

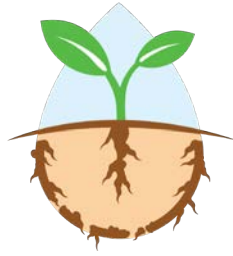


STEM

in the garden

Monthly Outdoor Classroom Calendar





STEM in the garden

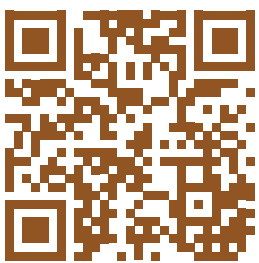
Monthly Outdoor Classroom Calendar

School gardens and outdoor classrooms need specific maintenance to be an effective part of a school's curriculum. The Alabama Cooperative Extension System (Alabama Extension) understands these needs and created the Monthly Outdoor Classroom Calendar to be used in its STEM in the Garden: Teacher Training Program. This calendar will streamline the maintenance, planting, and harvesting of the outdoor classroom space as well as provide ideas for incorporating the outdoor classroom into your curriculum.

This calendar is specifically designed to work with Alabama schools. It considers Alabama's climate, soil types, and rainfall to pinpoint monthly management needs to increase success and productivity for Alabama's school gardens and outdoor classrooms.

Each month includes the following items:

- 1. Garden Tasks:** Monthly maintenance tasks to create a healthy and productive outdoor classroom.
- 2. Garden Challenge:** Monthly projects to grow your student's horticultural skills and/or help raise money for your outdoor classroom.
- 3. Let's Explore:** Places and things to explore each month in the outdoor classroom.
- 4. Vegetable Planting and Harvesting Guide:** Crops to plant and harvest each month in the outdoor classroom. This calendar is intended for use in schools that do not have summer programs. If your school is open year-round, please see the last page with the summer program planting and harvesting schedule. Please note that planting schedules may vary by up to two weeks for northern or southern parts of Alabama. For the most accurate planting dates, please download the Alabama Extension SOW App. This app provides planting data based on zip codes throughout the state.



To learn more about the **STEM in the Garden Teacher Training Program**, please visit our website: www.aces.edu/go/STEMgarden. Here you can find upcoming workshops, curriculum recommendations, and short management videos on topics related to outdoor classrooms.



Download the SOW App

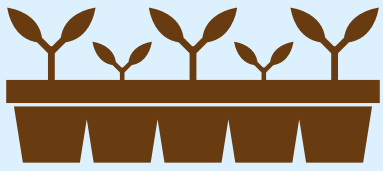


For gardening information for your zip code, download the SOW - A Planting Companion app.

The "**SOW - A Planting Companion**" app is designed to tell you the optimum time to plant each crop in your home garden. Simply choose your location and start planting. Click on the photo of a crop to see more information including:

- Estimated days to harvest
- Estimated yield per plant
- Spacing between plants
- Planting depth below ground level
- Suggested varieties
- Special notes as needed

August



Start Inside

Vegetative Cutting

None

Seed

None



Start Outside

Transplant

Broccoli (55-75 days)

Brussels sprouts (90-120 days)

Cabbage (60-85 days)

Oriental cabbage, bok/pak choi
(45-60 days)

Cauliflower (60-75 days)

Collards (60-80 days)

Seed

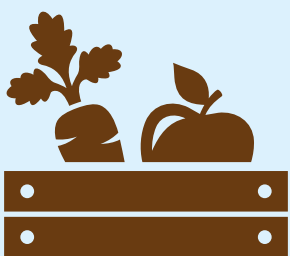
Bush snap beans (50-60 days)

Beets (55-65 days)

Carrots (60-80 days)

Summer squash (40-55 days)

Turnip greens (40-60 days)



Harvest

Estimated

(Based on planting date)

Sweet potato

Winter squash



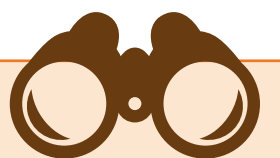
Garden Tasks

- **Do not fertilize or heavily prune** woody plants in late summer. Fertilizing or heavy pruning will stimulate new growth that might not have time to harden off before winter's first frost.
- **Apply needed phosphorus** around shrubs to encourage spring bloom (use soil test recommendations).

Garden Challenge

Layering is an easy way to propagate woody shrubs. Try layering on hydrangeas, azaleas, figs, and blackberries.

Let's Explore



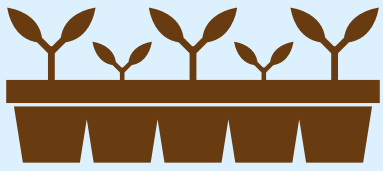
August is generally a dry month, so the outdoor classroom pond should have plenty of visitors stopping by for a drink. What animals and insects do you see visiting the pond? What observations can you make about where and how those visitors stop to drink water.



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September



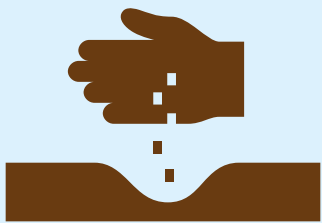
Start Inside

Vegetative Cutting

None

Seed

None



Start Outside

Transplant

None

Seed

Kale (50-70 days)

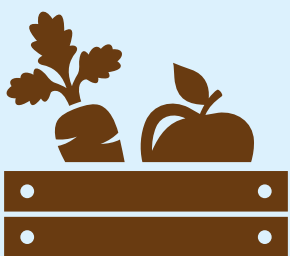
Lettuce (45-85 days)

Mustard (40-50 days)

Radish (25-30 days)

Spinach (40-45 days)

Swiss chard (60-70 days)



Harvest

Estimated

(Based on planting date)

Bush snap beans

Summer squash



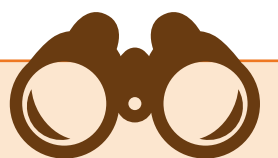
Garden Tasks

- **Begin dividing** summer blooming perennials 6 weeks before the first frost.
- **Add new** in-ground perennial beds.
- **Plant hardy annuals**, such as pansies, violas, and ornamental cabbage through mid-October.
- **Collect seeds** from heirloom and annual plants.
- September and October are traditionally very dry months in Alabama. **Continue watering** plants in outdoor classrooms, especially plants in raised beds and newly planted or divided beds. These areas should receive one inch of water per week.

Garden Challenge

If your class planted a fall crop of squash in the outdoor classroom, try to hand pollinate it to increase fruiting. Squash has male and female flowers. Make sure you know the difference!

Let's Explore



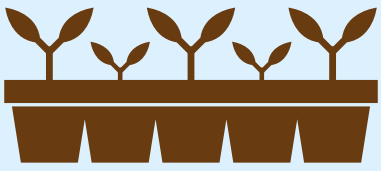
The population of butterflies increases over the summer into the fall. By September it should be easy to find butterflies in your outdoor classroom. Can you identify any butterfly species? What are their food sources? Do you see any caterpillars or host plants?



For gardening information for your zip code, download the SOW - A Planting Companion app.



October



Start Inside

Vegetative Cutting

None

Seed

None



Start Outside

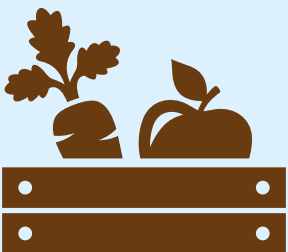
Transplant

Green/multiplying onion
(40-55 days)

Strawberries

Seed

None



Harvest

Estimated

(Based on planting date)

Beets

Broccoli

Oriental cabbage, bok/pak choi

Cauliflower

Lettuce

Mustard

Radish

Spinach

Turnip greens

Pumpkin



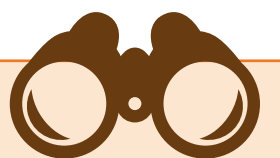
Garden Tasks

- **Move tender plants** inside for the winter after thoroughly checking for insects.
- **Apply fire ant bait** throughout the outdoor classrooms according to label directions.
- **Plant spring blooming bulbs** from October through December.
- **Begin a compost pile** to recycle leaves from the school grounds.
- **Plant strawberry plants.**
- **Apply fresh mulch** for winter protection.

Garden Challenge

Collect and save seed for next year's garden. Heirloom varieties will produce fruit and flowers that look the same from generation to generation. Hybrid seed may produce flowers or fruit that looks different from generation to generation.

Let's Explore



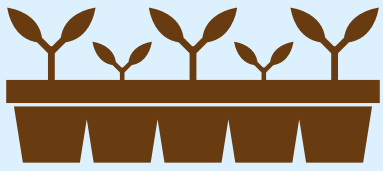
Some plants grow best in winter; others go dormant in winter. Identify 5 plants that are going dormant for the winter and 5 plants that look like they are going to continue growing all winter.



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November



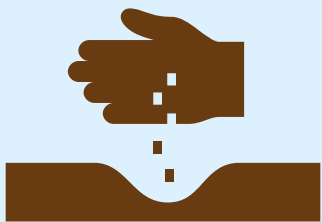
Start Inside

Vegetative Cutting

None

Seed

None



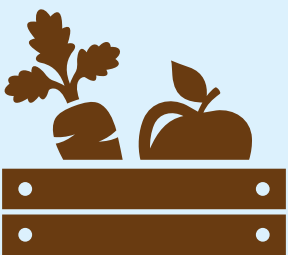
Start Outside

Transplant

None

Seed

None



Harvest

Estimated

(Based on planting date)

Brussels sprouts

Cabbage

Carrots

Collards

Green onions

Swiss chard



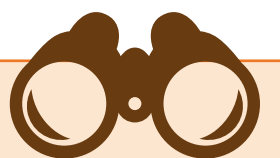
Garden Tasks

- **Take a soil sample** for analysis. Apply amendments needed to adjust pH. For information on taking and interpreting a soil test, talk to your local county Extension office.
- **Remove disease and pest infected debris** as it dies back from winter weather.
- Once soil moisture is adequate, November is the best month to **add new trees and shrubs**.
- **Winterize** aquatic garden pumps, irrigation systems, and water outlets.
- **Save or utilize fallen leaves** for mulch, compost, or garden.

Garden Challenge

Create a small cold frame over your raised beds using PVC pipe. Cover the frame with frost fabric to extend your fall vegetable harvesting season by up to 4 weeks.

Let's Explore



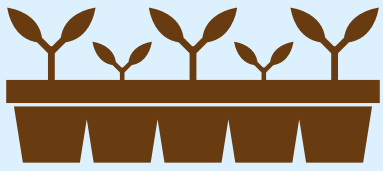
Some trees lose their leaves in winter, others keep them. Identify which trees are evergreen and which are deciduous in your outdoor classroom. What happens to all the deciduous leaves when they fall?



For gardening information for your zip code, download the SOW - A Planting Companion app.



December



Start Inside

Vegetative Cutting

None

Seed

None



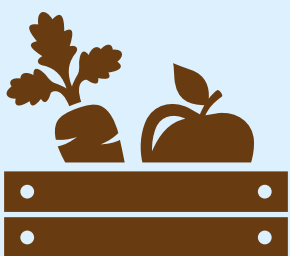
Start Outside

Transplant

None

Seed

None



Harvest

Estimated

(Based on planting date)

None



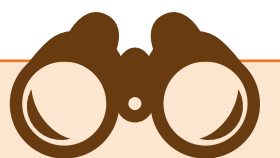
Garden Tasks

- **Sow perennial and wildflower seeds** outdoors in pots or directly in the ground.
- **Continue to plant** and transplant trees and shrubs.
- **Continue to add** to and turn compost pile.
- Take some time to **sharpen and clean garden tools**.

Garden Challenge

Make a seasonal ornament or wreath from natural items you find around the garden and grounds.

Let's Explore



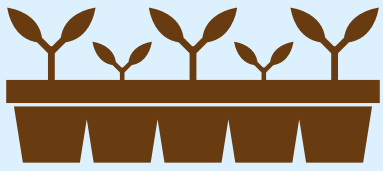
Cool, damp weather is great for growing fungi. Do you see any fungi in your outdoor classroom? What are they growing on? Identify the parts of a mushroom. Look for different types of fungi, including shelf fungi and toadstool mushrooms.



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January



Start Inside

Vegetative Cutting

None

Seed

None



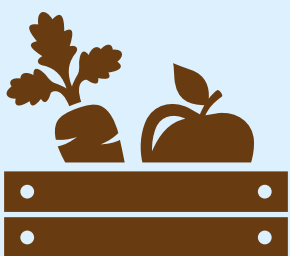
Start Outside

Transplant

None

Seed

None



Harvest

Estimated

(Based on planting date)

None



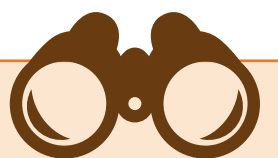
Garden Tasks

- **Prune** fruit trees and grape/muscadine vines.
- Did you notice **scale insects on plants** during the growing season? Now is the time to control them with a spray of ultrafine oil on the entire plant.
- Don't be afraid to provide **extra mulch** or cover for newly planted or sensitive plants during severe cold outbreaks.
- **Read nursery and seed catalogs** for new plants that will work well with your curriculum.

Garden Challenge

Make seed tape to use in the garden once it warms up. You can use seed saved from the outdoor classroom last year or use vegetables like radish or lettuce.

Let's Explore



Birds appear bright and bold in winter when the leaves have fallen from the trees. See what types of birds you can find in your outdoor classroom and try to determine what they might be eating in the winter when insects are dormant.

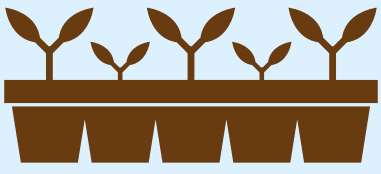


For gardening information for your zip code, download the SOW - A Planting Companion app.



extension
ALABAMA A&M & AUBURN UNIVERSITIES

February



Start Inside

Vegetative Cutting

None

Seed

None



Start Outside

Transplant

Onion sets (120 days)

Cabbage (60-85 days)

Cauliflower (60-75 days)

Irish potato (70-90 days)

Seed

Beets (55-65 days)

Mustard (40-50 days)

Lettuce (45-85 days)

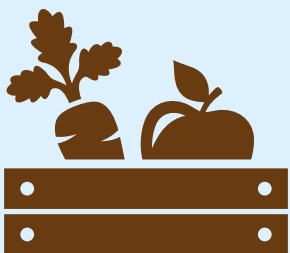
English/Garden peas (60-70 days)

Radish (25-30 days)

Spinach (40-50 days)

Swiss Chard (60-70 days)

Turnip greens (40-60 days)



Harvest

Estimated

(Based on planting date)

None



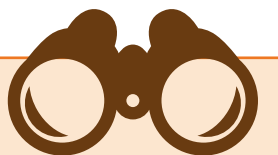
Garden Tasks

- **Prune** ornamental shrubs and trees that bloom after May. Eliminate damaged or diseased branches, and thin shrubs to increase air flow or direct new growth.
- **Fertilize** fruit trees in late February.
- **Cut back ornamental grasses** to 6" tall.
- **Cut back Liriope** (Monkey-grass) to 3" tall.

Garden Challenge

Have students identify areas on the school grounds that are in need of beautification. Make seed bombs out of clay, potting soil, and wildflower seeds to drop in areas that could use some color. As spring arrives, the seed bombs will burst with color.

Let's Explore



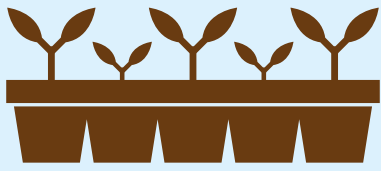
The soft ground created by rainy, cool weather makes it easier to find animal tracks. What animal tracks do you see in your outdoor classroom? Do you see any other signs of animals (fur, feathers, scat, freshly dug holes)?



For gardening information for your zip code, download the SOW - A Planting Companion app.



March



Start Inside

Vegetative Cutting
Sweet potato cuttings

Seed
None

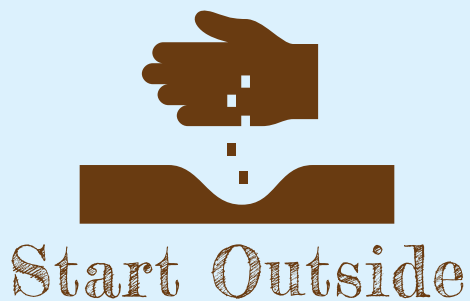


Garden Tasks

- **It's clean up time!** Remove any old, fallen plant growth before new foliage emerges, especially if the plant showed signs of disease or pest insects last year.
- **Add a fresh layer of mulch** to the garden where needed. Remember the mulch layer should be 1-2" thick and should not cover the crown or stems of a plant.
- **Fertilize ornamental shrubs and trees** (except azalea and camellia) according to last year's soil test.
- **Plant semi-hardy annuals** or start them outdoors from seed in mid-March.
- **Start spray program for fruit trees** including apples, peaches, pears, and grapes as needed. Use the Alabama Extension publication 'Home Orchards: Disease and Insect Control Recommendations.'
- **Begin dividing** summer and fall blooming perennials in mid-March.
- **Rejuvenation pruning** can be done to many overgrown shrubs in early March, but research individual species carefully to see how they respond to this technique.

Garden Challenge

Start seeds indoors for a spring plant sale. Some easy seeds to start in mid-March include squash, zucchini, cucumber, winter squash, sweet potato cuttings, cosmos, marigolds, and zinnias.

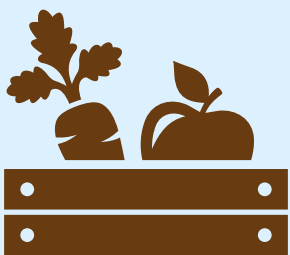


Start Outside

Transplant
None

Seed

Kohl Rabi (45-55 days)
Mustard (40-50 days)
Lettuce (40-85 days)
Radish (25-30 days)
Spinach (40-50 days)
Turnip greens (40-60 days)

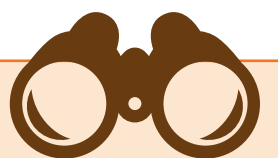


Harvest

Estimated
(Based on planting date)

Mustard
Lettuce
Radish
Spinach

Let's Explore



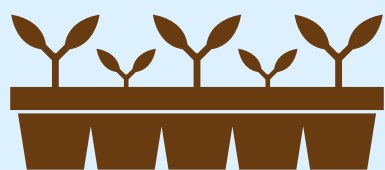
Birds are busy building their nests and laying eggs as the weather begins to warm and the days get longer. Do you see any bird nests in your outdoor classroom? Where are they built and what does that tell you about the bird building the nest.



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April



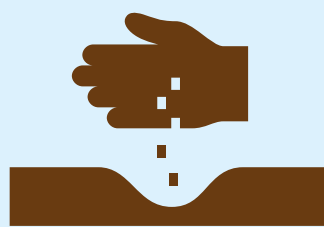
Start Inside

Vegetative Cutting

None

Seed

Winter squash



Start Outside

Transplant

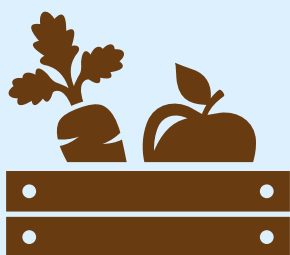
None

Seed

Lettuce (45-85 day)

Radish (25-30 day)

Turnip greens (40-60 day)



Harvest

Estimated

(Based on planting date)

Beets

Cabbage

Cauliflower

Garden/English peas

Mustard

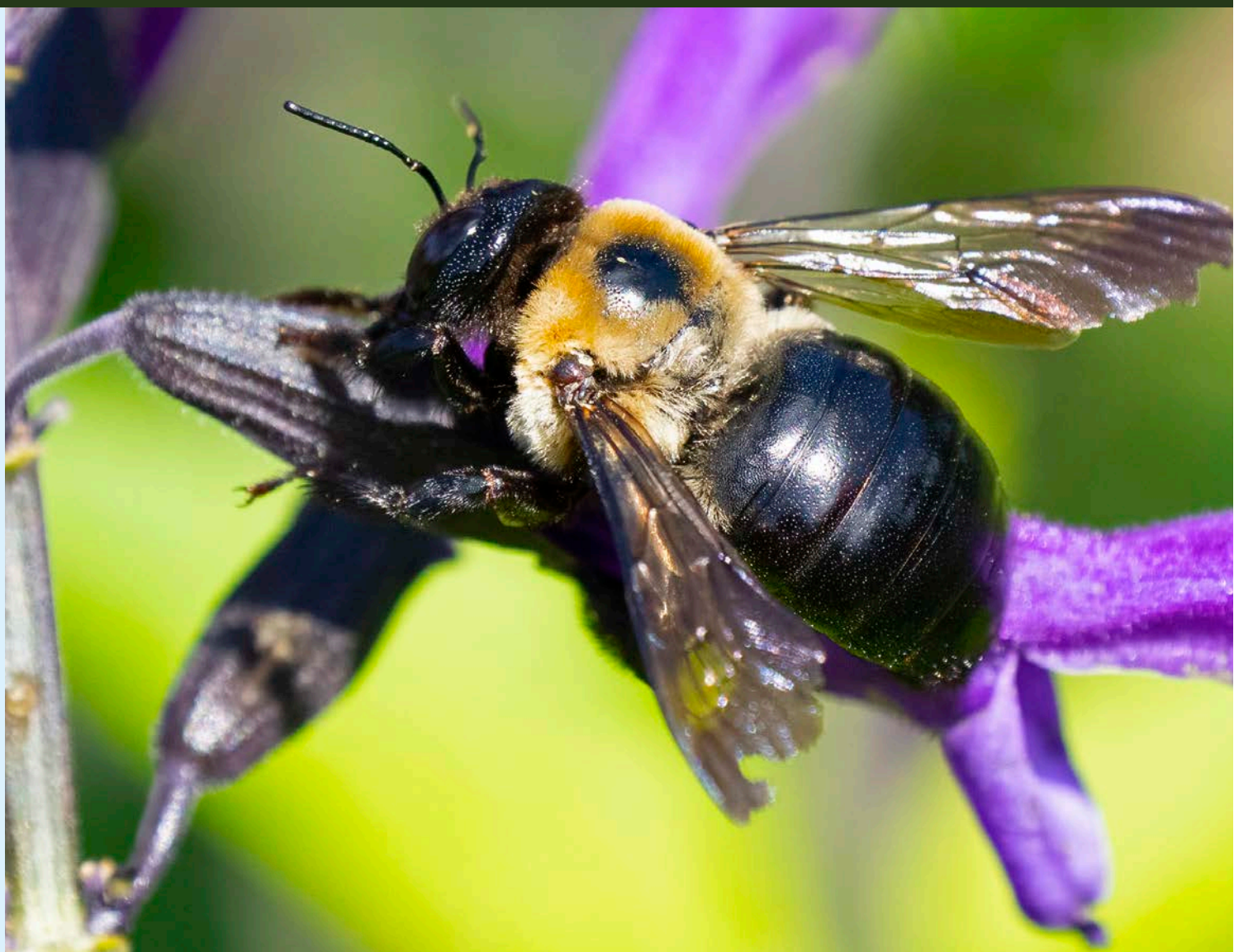
Lettuce

Radish

Spinach

Swiss chard

Turnip greens



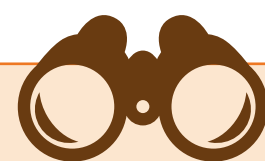
Garden Tasks

- **Plant new perennials.**
- **Plant summer annuals** from April 15-May 15.
- **Directly sow summer annual seeds** outdoors (Zinnia, sunflower, marigold, salvia, cosmos, etc.).
- **Fertilize** lawns, perennials, and annual plantings based on soil test results.
- **Begin fertilizing** potted aquatic plants monthly through September.

Garden Challenge

Soil and air temperature are important when deciding when to plant crops in the spring. Monitor air and soil temperature daily to determine best planting dates for each crop. Compare current and previous year records to look for temperature trends.

Let's Explore



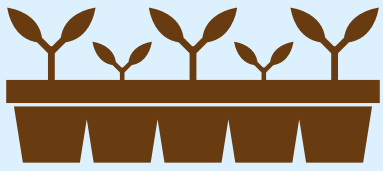
Carpenter bees are easy to find in April. While they may act tough, they rarely sting and have a very interesting life cycle. See if you can find their home (wood structures) and watch them as they work. How do they dig? Why are they digging holes? What's inside the holes they dig?



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May



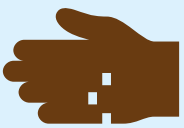
Start Inside

Vegetative Cutting

None

Seed

None



Start Outside

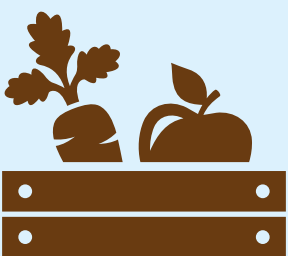
Transplant

Sweet potato (90-120 days)

Winter squash (85-100 days)

Seed

None



Harvest

Estimated

(Based on planting date)

Onion sets

Irish potato

Kohl Rabi

Lettuce

Radish

Strawberries

Turnip greens



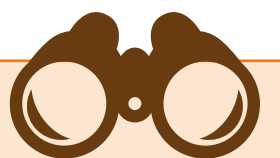
Garden Tasks

- **Prune** spring flowering shrubs as needed after they bloom.
- **Divide** spring blooming bulbs that are not flowering well.
- **Divide** spring blooming perennials after they finish blooming.
- **Take cuttings** of deciduous shrubs to propagate. Look for semi-hard wood for best results.
- **Move house plants** outdoors into full shade.
- **Apply fire ant bait** throughout the outdoor classrooms according to label directions.
- **Fertilize** again if needed.
- **Thin** out heavily set fruit on peaches, apples, pears, and other fruit trees to prevent limb breakage and premature fruit drop.

Garden Challenge

Sweet potatoes and herbs such as basil, fennel, thyme, and rosemary grow well all summer without much effort. Add these to outdoor classroom raised beds before summer break begins. Use sprinklers, soaker hoses, and automatic timers to create a summer watering schedule while school is out for summer. In the fall, harvest these crops and sell them to parents and teachers to raise funds for the outdoor classroom.

Let's Explore



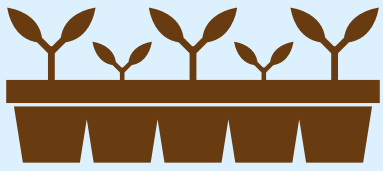
April showers bring May flowers! Identify the different types of flowers in the outdoor classroom. Identify the male and female flower parts. Which flowers seem to be visited most by pollinators? What traits do these frequently visited flowers share?



For gardening information for your zip code, download the SOW - A Planting Companion app.



June



Start Inside

Vegetative Cutting

None

Seed

None



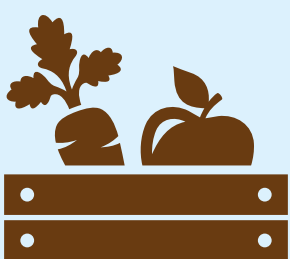
Start Outside

Transplant

None

Seed

None



Harvest

Estimated

(Based on planting date)

None



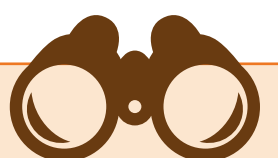
Garden Tasks

- **Begin to deadhead** flowering plants to keep them blooming all summer long.
- **Set up irrigation** with timers to water the outdoor classroom throughout the summer. Set timer to run 2-3 times per week to provide a total of 1 inch of water weekly.
- **Divide and repot** overgrown aquatic plants.
- **Stake** tall fall blooming perennials for support as they grow.

Garden Challenge

June is a great month to propagate cuttings of deciduous woody shrubs and perennials. Research some species that would work well in the outdoor classroom and try propagating cuttings to plant in the fall. If your school is not in session in June, try propagating shrubs in late May.

Let's Explore



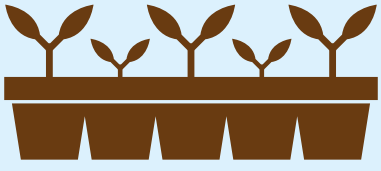
Weeds are abundant in the summer. Identify which plants are weeds and which are ornamental plants. Identify some characteristics of the weeds that help them to grow more quickly than the ornamental plants.



For gardening information for your zip code, download the SOW - A Planting Companion app.



July



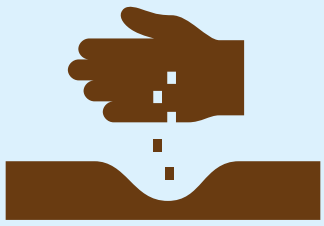
Start Inside

Vegetative Cutting

None

Seed

None



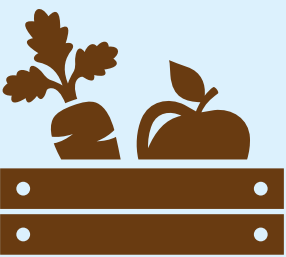
Start Outside

Transplant

None

Seed

Pumpkin (90-110 days)



Harvest

Estimated

(Based on planting date)

None



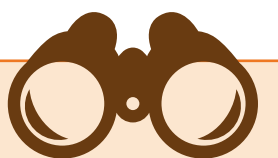
Garden Tasks

- The heat and humidity of July can increase **pest and disease problems**. Keep a close eye out for both and treat with insecticides and fungicides if needed.
- July heat increases **watering needs**. Make sure the outdoor classroom is getting 1 inch of water per week.
- **Remove old blackberry canes** after fruiting and fertilize the plants to cultivate replacement canes.
- If plants show signs that they are in need of additional nutrients, **fertilize** again in early July.
- Mid-July is the last opportunity to easily **propagate deciduous shrubs** from cuttings using semi-hard wood.

Garden Challenge

Share or sell bouquets of cut flowers like zinnias and marigolds that you have grown from seeds started in March.

Let's Explore



July is a great month to look for insects! See what insects you can find and try to classify them as either pollinators, pests, decomposers, or predators (eat other insects).



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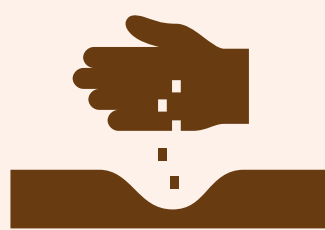


extension
ALABAMA A&M & AUBURN UNIVERSITIES



Summer Programs

Most of our Alabama schools are out for the summer and so we have set the calendar's vegetable planting lists up to reflect that. But we realize that some schools are year-round or host summer programs. Therefore, we have put together this alternate schedule for vegetables that will keep your garden productive all summer long.



Plant

February

Start Indoors
Seed

Eggplant (65-85 days)
Peppers (65-85 days)
Tomatoes (70-90 days)

March

Start Indoors
Seed

Cucumber (50-65 days)
Summer Squash (40-55 days)

April

Start Outside
Transplant

Cucumber (50-65 days)
Eggplant (65-85 days)
Peppers (65-85 days)
Summer squash (40-55 days)
Tomatoes (70-90 days)

Seed

Beans (50-60 days)
Okra (50-65 days)



Harvest

May

Cucumber
Summer squash

June

Beans
Cucumber
Eggplant
Okra
Pepper
Summer squash
Tomatoes

July

Beans
Cucumber
Eggplant
Okra
Pepper
Summer squash
Tomatoes



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For more information, contact your county Extension office.

Visit www.aces.edu/directory.

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New August 2024, UNP-2203

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STEM

in the garden

Monthly Outdoor Classroom Calendar