

DRAWN, CUT & LAYERED: THE ART OF WERNER PFEIFFER

Parent and Teacher Resource: Fold a Flexagon



Werner Pfeiffer (German-American, born 1937), *Zig Zag*. Paper construction, 2010.

About Werner Pfeiffer

For more than 50 years, Werner Pfeiffer (German-American, born 1937) has experimented with the multiple uses of paper as both a canvas and a structural material. Much of his work as a sculptor, printmaker and painter suggests a fascination with machines and machine-like constructions. His drawings are schematic, his dimensional works project into space claiming their own territory and his complex artist books have moving parts. He is fascinated by puzzles and contradictions, metaphors and wordplay, and this curiosity serves in turn to inspire works that are thought-provoking in themselves. A prodigious artist, Pfeiffer's works on paper have been shown and collected internationally.

About this resource

This resource will provide everything you need to create a flexagon similar to the constructions created by Werner Pfeiffer. Pfeiffer used a double accordion fold structure reminiscent of a flexagon for his book *Zig Zag*; he used a different flexagon form for his book *Abracadabra*. Both can be viewed in the exhibition *Drawn, Cut, & Layered: The Art of Werner Pfeiffer*, on view at the Museum from February 6, 2015- May 3, 2015.

This resource, inspired by *Zig Zag* (2010) outlines the process of creating a **flexagon**, a folded paper construction with moving parts.

How to use this resource:

Step 1: Print out the instructions and one template for each student.

Step 2: Read through the instructions carefully.

Optional: before folding, have students use crayons or colored pencils to decorate the triangles and diamonds on the flexagon template.

Step 3: Guide your students through the process of folding and assembling the flexagon

This activity is meant for use at home or in the classroom. To see the exhibition *Drawn, Cut, & Layered: The Art of Werner Pfeiffer*, please visit the Museum Tuesday through Sunday or schedule a tour. Visit <http://www.toledomuseum.org> to learn more.

Elements of Art

Line: A continuous mark with width and height, but no depth, made with a moving point.

Shape: An enclosed area defined by other elements of art, such as line or color.

Color: The full visible light spectrum (rainbow) and black and white, plus all possible combinations.

Space: The area around or within objects; the arrangement of components on the surface.

Texture: Refers to the tactile quality of an object, whether real or perceived.

Principles of Design

Emphasis: The point or points of focus in a composition.

Balance: Relates to the sense of visual equilibrium in a work of art; how components of an image are arranged around a focal point.

Proportion: The relative scale of objects and shapes in an image to one another and to the viewer.

Harmony: The way the elements work together to create an overall appealing effect.

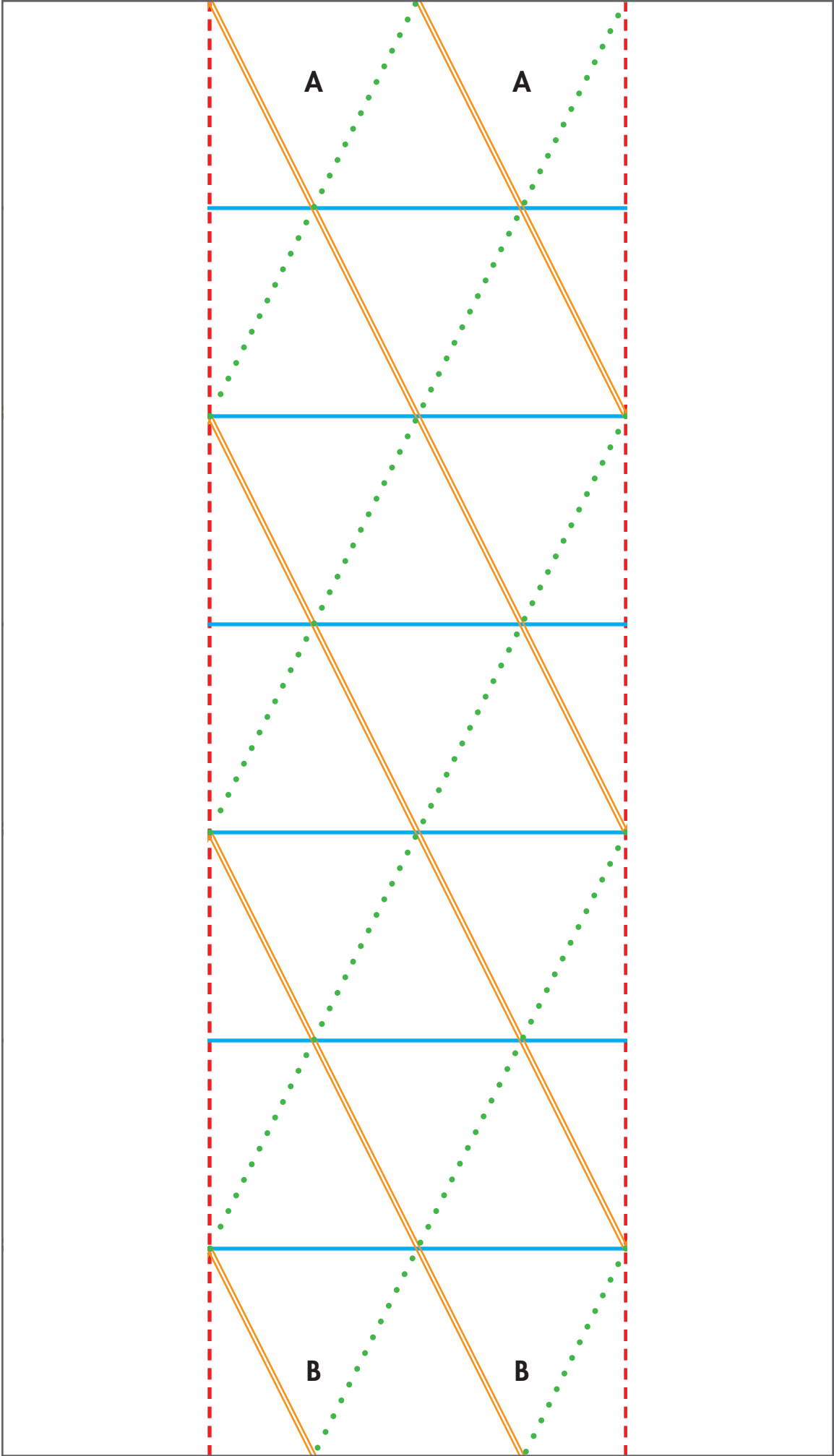
Rhythm: The path along which the eye follows a regular or repeating arrangement of motifs (such as colors or shapes) around a composition.

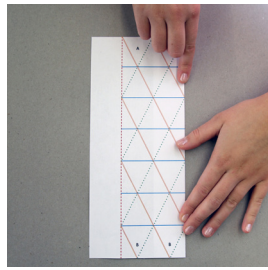
Movement: The way shapes, lines, colors and forms direct the eye around a composition or interact with each other to suggest motion.




Variety: The use of different, often contrasting, elements that provide visual interest.

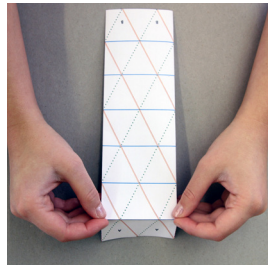
Unity: The wholeness that is achieved through the effective use of the Elements of Art and Principles of Design.



Flexagon
Template

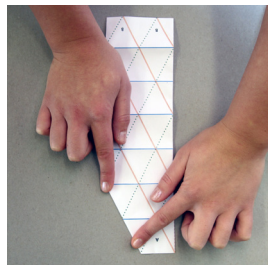






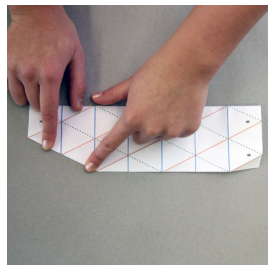
1. Mountain fold  along the dotted red lines.  







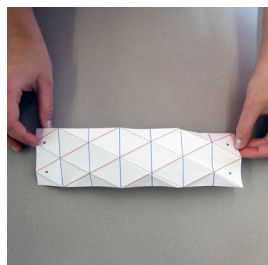
2. Mountain fold  and unfold all of the horizontal blue lines  to create defined creases.



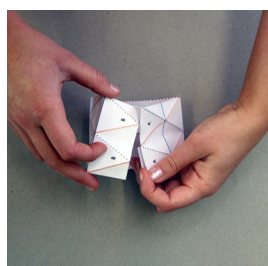
3. Mountain fold  and unfold all of the diagonal, double orange lines  to create defined creases.



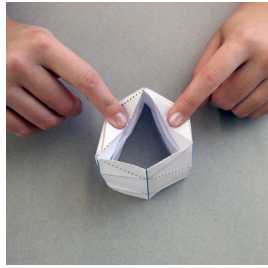
4. Mountain fold  and unfold all of the diagonal, dotted green lines    to create defined creases.



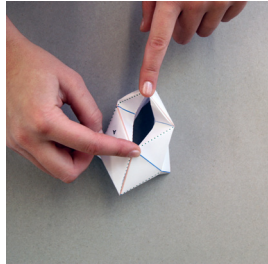
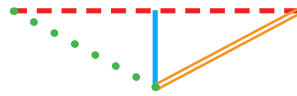
5. Your template should look like this so far.



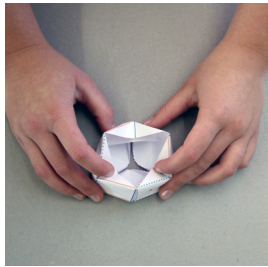
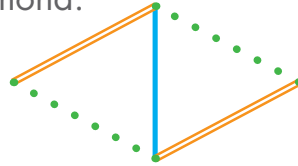
6. Interlock by inserting section **B** into the fold of section **A**.



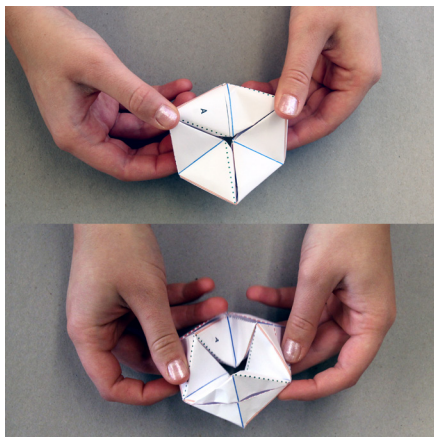
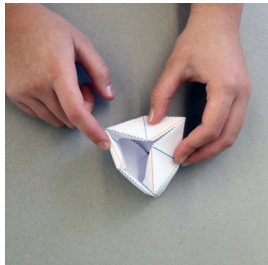
7. Place the interlocked paper on the table, and press down each half diamond.



8. Press down, and fold inward each whole diamond.



9. Flip the paper upside down and repeat steps **7** and **8**.



10. Now you have a flexagon! To move your flexagon, ensure all folds are well creased and rotate inward from the back toward the center.

