



## Diamond Fold: Accordion Variation

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*This lesson plan outlines the accordion variation of a diamond fold book. This book form has a linear form and easily supports teaching linear content like the number line, historical timelines, and plotlines of books. There are many other variations of diamond fold books that can be made depending on how you glue together your folded paper squares and how many squares you glue together.*

**Grades/Age Group:** K-12

**Approximate Time Required:**

Prep: 30-45 minutes

Teaching: 10 minutes

Making the Book: 20-60 minutes or longer depending on age and the depth of information students write in the book

**Materials Needed:**

5 pieces of 8 ½ in. square text-weight paper

2 pieces of 4 ¼ in. square cover-weight paper

**Prep Instructions:**

1. Cut text-weight paper to 8 ½ in. squares: 5 per person. You can cut down 8 ½ X 11 in. copy paper, or use origami paper which is already square.
2. Cut cover-weight paper to 4 ¼ in. squares: 2 per person. You can use cardstock, tagboard, or any recycled mat or cardboard. These will be used for the covers.

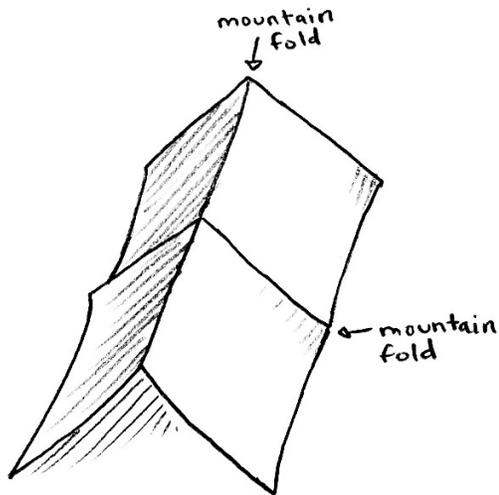
**Teaching Overview:**

Materials needed:

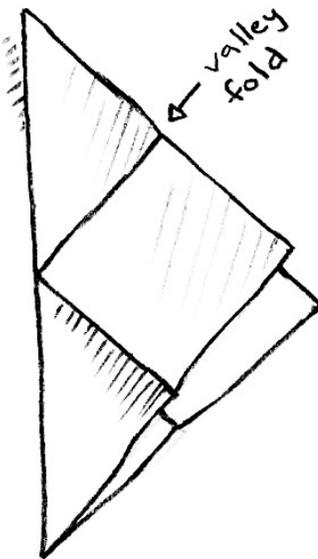
1. Pre-cut paper
2. Glue sticks
3. Writing and drawing materials

Procedure:

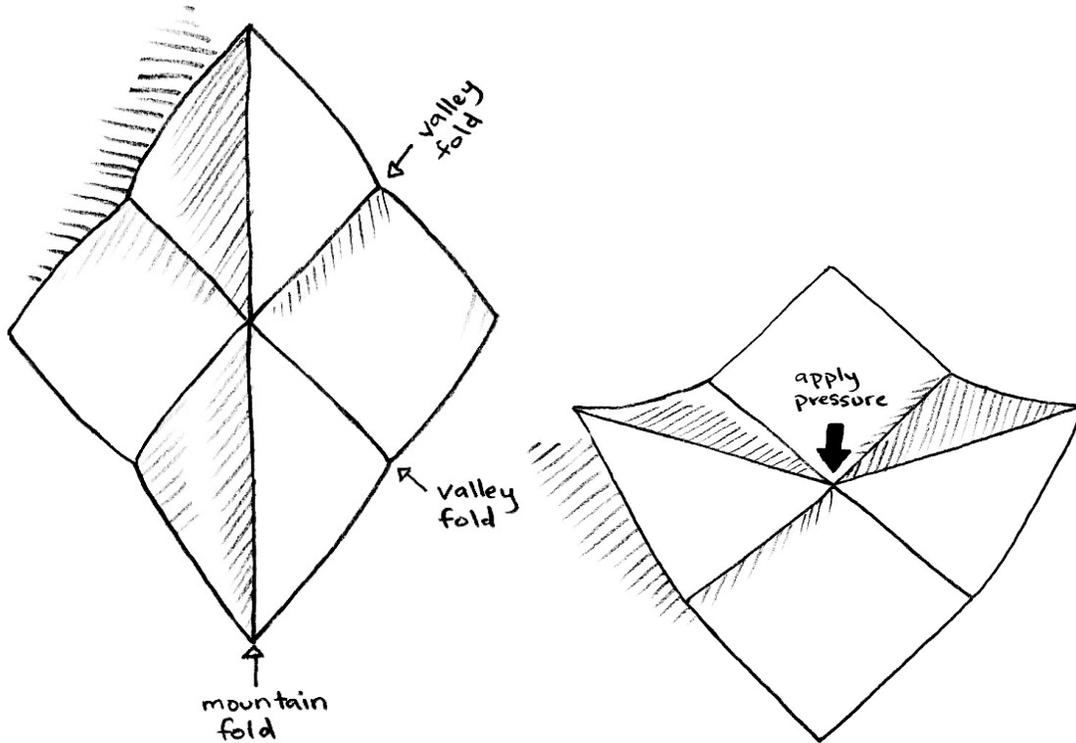
1. Each student gets 5 pieces of 8 ½ in. square text-weight paper.
2. The 8 ½ in. pieces are all folded in the same manner as outlined in steps 3-6:
3. Fold paper in half both ways, with the two folds on the same side. The two folds you just made will both pop up, making what looks like a mountain (see diagram on following page).



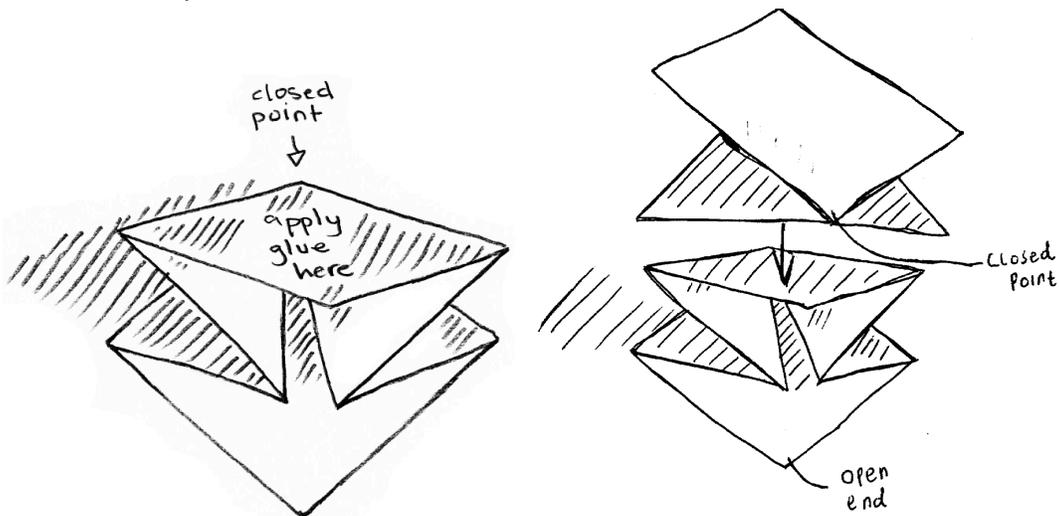
4. Fold in half diagonally on the *opposite* side of the two folds made in the previous step. The first two folds you made in step 3 will now look like a valley.



5. Open folds you just made so it stands as a mountain fold on top. Apply pressure with finger to the very center to *pop* the paper (see diagram on following page).



6. Gather the square and close it. There will be a *closed point*, and an *open point* on each folded square.



7. Put glue on the outside of one of the folded squares. Then press it to the outside of another of your folded squares so that the closed point aligns with the open end of the folded square. Continue until all folded squares are glued in a stack alternating so that all open ends are aligned with closed points and vice versa. Then glue covers to the front and back of the book. When open, the book will unfold like and accordion.



## ***Diamond Fold Accordion Variation – Lecture Overview:***

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### **Key Points:**

1. Books can come in many forms that can present information in different ways.
2. Students are creating a book that stores information in linear format.

### **Learning Objectives:**

1. Students will increase their dexterity skills by folding and gluing accurately.
2. Students will learn content knowledge through book making.

### **Examples of Common Core applications:**

#### *Math:*

- 5<sup>th</sup> grade math. Objective: Understand the place value system. Perform operations with multi-digit whole numbers and with decimals to hundredths. Application: Have students make a book that shows how decimals work.
- Kindergarten math. Objective: Know number names and the count sequence. Application: Have students make a book that counts from one to ten by drawing numbers, writing out the name of numbers and drawing objects to correspond with the number written (One cat, two dogs, three birds ect.).

#### *Science:*

- 9-12 grade earth science. Objective: Describe both the big bang theory of universe formation and the nebular theory of solar system formation and evidence supporting them. Application: On each new section of the book have students draw and write information about the stages of the big bang and the formation of the solar system.
- 2<sup>nd</sup> grade science. Objective: Second Grade: Identify basic needs of living things (plants and animals) and their abilities to meet their needs. Application: Have students make this book and draw and write about what animals and plants need to live.

#### *Language Arts:*

- 6<sup>th</sup> grade language arts. Objective: Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. Application: Have students write quotes from the text on each page of the book to show support for central ideas or themes within a text
- 8<sup>th</sup> grade language arts: Objective: Explain how an author develops the point of view of the narrator or speaker in a text. Application: Have students read a novel, short story, or poem that is told from multiple points of view. On the different panels of student's accordion book have students draw pictures of the different characters and write information about how the author develops their point of view.



*Social Studies:*

- 9-12 Utah Studies. Objective: Students will understand the diverse ways people make a living in Utah. Application: Have students interview community members about how they make a living. Have each student make one page of the accordion book with a picture of the person they interviewed and information from the interview. Combine all of the pages to make a class book.
- 6<sup>th</sup> grade social studies. Objective: Students will understand the transformation of cultures during the Middle Ages and the Renaissance and the impact of this transformation on modern times. Application: Have students research an aspect of the Middle Ages or Renaissance. Have them fill their accordion book with drawings and information about their research topic.