Students will create beautiful leaf print castings made in concrete, capturing the unique patterns and forms of the garden.

Students will:
- build awareness of natural patterns and forms
- preserve the beauty of the garden harvest
- create ornamental art for the garden

Time
2 hours

Materials
- sand
- disposable gloves, a pair for each student
- safety goggles (for mixing concrete)
- dust mask (for mixing concrete)
- quick-dry concrete
- leaves
- plastic wrap
- cardboard
- scissors
- plastic bucket or mixing tray
- trowel (for mixing concrete)
- metal mesh used for crafting, precut to each students unique leaf shape
- cement coloring powder (optional)
- wire cutters (optional)
- metal wire (optional)

Background
Leaf casting is a printmaking technique that captures the print of a leaf through a process of casting it into a durable medium such as concrete. Not only is it useful in terms of preserving the intricate patterns and natural beauty of the garden harvest, but the castings themselves also become beautiful ornamental garden art. Each casting is as unique as the leaf that created it and can be made into a birdbath, birdseed feeder, garden path ornament, or an indoor decoration. This activity has widespread appeal because it doesn’t require a lot of technical skill or artistic talent, is a fairly quick casting process, and is enjoyable for children, youth, and adults.

Instructions
1. Invite students to choose a leaf from the garden that has prominent vein patterns.
2. Distribute a sturdy piece of flat cardboard to each student and demonstrate how to build a mound of sand on it about the size and shape of the leaf they have chosen.

3. Next, cover the sand mound with plastic wrap to ensure that sand stays out of their work.

4. If students use a leaf that is larger than the size of their hand, then they will use some metal mesh to give it some extra support along the spine. Cut the mesh to the approximate shape and size of the leaf while taking care that it is not larger than the leaf. This will be pushed in to the concrete in Step 9.

5. Students will lay their chosen leaf face down on the plastic wrapped mound of sand. The back side of the leaf with the prominent veins should be facing up.

6. Mix the concrete. Whoever helps with this step should be wearing full protective gear including gloves, dust mask, and safety goggles. Pour the dry concrete mix into a plastic bucket or mixing tray and then slowly add water until the mixture is the consistency of brownie dough. It should be thick enough that it won’t run off the leaf but not so thick that it can’t be worked and moved around easily.

7. If students want to add color to their casting project, it can be mixed with the water prior to adding it to the dry concrete mix. One bottle of coloring will mix with 160 lbs of dry concrete mix.

8. Once the concrete is ready, distribute gloves and demonstrate how to put a fairly thin layer of concrete on the leaf to begin with. Spread some concrete onto the center of the leaf and then begin working it toward the outer edges. Large veins that run down the middle of the leaf need plenty of concrete to cover them so be generous there.
9. Fit the precut piece of metal mesh wire to the back of the leaf and gently press it into the concrete.

10. If students plan to hang their leaf casting, then they can cut two pieces of metal wire about 2 inches, pinch them into a u-shape and then set them into the back of the leaf with a little concrete.

11. Put another thin layer of concrete on. Altogether the concrete layer should be about 3/4 inch thick in the middle and taper to 1/4 inch thick at the edges.

12. Finishing the edges well is very important so that the casting does not break or crumble while drying. The best way to finish the edges is to fold the plastic wrap over to knead the edges down like a pie crust.

13. When the leaves are done, place them somewhere out of the way to dry. It takes about 2 days to dry to the touch and 28 days to fully cure (completely dry and ready to be used outdoors).

14. After a month of curing, students can carefully turn their concrete leaf over and slowly peel off the real leaf. If the leaf doesn’t come off easily, spraying it with water and gently using a metal scrub brush to scrape it off can help.

**Taking it Further**

Students can then paint their leaf casting with a thin wash of acrylic paint diluted in water. If they plan to use their casting as a birdbath or ornament outdoors, then it must be sealed with concrete sealer. Once the paint and sealant has dried, the leaf castings are ready to be displayed or go home with students.

Students can experiment with other art mediums to capture unique patterns, forms, and textures in the garden. Clay can be used, crayon rubbings, photography, drawing what you see through a magnifying lens, etc.