

## Dinosaur Garden

**Overview:** Kids love dinosaurs! The mystery behind their lives and extinction engages the imagination of young and old alike, inviting visions of a world dominated by huge lizards. Although these great reptiles have disappeared, some of the plants that grew millions of years ago still thrive today. Enhance your kids' sense of adventure by creating your own garden fit for a dinosaur!



### Materials:

- Dino plants
- Garden space and tools

**Approximate Time to Complete:** Variable

**Location:** Outdoor

**Ages:** Prek – 5<sup>th</sup> grade

**Season:** All seasons

### Instructions:

1. Research some dinosaur era plants for your garden. Here are descriptions of some plants with prehistoric origins that are still around today that you could use to help your young gardeners recreate a Mesozoic environment:

**Ferns** were once the primary vegetation covering the earth! The ancient species were probably similar to the tree ferns, now found only in some tropical regions. These dominant plants of the dinosaur era decomposed to become a major component of coal deposits, an important energy source for us today.

The ability of ferns to adapt and evolve has resulted in more than 12,000 known living species growing in climates from the tundra to the tropics. Some of the earliest species include the maidenhair ferns (*Adiantum* species), lady ferns (*Athyrium* species), and autumn fern (*Dryopteris erythrosora*). The leaves of ferns are borne on feathery fronds arising from rhizomes (underground stem structures that grow just below the soil surface). Ferns range in size and shape from low mounding ground covers to the tree ferns mentioned above. Most ferns grow in woodlands and are well adapted to shady beds and indoor plantings.

**Horsetails** (*Equisetum* species) are among the oldest plants in existence. Like their close relatives, the ferns, horsetails reproduce via spores rather than seeds, and horsetail species are also adapted to grow around the globe. They grow in marshy areas and sport two different types of vertical, hollow stems. The first stems appear in the spring and look something like asparagus topped with brown cone-like structures that bear the spores. Later in the year larger stems with stringy, tough leaves emerge, and these give plants a feathery appearance (like a horse's tail). If planted in a favorable location, horsetails spread quickly -- in fact, they are considered invasive weeds in some areas. Check with local native plant organizations or your state's conservation agency about the invasive status of horsetails in your region before planting them in your home or school landscape. Consider planting in a container to keep them from spreading aggressively.

**Bald Cypress** (*Taxodium distichum*; USDA Zones 5-10) is a tree that can grow in both saturated and dry soils, making it a popular street tree. Bald cypress can reach 120 feet tall, and in wet areas develops distinctive 'knees' (hump-shaped roots that grow out of the ground). Although many gymnosperms are evergreen, the bald cypress is deciduous and provides attractive fall color.

Bald cypress seeds are a food source for wildlife including turkeys, wood ducks, and squirrels. Some have referred to the lumber as "wood eternal," not because the species has been in existence for ages, but because the heartwood is resistant to decay and thus is used to make docks, boats, and bridges. Historically, the Choctaw used the bark for string and rope, and the Seminoles found bald cypress useful for making houses, canoes, and ceremonial objects.

**Dawn Redwood** (*Metasequoia glyptostroboides*; USDA Zones 4-8) is another deciduous tree first identified from fossils. Scientists thought it was extinct, but during World War II a grove of surviving trees was discovered in a remote location in China. Seeds were harvested and you can now find this attractive tree in landscapes throughout the world. Dawn redwood can reach heights of more than 120 feet, and it is useful for stabilizing soil in wet areas.

**Ginkgo** (*Ginkgo biloba*; USDA Zones 4-9) is another deciduous landscape tree with unique fan-shaped leaves known for beautiful fall color. Until it was 'discovered' growing Japan by a 17th-century Dutch botanist, Europeans believed all ginkgo species were extinct. Male and female reproductive structures form on separate trees, and because the fleshy outer layer of seeds borne on female trees gives off a putrid odor, male trees are a better choice for landscapes. Despite the smell, the seeds are a delicacy in many Asian cultures. Extract from the leaves has become a popular herbal remedy purported to improve memory.

**Cycads** are gymnosperms that resemble palms. The cycad commonly called coontie (*Zamia pumila*), with its soft fern-like leaves, is a good candidate for a youth dinosaur garden. This mounding shrub reaches approximately three feet tall and sports evergreen foliage that grows well in either full sun or shade. It's hardy only to Zone 8, but gardeners in cooler climates can grow it in a container and bring it inside during the winter. Although coontie seeds are

poisonous, the Seminoles and early European settlers used the root as an ingredient to make bread.

Sago (*Cycas revoluta*) is another ancient cycad popular for landscape use, but its sharp-edged leaves make it a less appealing choice than coontie for a youth garden.

**Magnolias** (*Magnolia* species; USDA Zones 4-10) are some of the earliest angiosperms. There are more than 80 different species ranging in size from small shrubs to huge trees. Some, like the southern magnolia, are evergreen, and others, like the saucer magnolia, are deciduous. All are known for their beautiful and often fragrant flowers. Look for varieties that grow well in your area.

**Palms** are native to tropical and subtropical areas of the globe. Even today the fruits of many palm trees are used for food (think dates and coconuts). Two of the hardiest palms to consider for your dinosaur garden are the pindo palm and the windmill palm. The pindo palm (*Butia capitata*; USDA Zone 8-9) has a very graceful appearance with feathery leaves that curve down towards the trunk. It also produces a healthy crop of edible orange fruit that some people use to make jelly. The windmill palm (*Trachycarpus fortunei*) is among the most cold-tolerant palms (hardy in USDA Zones 7b-10, and known to survive winter snow) and is a common landscape plant.

2. Determine if any of the above plants will grow well in your yard or garden. If not, look for related plants adapted to your area.

3. If finding appropriate plant materials proves to be a challenge, or if you just want to include some interactive elements to your dinosaur garden, try adding some of the following complementary features:

- Create garden stepping stones shaped like dinosaur footprints.
- Build a "dig" site where young gardeners can search for "fossils." Fill a raised bed frame with loose soil or sand. Make your own "fossils" by creating impressions of natural materials, such as leaves and pinecones, in pieces of concrete.
- Paint a mural featuring different types of dinosaurs and Mesozoic plants on surrounding fences or buildings.
- Place models of dinosaurs around the garden. Encourage kids to exercise their creativity by writing stories, plays, poems, or songs about these "inhabitants."