). Please refer to these sections if you are not sure about what plants are in your garden. If you are still not sure, it is okay to leave it alone. NOTE: Not all plants will be ready to be removed or cut back on the garden work days – it is okay to leave these until a later time, even until the spring.

- There are garden shears and pruners available in the courtyard utility closet for pruning. Please talk to the students about how to use these safely.
- Most annuals can be pulled gently from the soil – tell the students that this is one way to aerate the soil.
- Perennials will need to be cut back, but do not cut back what has not yet withered – the flowers stalks may be ready to be pruned but the leaves may not.
- Each garden also has a few shrubs and/or evergreens that should NOT be pruned at all.
- Dead plant debris should be collected in one of the plastic mulch bags from the courtyard utility closet and the bag can be emptied in the woods in the front of the school. (Please save the bags and return them to the utility closet.)

Once the plant debris has been removed, **students should spread compost and then mulch**. Because the gardens are so densely planted, it is easiest for the students to spread compost and mulch by spreading small amounts at a time. One method that has worked well is described below:

- Empty bags of mulch or compost into the garden cart or a wheelbarrow. If possible, open these bags so that they can be saved and reused – extras are stored in the courtyard utility closet.
- Have each student use a small plastic plant pot to gather mulch/compost from the wheelbarrow. (Plastic pots are available in the courtyard utility closet.)
- Students should spread their mulch/compost gently around the plants (but not too close to the crown of the plant). Instruct students not to dump the mulch/compost from up high, but show them how to bend down low to the plants.

3.2. *Planting Seeds*

When you plant the seeds with the students, there are a number of things that you can talk about with them at the beginning of the session.

- Show them the actual seeds ahead of time. (You can make up a sample seed card with one of each seed on the card.)
- Explain how seeds come in all different shapes and sizes.
- Mention how the plants from these seeds tie into the theme of the garden.
- Mention how these seeds are all for annual plants, not perennials, and explain the difference between annuals and perennials.

3.2.1. *Sowing Seeds Indoors*

Below are the supplies needed for sowing seeds indoors. Some of these supplies are available in the courtyard utility closet. The Committee Chair can supply the rest if notified.

- **Plastic trays** – Plastic trays for peat pots are available in the utility closet for the 1st and 3rd grades – there are 4 trays total (each tray hold 50 peat pots) – 2 trays for each grade.
- **Clear plastic covers** - These are available with the plastic trays and are used to cover the seeds as they are germinating.
- **Peat pots** – New peat pots will need to be purchased each year for starting the seeds (peat pots to fit the trays in the closet should be available at Wal-Mart – they are manufactured by Jiffy).
- **Empty container** – Use this to moisten the potting mix (about the size of a dish basin).
- **Potting mix** - Seeds do best in a soilless mix where there are fewer inherent problems than with garden soil. One 10 dry quart bag is more than enough for 100 peat pots.
- **Seeds** – Review the Garden Plant Lists on the Learning Garden web page to see what has been planted in prior years. Any seeds selected should tie into the garden theme.
- **Labels/markers** - Trust me, you won't remember which rows have which seeds or which pots have been planted. Craft sticks are available in the utility closet.
- **Water/Mister bottle** – Each Grow Station should be supplied with a water bottle that allows the students to spray the seedlings gently when they water. Some teachers already have them, but ask if they need one.
- **Light Source** - If you don't have a bright window, you will need some kind of florescent or high density plant light. There are 3 grow-light stations for the 1st grade

classes. Coordinators can check with their teachers and/or the 1st grade teachers to see if they can be used while growing indoors

Depending on how much time you have, you will probably need to get the peat pots set up ahead of time. In general, you will probably not have enough time to have the students both prepare the pots and plant the seeds. You can prepare the peat pots as described below in section 3.2.1, prepping them and filling them with the potting mix. Then determine which pots will be planted with which seeds (e.g., 2 rows of sunflowers, 4 rows of parsley, and 4 rows of marigolds) and mark them.

When you are actually working with the students, it works well to have 2 stations set up with 2 volunteers each. Small groups of 4 or 5 can come out of the classroom to each station. Determine how many pots a student can plant based on the total number of pots and the total number of students (e.g., for 100 pots and 50 students, each student can plant 2 pots). One at a time, each student should make small 2-3 small holes with his/her finger in each pot, place one seed in each hole, and then cover up each seed. As the students plant seeds in a pot, mark the planted pot with a craft stick so you can track which pots have been planted. These stick should be pulled after the tray has been planted so the cover can be put on.

After all the pots have been planted, water the pots thoroughly with the mister bottle and place them in the Grow Station with the clear plastic covers on.

Listed below are the steps to sow seeds indoors:

1. **Pre-moisten the peat pots** by soaking them in the sink.
2. **Loosen and dampen the potting mix** in an empty container before you put it into your seed starting containers. It is easier to get a uniform level of moisture if you do it this way. Dampen the mix to the consistency of a rung-out sponge. It should be wet, but not dripping, with no dry lumps. Using a soiless potting mix rather than outdoor soil is preferable because potting mixes don't readily compact, don't contain weed seeds and don't have disease spores and other possible problems. Also, since new seedlings don't require fertilizer until they sprout their first true leaves, you don't really need a mix with fertilizer already in it.
3. Use the pre-dampened potting mix to **fill your seed starting containers**. Don't pack the potting mix into the container. Fill about 2/3s full and tap the container on the table top, to help the potting mix settle. Gently firm with your hand or a small board.
4. **Start Planting:** Once you have your containers prepared, you can begin planting the seeds. Make sure you read the seed package for special instructions. Some seeds may require a period of pre-chilling or soaking. Small seeds can be sprinkled on top of the potting mix. Larger seeds can be counted out and planted individually. Use at least 3 seeds per container, since not all seeds will germinate and not all that do germinate will survive. You can thin extras later.
5. **Finishing Touches:** Cover the seeds with more dampened potting mix and then gently firm again. Re-check your seed packet for information on how much potting mix should go on top of the seeds. Generally, the smaller the seed, the less you need to

cover them. There are a few seeds, like lettuce, that require light to germinate and should barely be covered with potting mix.

6. **Water Again:** Although the potting mix was pre-dampened, it is still a good idea to sprinkle some additional water on top of the newly planted seed. This insures that the top layer of mix won't dry out and it also helps to firm the potting mix and insure good contact between the seed the mix.

The remaining steps are for the students and teachers to follow to grow their seedlings. You should send these instructions to the teachers as a reminder.

7. **Water daily** using a mister. The potting mix should be moist throughout but not dripping.
8. **Keep the clear plastic cover on until the seedlings start to emerge.** It's not supposed to seal because the plants need air circulation so as not to mold. Once the seedlings emerge, the top can be removed (but please keep because we will use these trays again - it fits nicely under the black tray for easy storage). Then you can close the curtain on the front of the Grow Station itself.
9. **Start using the grow lights once the seedlings appear** and leave the grow lights on 12-18 hours a day. (Timers work well for this).
10. If more than one seedling is growing in the same pot, at some point **the seedlings will need to be thinned**. Cut off all but the strongest seedling. Don't try to pull out the extra seedlings, since this might hurt the roots of the seedling you want to keep.
11. 7-10 days before the students plant them outside, they will need to be "**hardened off**" - taken outside for a successive amount of time each day - starting in the shade, and gradually increasing the amount of sun exposure each day. The seedlings should stay inside if it is too cold.

3.2.2. Transplanting Seedlings

Coordinators should try to choose days for transplanting that are not too hot or the seedlings will have difficulty surviving. Also, try to choose days towards the beginning of the week so the plants can be watered on the days immediately following. Remind students to watch where they are walking – they have a tendency to focus on their own plant and will step on other seedlings that have just been planted. Each seedling should be marked with a popsicle stick so that students can see where seedlings have already been planted. Seedlings of the same type should be grouped in the same area. If there are not enough plants for each student to plant his/her own, have the students work in teams.

To transplant the seedlings, have the student dig a hole with a trowel deep enough and wide enough for the peat pot. Have the student place the peat pot in the hole and push the loose soil back around and over the peat pot.

Once all the seedlings have been transplanted, please clean out the plastic trays and their covers and return them to the utility closet. The garden will need to be watered right away and the teachers reminded to water them daily so that they will survive.

3.2.3. Sowing Seeds Outdoors

Below are the supplies needed for sowing seeds directly into the garden. Some of these supplies are available in the courtyard utility closet. The Committee Chair can supply the rest if notified.

- **Seeds** – Review the Garden Plant Lists on the Learning Garden web page and/or the Learning Garden Journal to see what has been planted in prior years. Any seeds selected should tie into the garden theme.
- **Trowels** – Narrow trowels are available in the utility closet, but students can also just use a craft stick to make a hole and then use it to mark the location.
- **Labels/markers** - Trust me, you won't remember what has been planted where. Craft sticks are available in the utility closet.

If the garden has not been weeded, either the volunteers or students should weed the areas to be planted. (Depending on how much time the teachers have set aside, you will probably not have enough time to have the students do it.) Determine which areas will be planted with which seeds and mark the areas with a copper/metal marker (the markers may already be there from the previous year).

When you are actually working with the students, it works well to have at least 4 volunteers to help guide the students. Small groups of 4-8 students can come out at a time. Work with the teachers to determine the size of the groups based on the number of parent volunteers, the number of students, and the time available. Each student should be able to plant 2 holes with 2-3 seeds each. Each student should make small a hole, place 2-3 seeds in each hole, and then cover up each seed. As the students plant seeds, mark the spot with a craft stick so you can what areas have been planted.

After all the seeds have been planted, water the garden thoroughly.

The steps for sowing seeds **outdoors** are below:

1. Wait until early- to mid-May or so (after the last chance of frost).
2. Locate an area to plant your seeds (a sunny spot is best).
3. For each seed, make a hole 2" wide and 2" deep to loosen up the soil. Put most of the soil back into the hole.
4. Using your finger, make a small hole about 2 times as deep as the seed is long. Put one seed into the hole. Make sure the correct end is facing down into the hole.
5. Cover the seed gently with enough soil to fill up the hole.
6. Look at the seed packet to determine how far apart each seed should be planted.
7. Water your seeds gently every day and keep moist (but not soaking wet) while the seed is germinating and after the seedling appears. Once the plant is well established, water them only during dry periods (once or twice a week)
8. Watch your plants grow and bloom!

3.3. *Planting Perennials*

4. Specific Tasks for 1st Grade Five Senses Garden

4.1. *Fall*

Gather Seeds

- Harvest seeds from annuals if possible and save for planting in spring.
 -

Clean up dead growth

- Pull out dead annuals.
- Cut off dead perennial growth (do not pull out the whole plant). Some perennials will not completely die back until late winter and can be cleaned up in early spring.
 - Lambs Ear, Amsonia, Red Hot Poker, Baptisia, Salvia, Cardoon (do NOT let this go to seed – invasive), Lily-of-the-Valley, Clematis
- There is no need to do anything with the shrubs and some perennials (if they look healthy)
 - Knockout Rose, Chives, Rosemary

Plant, if necessary

- Plant any bulbs that need to be replaced – look for donations, if possible; otherwise purchase.
 - Daffodils
- Plant any perennials/shrubs that need to be replaced – look for donations, if possible; otherwise purchase.

Mulch

- Add compost (horse manure, coffee grounds, ...)
- Mulch!!! (probably about 5 store-bought bags)

4.2. *Spring*

Clean up dead growth

- (by mid-March) Cut off dead perennials growth (do not pull out the whole plant).
- (by mid-March) Cut back grasses (Muhly Grass).

Plant

- Plant seeds for annuals (use seeds collected in fall, if possible – otherwise, purchase seeds). Can start indoors (early April) or outdoors (early- to mid-May). Some seeds do not transplant well and should be sown directly into the garden.
- Plant seedlings if annuals started indoors (early- to mid-May to avoid frost).
- Plant any perennials/shrubs that need to be replaced – look for donations, if possible; otherwise purchase).

5. Specific Tasks for 3rd Grade Butterfly Garden

5.1. *Fall*

Gather seeds

- Harvest seeds from annuals if possible and save for planting in spring:
 - marigolds, sunflowers, parsley, chives, nasturtium, dill, fennel, zinnia

Clean up dead growth

- Pull out dead annuals.
- Cut off dead perennial growth (do not pull out the whole plant). Some perennials will not completely die back until late winter and can be cleaned up in early spring.
 - Asclepias, Black-eyed Susan, Purple Coneflower, Shasta Daisy, Russian Sage, Flax, Coral Bells, Goldenrod, Aster, Bleeding Heart, Joe-Pye Weed, Salvia
- There is no need to do anything with the shrubs and some perennials (if they look healthy)
 - Sweetspire 'Little Henry', Chives...

Plant, if necessary

- Plant any perennials/shrubs that need to be replaced – look for donations, if possible; otherwise purchase.

Mulch

- Add compost (horse manure, coffee grounds, ...)
- Mulch!!! (probably about 7-8 store-bought bags, including the 2 Bleeding Hearts and the 2 Butterfly Bushes)

5.2. *Spring*

Clean up dead growth

- (by mid-March) Cut off dead perennials growth (do not pull out the whole plants).

Plant

- Plant seeds for annuals (use seeds collected in fall, if possible – otherwise, purchase seeds). Can start indoors (early April) or outdoors (early- to mid-May). Some seeds do not transplant well and should be sown directly into the garden.
- Plant seedlings if annuals started indoors (early- to mid-May to avoid frost).
- Plant any perennials/shrubs that need to be replaced – look for donations, if possible; otherwise purchase).

6. Specific Tasks for 4th Grade Virginia Garden

6.1. *Fall*

Gather Seeds

- Harvest seeds from annuals if possible and save for planting in spring:
 - Marigolds, chives, pumpkin, ...

Clean up dead growth

- Pull out dead annuals.
- Cut off dead perennial growth (do not pull out the whole plant). Some perennials will not completely die back until late winter and can be cleaned up in early spring.
 - Peony, Viola, Daylily, Iris, Daisy, Black-eyed Susan, Goldenrod, Aster, Purple Coneflower, Salvia, Catmint, Dianthus, Lambs Ear, Lemon Scented Geranium/Lemon Balm, Thyme
- There is no need to do anything with the shrubs and some perennials (if they look healthy)
 - Boxwood, Bayberry, Chives, Rosemary, Sage, Yarrow

Plant, if necessary

- Plant winter row crops (spinach)
- Plant any bulbs that need to be replaced – look for donations, if possible; otherwise purchase.
 - Crocus, grape hyacinth, daffodil
- Plant any perennials/shrubs that need to be replaced – look for donations, if possible; otherwise purchase.

Mulch

- Add compost (horse manure, coffee grounds, ...)
- Mulch!!! (probably about 3 store-bought bags)

6.2. *Spring*

Clean up dead growth

- (by mid-March) Cut off dead perennials growth (do not pull out the whole plants).

Plant

- Plant seeds for annuals (use seeds collected in fall, if possible – otherwise, purchase seeds). Can start indoors (early April) or outdoors (early- to mid-May). Some seeds do not transplant well and should be sown directly into the garden. Check with the teachers for preference (colonists would have sown directly into garden).
- Plant seedlings if annuals started indoors (early- to mid-May to avoid frost).
- Plant any perennials/shrubs that need to be replaced – look for donations, if possible; otherwise purchase).

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