



Children's
Discovery
Museum
of San Jose

California Content Standards

Grade 1

- Science:
2a, 2b, 2c, 2e, 4a,
4b
- History:
Social Science 1.2.4
- Visual and
Performing Arts:
Visual Arts 2.8

Kids' Garden

Teacher's Guide: Grade 1



What's Going On?

The **Kids' Garden** gives children the opportunity to explore the natural community of which we are all members. While they explore the world outdoors, children develop appreciation for living things and the environment. They learn how their actions affect the planet and how they can be positive stewards of the Earth. The activities described in this guide help children further explore the interdependence of humans and the natural world.

Before You Visit

Before Your Visit to CDM, explore the habitat around your school. What kinds of plant and animal life are there and how are they interdependent?

During Your Visit

During Your Visit to CDM, encourage children to look closely at the garden and pond habitats. Invite them to touch the plants to look under leaves, in the soil, and above their heads.

After Your Visit

After Your Visit to CDM, create a simple terrarium to study changes in an environment over time.



Before You Visit Plant and Animal Needs

Objective:

Students learn that plants and animals (including humans) are interdependent.

What you'll need:

- Clipboards
- Paper
- Pencils
- Crayons
- Large sheet of butcher paper
- Book about the interconnectedness of plants and animals, such as:

Tree of Life – The World of the African Baobab, by Barbara Bash

Desert Giant: The World of the Saguaro Cactus, by Barbara Bash

The Great Kapok Tree, by Lynne Cherry

One Small Place in a Tree, by Barbara Brenner

The Gift of the Tree, by Alvin Tresselt

What to Do:

1. Read one of the books about the interconnectedness of plants and animals.
2. Ask children to think of the ways that people need plants (ex. for shelter, food, beauty). Record their responses on chart paper.
3. Repeat the process to create two more charts – ways that animals need plants (ex. to create oxygen, shade, camouflage) and ways that plants need animals, including humans (ex. to create carbon dioxide, to carry seeds).
4. Take the children for a walk in the woods, around a pond, or to another habitat near the school.
5. Ask the children to record (in writing or pictures) specific examples of the interdependence of plants and animals. For example, observe snails eating moss from a lily pad, follow a squirrel carrying an acorn from a tree to an underground hiding spot, or find a bird's nest on a tree branch.
6. Lead the children to create a mural of the habitat you explored demonstrating the interdependence of the plants and animals living there.

Assessment:

Save the recording sheets to show that children are able to find examples of the interdependence of plants and animals.

Extensions:

- Take a trip to a different habitat to compare plant and animal life there with the first habitat the class visited.
- Compare and contrast two plants from obviously different habitats – for example, cactus and a hibiscus.
- Ask children to imagine that something disappears from their mural. How would it affect the rest of the plants and animals that remain?



During Your Visit

Guided Exploration of the Exhibit

What you'll need:

- Hands, eyes, and brains

What to do:

Encourage children to look closely at the garden habitat. Invite them to touch the plants to look under leaves, in the soil, and above their heads. You may want to use the following items as discussion starters:

- What types of plants do you notice in the garden?
How are they different and alike?
- What types of animals do you notice in the garden? Look closely!
How are they different and alike?
- How do the animals in the garden (birds, bees, worms, etc.) help the plants?
Be sure to check out the worm composting bins.
- How do the plants in the garden help the animals?



After Your Visit Pond in a Jar

What you'll need:

- Clean canning jars with lids
- Hammer
- Nail
- Candle

Objective:

Children will create their own ponds-in-a-jar to observe a dynamic ecosystem.

What to Do:

1. Before introducing the activity to children, prepare the collection jars. Use the hammer and nail to poke one hole in the middle of each lid. Drip hot wax from the candle onto the hole to seal it. This procedure creates a sealed environment for the habitat while creating a way for steam to escape if the pressure inside the jars becomes too great.
2. Take the children to a pond to collect about 1 cup of pond water and a handful of mud for their jars. Seal the jars with the lids.
3. Ask the children to observe their habitats with a microscope and record the plant and animal life they find.
4. Place the jars in a sunny section of the classroom to observe changes over time. In the closed environment, how do plants and animals support each others' growth?

Assessment:

While the children are discussing the results, note whether or not children understand what plants and animals need to survive.

Extensions:

- Provide some environmental changes to your ecosystems. For example, place them in a dark area, change the temperature, or introduce a new plant or animal. When introducing the changes, be respectful of any animal life that may be living in the habitat and consider how those changes will affect their growth.
- Ask the children to keep science journals recording changes over time.
- Create terrariums exemplifying different ecosystems, such as deserts or forests, to compare to the pond habitat.

Related CDM lesson plans:

From Harvest to Home: The Farmer in the Dell

Additional reading for children:

- *Nature in the Neighborhood*, by Gordon Morrison
- *Pond*, by Gordon Morrison