

Supplies List for Grow Smart® STEM DIY Pollinator Projects

Here are the supplies needed for the three STEM pollinator projects for kids, teens and families. Step-by-step instructions for each project and the corresponding videos will be posted mid-May on www.atc-GrowSmart.com/library.

Making and caring for a bee house supplies:

1. Tubes for nesting (a dozen or enough to fill the container being used). Tubes can be any of the following:
 - Paper straws (not plastic)
 - Make your own tubes by wrapping newspaper, nonglossy paper or parchment paper around a pencil or dowel rods of different diameters.
 - Or use the stems from plants with hollow stems. Check your garden for these and more: purple coneflower, lavender hyssop, bee balm and Joe Pye weed.
 - o Cut each stem below the node (ridge) or drill holes in plants with pithy stems like sumac, elderberry, and raspberries (watch out for the thorns)
2. Paint the open outer tip black to help attract the bees (*optional*)
3. Blocks of untreated wood and various size drill bits to create the holes
4. Zip ties, string, or wire to hold bundles together and prevent shifting if needed
5. Nesting structure to protect the nesting tubes from rain such as Cans, pieces of PVC pipe, plastic totes or buckets, cinder blocks, wood frames or anything that keeps the tubes dry
6. Wire mesh to prevent birds and animals from eating the bees (*optional*)
7. Paint to decorate the nesting box (*optional*)

Native annual sunflower project supplies:

1. Sunflower seeds
2. A container if they are not planting sunflowers directly in a garden
 - a. 10-12-inch diameter pots with drainage hole for 2-inch tall and shorter sunflowers
 - b. 3-5-gallon pot for taller varieties. These could be recycled items
 - i. Pots from garden center recycling shelf
 - ii. Pots from trees, shrubs or perennials planting in your garden
 - iii. Old coffee cans, buckets, or anything that would hold soil and tolerate weather.
Be sure to add holes in the bottom for drainage.
3. Potting mix
4. Fertilizer
5. Weatherproof, plant-safe paint or markers (latex or acrylic work best)
6. Planting & Growth Chart - we will have one to download with the activity sheet or see [page 7 of use this gardening activity booklet](#).

If you want to do something on a smaller scale at the library, you could start seeds in small pots and once sprouted with four leaves, move into a bigger pot or the garden. Here's what you'd need:

- Egg carton, yogurt or applesauce containers, or [make your own origami pots](#)
- Add drainage holes in the bottom of any container that is used

Growing a pollinator garden in a container supplies:

1. A container with drainage holes – ask an adult to make/drill drainage holes in the bottom as needed
 - a. You can purchase a container or make your own from a recycled or repurposed item like a metal coffee can, an old bucket or tin used for cookies, a fabric shopping bag or a nursery pot from a large perennial, tree or shrub (many garden centers set these aside for you to help yourself)
 - b. Look in your basement, shed or garage for items to convert into planters
 - c. Ask friends and family for old pots or items that can be planted
2. Potting Mix
3. Fertilizer
4. Paints or permanent markers to decorate the containers
5. Plants or flower seeds pollinators prefer and those that will grow in your yard

Evaluate the amount of sun your container will receive

- Check the space several times a day and record if it is sunny or shady
- Check plant tags to find plants that will grow in that amount of sunlight
 - Full sun plants need 6-8 hours or more, part sun (5-6), shade (4 or less)
- Watch the weather forecast and record high/low temperatures
 - Some plants like impatiens and fuchsia need warm conditions and don't tolerate frost
 - Other plants like alyssum, dianthus and pansies take cool, even frosty temperatures
- Make a list of plants that will grow in your yard

For small containers you may only be able to plant one flower/pot

- You can plant 3-4 plants in a 10-12-inch diameter pot; 4-6 plants in a 14-16-inch diameter pot; and 6-8 plants in a 16-20-inch diameter pot.
- Adjust this number based on the size of transplant purchased and the mature size and growth habit of the variety of plant selected.

If you want to do something on a smaller scale at the library, you could start zinnia, marigold or cosmos seeds in small pots and once sprouted with four leaves, move the seedlings into a bigger pot or the garden. Here's what you'd need:

- Egg carton, yogurt or applesauce containers, or [make your own origami pots](#)
- Add drainage holes in the bottom of any container that is used

A special thank you to our sponsor:



Thanks for helping to grow pollinator gardeners!