

Ideas with

IMPACT

STEM/STEAM

**Garden
to Vase**

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Garden to Vase



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Background:

Ikebana, the traditional Japanese art of flower arrangement, is very different from Western styles. Rather than aiming for fullness or symmetry, ikebana focuses on **simplicity, space, and natural form**. Arrangements are designed to be viewed from one direction—often in a **tokonoma**, a small decorative alcove in a Japanese home—and they emphasize **line, balance, and seasonality** using branches, greens, and even berries.

A central idea in ikebana is **ten-chi-jin** (heaven, earth, and human), which reflects the harmony between nature and people. The tallest stem represents heaven, the lowest stem represents earth, and the middle stem represents humanity. Ikebana often uses **asymmetry**, such as a scalene triangle, to express natural energy and beauty. This reflects the Japanese belief that there is **beauty in imperfection and change**, and that even bent or broken branches can carry meaning.

Students will gather materials from our food forest and learn to create arrangements that reflect both **nature's form and their creativity**. This project encourages a deeper appreciation for Japanese culture, natural beauty, and the quiet power of resilience.

Goals:

1. **To develop an appreciation for Japanese culture** by exploring the traditional art of ikebana and understanding how it reflects harmony, simplicity, and respect for nature.

2. **To foster a connection with the natural environment** through hands-on exploration and collection of plant materials from the surrounding area.
3. **To encourage observation, creativity, and aesthetic sensitivity** by guiding students to notice shape, texture, space, and line in natural forms.
4. **To promote mindfulness, patience, and personal reflection** by engaging students in a calm, focused activity that values imperfection and resilience.
5. **To integrate learning across subjects**, combining elements of art, science, and cultural studies in a meaningful, student-centered experience.

Objectives:

By the end of this project, students will be able to:

1. Understand cultural differences between Japanese and Western flower arrangements, particularly the values of asymmetry, simplicity, and natural form in ikebana.
2. Recognize and apply the concept of *ten-chi-jin* (heaven–earth–human) to create meaningful, balanced floral compositions.
3. Explore and collect natural materials from their surroundings (e.g., branches, leaves, berries) and use them thoughtfully in an ikebana-inspired arrangement.
4. Identify basic plant parts (such as stems, leaves, flowers, and buds) and learn the names of local plants, thereby enhancing their observation and classification skills.

5. Demonstrate artistic and spatial awareness by designing an arrangement that reflects harmony, intentionality, and seasonality.
6. Practice mindfulness and reflection, learning to find beauty in imperfection and value resilience in both nature and themselves.
7. Express personal creativity while connecting with Japanese cultural traditions and aesthetic values.

Standards:

Florida Science Standards

SC.1.L.14.2 (Grade 1): Identify the major parts of plants, including stem, roots, leaves, and flowers.

SC.3.L.14.1 (Grade 3): Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.

Florida Math Standards: Measurement & Data

MA.2.M.1.1 (Grade 2): *Estimate and measure the length of an object to the nearest inch, centimeter, etc., using appropriate tools (ruler or tape measure).*

MA.2.M.1.2 (Grade 2): *Measure the lengths of two objects using the same unit and determine the difference between them.*

Florida Visual Arts Standards

✓ **Elementary (K–5)**

VA.A.1.1 – Skills & Techniques: Students learn to use a variety of media, tools, and processes to depict work from observation and imagination.

VA.B.1.1 – Creation & Communication: Students use the elements of art and principles of design to communicate ideas and interpret visual symbols, including those from diverse cultural traditions.

Overview:

Grade Level: Any Grade Level

Time Frame: Approximately 3–5 class sessions (can be adjusted based on depth of study)

Subjects Integrated:

- Visual Arts
- Social Studies (Japanese Culture)
- Science (Plant Parts & Observation)
- Math (Measurement)
- ELA (Reflection and Vocabulary)6

Project Outline

1. Introduction to Ikebana

- Teacher presentation or video on the history and philosophy of Ikebana
- Discussion of key concepts:
 - *Simplicity* and *asymmetry*
 - The symbolic structure of **Ten–Chi–Jin** (Heaven–Earth–Human)
 - Use of natural, imperfect, and seasonal materials

- Placement in a **tokonoma** (alcove)

2. Nature Walk & Plant Collection

- Students explore the school's garden or food forest to collect materials:
 - Leaves, stems, branches, flowers, berries
- Students observe and identify plant parts (science connection)
Optional: Sketch and label plant findings in journals

3. Measuring & Planning

- Students measure and compare plant materials
- Introduction to spatial design using a **scalene triangle** and natural posture
- Students sketch arrangement plans and decide placement based on shape and balance

4. Ikebana Creation

- Students assemble their arrangements using collected materials
- Use of small containers, floral foam, pebbles, or improvised kenzan
- Emphasis on mindfulness, simplicity, and creative choice

5. Reflection & Presentation

- Students explain their design and plant choices
- Optional: Write short reflections on imperfection, resilience, or cultural learning
- Display arrangements in the classroom or shared space with brief descriptions

Universal Lesson Plan: Japanese Ikebana Project

Lesson Title: *Garden to Vase*

Grade Level:

Adaptable (Elementary – Middle School)

Duration:

3–5 class periods (30–45 minutes each)

Subjects Integrated:

Visual Arts, Social Studies, Science, Math, Language Arts

Objectives

By the end of this project, students will be able to:

1. Understand the cultural and artistic values of Japanese Ikebana.
2. Identify and name basic parts of a plant (leaf, stem, bud, flower).
3. Apply principles of design (line, space, asymmetry) in their own arrangements.
4. Measure plant materials using standard tools (ruler or tape).
5. Reflect on the concept of imperfection and resilience through nature.

Standards Addressed

- **Art:** VA.A.1.1, VA.B.1.1, VA.C.1.1
- **Science:** SC.1.L.14.2 or SC.3.L.14.1
- **Math:** MA.2.M.1.1 or MA.2.M.1.2
- **ELA (optional):** Writing reflections, labeling, and journaling

Procedure with Timing

☛ Day 1: Introduction & Nature Walk (45–60 minutes)

1. Introduction to Ikebana (15–20 min)

- Show visuals or video about Japanese ikebana.
- Discuss cultural values: simplicity, asymmetry, Ten–Chi–Jin (Heaven–Earth–Human).
- Compare with Western floral design.

2. Nature Walk & Plant Collection (25–30 min)

- Students collect leaves, twigs, and natural materials.
- Optional: Sketch findings or label parts.

☛ Day 2: Observation, Plant ID, & Design Planning (45 minutes)

1. Plant Part Identification (15–20 min)

- Identify stem, leaf, bud, and flower parts.
- Draw and label in journals.

2. Measuring & Planning (20–25 min)

- Measure lengths of materials.
- Sketch design using the Ten–Chi–Jin triangle.
- Prepare containers with scotch tape grids.

☛ Day 3: Create Ikebana Arrangement (45 minutes)

1. Demonstration & Setup (10–15 min)

- Show how to use the tape grid and place stems.
- Emphasize asymmetry, space, and natural posture.

2. Student Work Time (25–30 min)

- Students create their arrangements mindfully.
- Walk around to support and ask reflection questions.

3. Clean-Up & Gallery Walk (5–10 min)

- Students place arrangements for display.
- Quick peer-to-peer viewing and appreciation.

Materials Needed

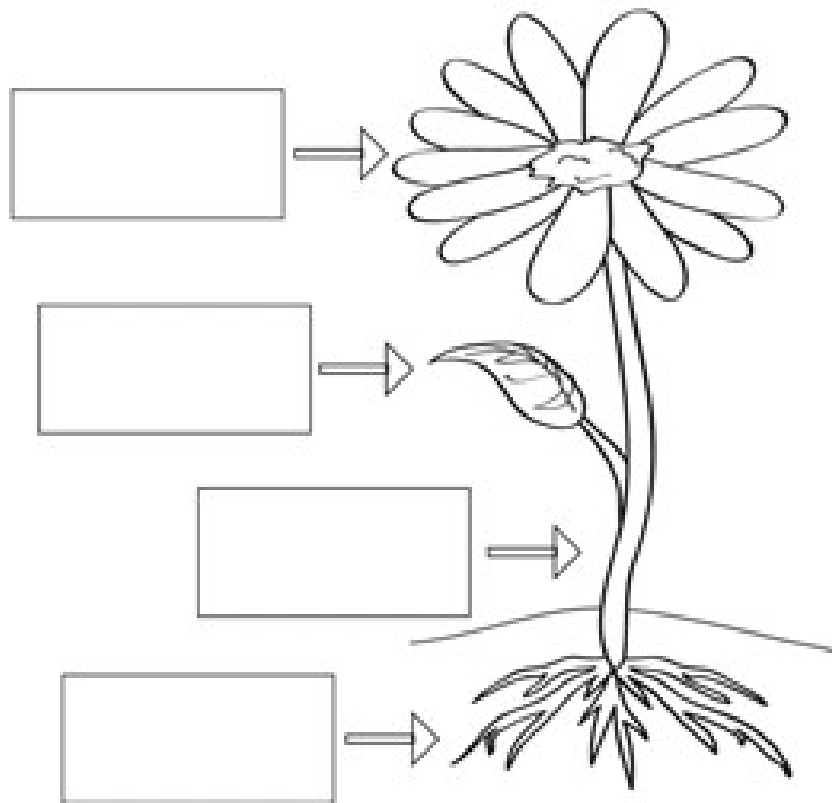
- **Containers:** small cups, jars, or recycled items (like yogurt containers or tea tins)
- **Scotch tape:** to make a tic-tac-toe–style grid over the opening of containers for stem support
- **Plant materials:** collected from outdoors or the school’s food forest
 - Leaves, twigs, branches, grasses, flowers, berries, etc.
- **Scissors or small clippers** (child-safe if needed)
- **Rulers or measuring tapes** (for measuring plant materials)
- **Paper and pencils** (for sketching, journaling, or planning designs)
- **Labels or plant ID cards** (optional, for plant identification and science tie-in)
-  **Book:** *Ikebana: Create Beautiful Flower Arrangements with This Traditional Japanese Art (Asian Arts and Crafts for Creative Kids)*
-  **Pitcher of water or access to a sink** – for filling containers and keeping arrangements fresh

Worksheets Samples

Name _____

Parts of a Plant

Color in the flower. Then cut and paste the correct word to each part of the plant.



Science Worksheet

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leaf

root

stem

flower

Ikebana Design Planning Sheet

Name: _____ **Date:** _____

Sketch your arrangement below. Try to show which part is:

- Heaven (tallest)
- Earth (lowest)
- Human (middle)

[Insert blank box for sketching]

Checklist:

Optional Notes:

Measurement Practice Sheet

Name: _____ **Date:** _____

Plant Description	Estimated Length (cm)	Actual Length (cm)
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Bonus Questions:

- Which item was longest?

- Which was shortest?
