

# Origami Paper Cranes: The Japanese Art of Folding Paper



## Background

The name origami is a Japanese term from the words oru (to fold) and kami (paper). As a result, in the Japanese, Chinese and Korean culture, the crane represents good fortune and longevity. Traditionally, it was believed that if one folded 1000 **origami** cranes, one's wish **would** come true. It has also become a **symbol of** hope and healing during challenging times. The following link shares the courageous story of Sadako and the 1,000 paper cranes. It also explains how to fold paper to make a paper crane.

<https://educ.queensu.ca/sites/webpublish.queensu.ca.educwww/files/files/Community/COC/Activities/3-4%20Folding%20a%20Paper%20Crane.pdf>

This link is a video on youtube showing how to make a paper crane:

<https://youtu.be/Ux1ECrNDZl4>

## Overview

Students will learn the history of origami and the paper crane, and what it symbolizes. Students will use mathematical skills to create their own paper crane.

## Education Standards

### TEKS 5.5 Geometry and measurement.

The student applies mathematical process standards to classify two-dimensional figures by attributes and properties. The student is expected to classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties.

## Materials Needed

- Origami paper
- Book: Easy Origami by John Montroll (to show/demonstrate easy folding techniques)

## Vocabulary

**Quadrilateral** a four-sided polygon, like a square, rectangle, or rhombus.

**Parallelograms** a four-sided polygon with opposite equal acute angles, opposite equal obtuse angles, and four equal sides

**Trapezoid** a quadrilateral with only one pair of parallel sides.

**Right Angle** an angle of  $90^\circ$ , as in a corner of a square or at the intersection of two perpendicular straight lines.

**Acute Angle** a small **angle** which is less than  $90^\circ$ .

**Obtuse Angle** an angle that has a measurement greater than 90 degrees but **less than 180 degrees**.

**Perimeter** the border or outer boundary of a two-dimensional figure; the length of such a boundary.

## Student Objectives

1. The students will be able to learn and appreciate the history behind the Origami Paper Crane and how origami originated in Japan.
2. The students will learn how to fold a paper crane using the mathematical terms:
  - a) Angle types: acute, obtuse, right
  - b) Quadrilaterals
  - c) Parallelograms
  - d) Types of triangles
  - e) polygons

## Activity

1. The teacher will read the story of Sadako and the 1,000 Paper Cranes.
2. Discuss that origami is an ancient Japanese art of folding paper.
3. Explain to students that this art includes precise folding techniques that incorporate math terms.
4. Teacher will go over vocabulary and examples of each term by drawing on the board or showing picture examples by using google.
5. Every student will receive a piece of origami paper as the teacher models each step of how to make a paper crane.
6. Teacher may wish to show the youtube video, by pausing each step and using the mathematical terms during this process.
7. Students will display all the cranes in the hallway with an explanation of what the cranes represent.
8. As students are folding paper, you can play this relaxing, Japanese music:

<https://youtu.be/DkW1iTyS8dk?list=LLVvVo67771YoRGL9vksdVw>

Ask: how did this music make you feel? Were you able to focus more on your task?

## Extension

Students can research the history of Peace Day (August 6) and can write a letter to a family member explaining what Peace Day is and what the significance of the paper crane is. Students can encourage others to observe this day by teaching a fellow classmate or family member how to make a paper crane.

