

*Mitate:*  
To See with New Eyes

Grades: 6-8

Portland Japanese Garden  
Lesson Plans for the Classroom



## Introductory Information for Teachers

### *Mitate*

One of the great lessons to be learned from experiences with other cultures is how to see things from different perspectives. Japanese gardens can be windows onto new ideas and ways of thinking. One of these is an aesthetic concept called *mitate* (literally, to see anew). It is an idea that originated in literature with words used in unexpected ways. The word was later appropriated by masters of the Tea Ceremony who sought to offer a way to renew one’s spirit through a disciplined approach to a simple act of everyday life: the making of green tea.

Chanoyu, or “hot water for tea,” is the term used to describe this lesson in simplicity and awareness, a practice known commonly in English as the Tea Ceremony. Utensils used by the early masters of chanoyu to make and serve tea were often found objects—a crudely formed farmer’s rice bowl was discovered to be the perfect vessel from which to drink this style of tea. It was an object that “seen with new eyes” embodied the essence of rustic, unpretentious simplicity—an explicit goal of this unique art form.

In garden design as well, the concept of *mitate* can be found in such things as the use of roof tiles as decorative edging for garden paths and borders—or in the millstones that are used here and there as stepping stones.

Discussions inspired by this lesson explore the artistic potential in recycling as well as the environmental benefits.



## Lesson Plan

### Introduction to the Lesson

The Lesson Plan and Classroom Activity in this section emphasize cooperative learning in art and science through an exploration of the concept of mitate.

Mitate (pronounced me-tah-tay) is the Japanese word for “to look again”. Mitate is one technique used by designers when creating a Japanese garden. Essentially, mitate is when something old is seen and used in a new way. In the Portland Japanese Garden there are 19th century roof tiles used for decorative edging. There are also millstones used as stepping stones.

### Lesson Overview

In this lesson, students will work in small groups to create a container garden using materials seen and used in creative new ways, incorporating elements of Japanese Garden design. They will formulate and express scientific questions to be investigated and will collect, organize, and display their results. This is a group project; student collaboration and cooperation will affect outcomes.

### Objectives

Students will be able to:

- Research how to plant a container garden.
- Design, plan, and create an indoor container garden.
- Maintain and care for the plants.
- Perform an inquiry-based experiment.
- Observe and record the growth of their plants and submit a written conclusion.

## Oregon Department of Education

### Common Curriculum Goals

#### Science

- Formulate and express scientific questions or hypotheses to be investigated.
- Design safe and ethical scientific investigations to address questions or hypotheses.
- Conduct procedures to collect, organize, and display scientific data.

#### The Arts

- Express ideas, moods, and feelings through the arts and evaluate how well a work of art expresses one’s intent.
- Apply use of ideas, techniques, and problem solving to the creative process and analyze the influence that choices have on the result.
- Evaluate one’s own work, orally and in writing.

In preparation for your trip to the Portland Japanese Garden:

1. Explain the purpose of the visit to the Portland Japanese Garden. During a guided tour of the Garden, the students will be introduced to several concepts that will later be incorporated into a group project creating container gardens at school. (If you cannot go on a tour to the Portland Japanese Garden, try to find examples of mitate in your school or neighborhood.)
2. Introduce the concept of mitate (to see anew), when something old is seen and used in a new way. Challenge the students to find and think of examples of mitate in the school and neighborhood. (Examples: wind chimes made of seashells, a pitcher used as a vase, an old barrel as a flower pot)
3. Explain that the students will observe several aesthetic Japanese garden design elements.
4. Explain that these concepts will later be used to make container gardens at school.

## The Visit to the Garden

When you visit the Portland Japanese Garden the students will have a guided walk through this natural space, focusing on mitate and design elements in a Japanese garden.

## The Tour

Your tour through the Garden will be led by a Garden Guide who has been trained to engage the children in this lesson. Your Guide will review behavioral expectations with the children before beginning the stroll through the Garden.

- Your Guide will encourage the students to notice examples of mitate in the Garden.
- Your Guide will also encourage an awareness of aesthetic design elements such as:
  - the use of the three natural elements: stones, plants, and water
  - the use of asymmetry and an odd number of plants and stones to achieve natural balance
  - the striving for simplicity; the cultural value that “less is more”
  - the symbolic use of elements, such as smooth river rocks to represent a stream
  - the attention to shape and texture as well as color

## The Activity

The making of the container gardens is a collaborative group activity. You will need to divide the class into groups of 3-4 students. Depending on the resources available to you, you might consider having each group plant two (2) containers so that they can control for a variable such as water, soil type, light, etc.

### Main Steps of the Activity

1. Introduce the Guidelines for the gardens.
2. Review the concepts of mitate and Japanese garden design elements.
3. Have each group research plant needs and develop a question to be investigated.
4. Have each group develop and turn in a written plan.
5. Assemble the materials.
6. Have each group create its container garden.
7. Have each group nurture the plants and keep detailed records of their care and the growth and health of the plants.
8. Have each group turn in a written summary and share the results with the class.

1. Introduce the Guidelines for the gardens. Read them and make sure the students are clear about the guidelines. Post these guidelines where they will be accessible as a reminder to the students.
2. Review with the students the concept of mitate as “seeing anew” or seeing and using old objects in new ways. Review examples that were found in the Portland Japanese Garden. Review design elements that were discovered at the Garden: asymmetry; simplicity; the three natural elements of stone, water, and plants; the use of color, shape, and texture; the symbolic use of elements.
3. Have each group research planting techniques, the needs of all plants, plant growth, etc. Discuss how some of these needs might be different for container plants and might contribute to different results.

Have each group develop a proposal for investigation, a question they would like to answer in growing their gardens. The type of investigation that can be conducted will depend on whether each group has created one or two container gardens. To have a controlled investigation either each group must have two (2) containers or two groups must cooperate on a shared inquiry.

Share the proposals with the class and get feedback before beginning the gardens. Some possible investigations might be:

- experiment with different types of soil mixes
- experiment with planting at different depths of soil
- experiment with the location of the container to determine how light affects plant growth; does it matter if you attempt to “follow” the sun during the day
- devise a system for providing water to the plant when school is not in session
- determine if amending the soil with fertilizer affects growth and health
- determine if organic fertilizer produces different results from chemical fertilizer

4. Have each group make a written plan for their container gardens, including materials needed, the use of mitate and design elements, the question to be answered, and the plan for maintenance and care of the garden.
5. Assemble the materials (see below). You must tell the students which items will be provided by the teacher and which they must provide. It is suggested that each group must provide at least the mitate element(s) (usually the container). Encourage creativity in the selection of containers: an old tennis shoe, toy football helmet, toy dump truck, hollow piece of wood, etc.
6. Create the gardens. Encourage the students to remember to incorporate elements of Japanese garden design. Even though the students will be conducting an inquiry, the goal is for an attractive container garden. (Encourage independence in the planning and planting of the garden. However, give tips and techniques if necessary to assure a reasonably successful plant. See Tips and Techniques for the Mitate Garden at the end of this lesson.)
7. Have each student keep detailed and accurate records of the care given to the gardens and accurate data on the growth and health of the plants. Use objective records such as graphs to measure growth and objective criteria to measure health such as leaf color, branch sturdiness, etc.
8. Have each student turn in a written summary of the project and share the results with the class.

### Materials

- Container
- Planting medium
- Small plants: herbs, decorative houseplants, small trees
- Some basic gardening tools
- Soil amendments\*
- Gravel for drainage\*
- Small stones for accent\*
- Pea gravel\*
- Project rubric (see attached)

\*Optional

## Consolidation

At a determined date, review the students' records and have each group share results with the class. Complete a rubric to assess how well the project met expectations. (See Sample Rubric at the end of this Lesson.)

### Discussion questions:

- How did your initial plans change over the course of the project?
- What other examples of mitate have you thought of or observed since we started this project?
- How do you think mitate and design elements of Japanese gardens might reflect Japanese cultural values?
- How does mitate differ from our usual understanding of the word recycle?
- Would you change your execution of this project if you did it again?
- What was your greatest success in this project/your biggest challenge?
- Did all plants grow the same? If not, how did they differ? What factors contributed to the inconsistent growth?
- Are there measurements we could have recorded/observed that would have informed our results even more?
- The class can vote on “Green Thumb Award (best plant growth),” “Most Creative Use of Mitate,” etc.

### Additional Resources

<http://www.kidsgardening.com/growingideas/projects/feb03/pg1.html> (This is an excellent resource!)

[http://gardening.about.com/od/containergardenin1/Container\\_Gardening\\_Designing\\_and\\_Displaying\\_Potted\\_Gardens.htm](http://gardening.about.com/od/containergardenin1/Container_Gardening_Designing_and_Displaying_Potted_Gardens.htm)

### Vocabulary

**asymmetry:** not having the same size, shape, or position on opposite sides of a dividing line or point

**data:** factual information, as measurements and statistics

**hypothesis:** a tentative assumption or explanation made in order to test its logical consequence

**mitate:** (Japanese) literally “to see anew,” a Japanese aesthetic concept of using old things in new ways

## Sample Mitate Gardening Project Rubric

	1	2	3
Plans	<p>Basic plans Not detailed Missing important elements</p>	<p>Detailed plans, with materials Well thoughtout and well written</p>	<p>Complicated, detailed plans with extra touches like design and attention to aesthetics and/or practicality; complete materials list</p>
Mitate	<p>Did not use old materials in a new way or used them in a non-essential way</p>	<p>Reused old materials in new ways, but recycled materials weren't an essential part of the project Creative use of materials</p>	<p>Reused old materials in new ways Creative use of materials Used more than one type of recycled materials Materials solved a problem or added to the overall aesthetics of the project</p>
Documentation	<p>Basic observations recorded Some maintenance missing Inaccurate data</p>	<p>Some detailed observations Accurate maintenance records, accurate data All factors affecting plants not considered</p>	<p>Detailed observations that consider all factors affecting the plants Detailed and accurate maintenance records Accurate and complete data</p>
Teamwork	<p>Some teamwork Uneven distribution of responsibilities and workload Communication challenges prevented team growth</p>	<p>Somewhat even distribution of responsibilities and workload Some communication during challenges Generally happy group</p>	<p>Even distribution of responsibilities and workload Open communication Successful team experience had by all</p>



## Tips and Techniques for the Mitate Garden

- Mitate containers can be found at home, in nature, from a local thrift store or vintage shop, etc.
- Consider the size of the container when choosing the size, shape, and number of objects to use.
- Cut a drainage hole in the bottom of the container, if possible. Cover the hole with a small flat stone or piece of screen.
- Place a thin layer of gravel in the bottom and add at least an inch of potting soil before placing the roots of the plant in the soil,
- Amend the soil slightly with fertilizer if desired and according to the students' inquiry.
- Consider using organic potting soil and organic fertilizer, depending on the students' inquiry.
- Place the roots on the soil, sifting more soil over them until they are covered.
- If the size of the container permits, add one or more stones, arranging them to appear as “natural” as possible. Bury a part of each stone in the soil so that it appears to have existed there always.
- A “stream” of pea gravel can represent water flowing past the rocks and plants.
- Gently press the soil down to insure that no air pockets remain. Sprinkle the soil with water.
- Keep the plant out of direct sun and lightly water, depending on the students' inquiry.
- Create an asymmetrical arrangement using odd numbers; strive for simplicity (less is more); use a variety of texture and color.

# Mitate: To See with New Eyes

## Expansions of this Lesson Plan for Other Levels

### Grades K-2

Students in this age group can become familiar with the concept of mitate during a visit to the Portland Japanese Garden as well as and in and around the school and neighborhood.

- Look for examples of mitate at home, at school, and in the neighborhood. Keep a group chart where new examples of mitate are written as the children discover them. Keep a running total of how many examples have been found. Solicit the help of parents in discovering examples of mitate.
- Use old items in a new way as an art project or to create a useful object (examples: cover a juice can with wall paper to make a pencil holder, paint and decorate a rock to serve as a paper weight).
- Children can plant a simple container garden using a mitate container. Encourage creative containers!

### Grades 3–5

Students in this age group can become familiar with the concept of mitate and several elements of Japanese garden design after a visit to the Portland Japanese Garden.

- Look for examples of mitate at home, at school, and in the neighborhood. Enlist parents' help in pointing out examples of mitate, for example in news articles about the use of recycled building materials.
- Plant a simple container garden using a mitate container. Encourage creative containers!
- Make sure the garden contains the three natural elements of stones, water, and plants.
- Measure the growth of the plants using a simple graph.
- Write a poem (perhaps a *haiku*) about the miniature garden.
- Assess and compare the plants. Try to figure out why some plants might have grown better than others.