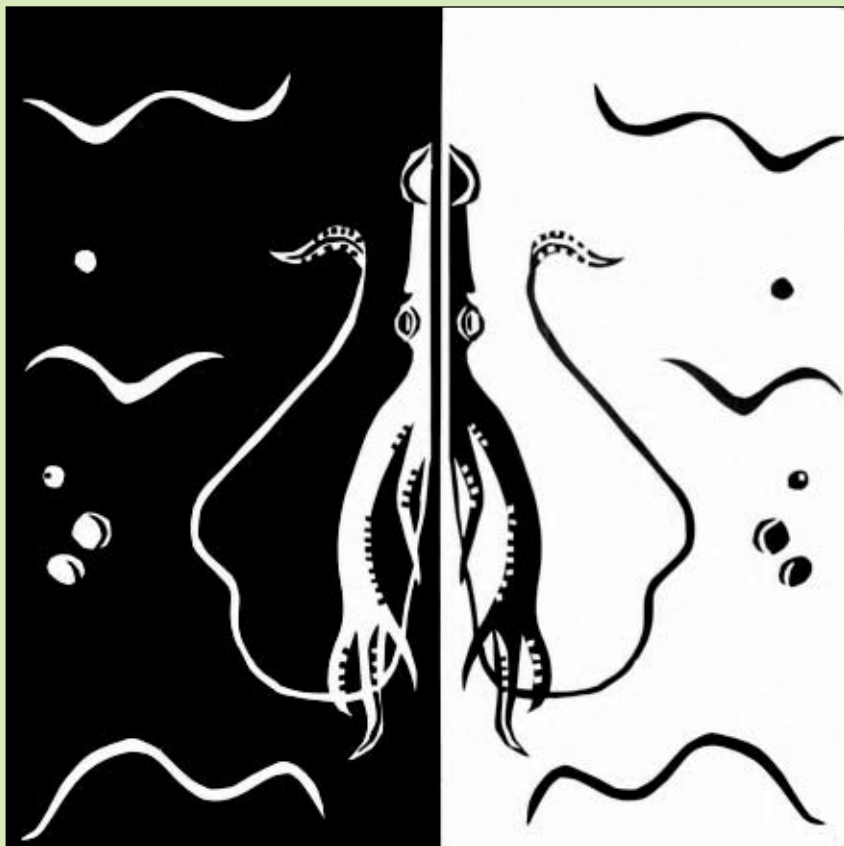


# VISUAL ANALOGS

A design analog is a visual image or construction that looks similar to an object in terms of its form.



*Nature* by Ernst Haeckel as a springboard for creating abstract visual analogies. They were asked to simplify and stylize naturalistic images after we showed them a presentation on abstraction. Our main objectives were to introduce figure/ground relationships, symmetry, and variety, while providing natural connections between design and math concepts.

## Visual Analogs

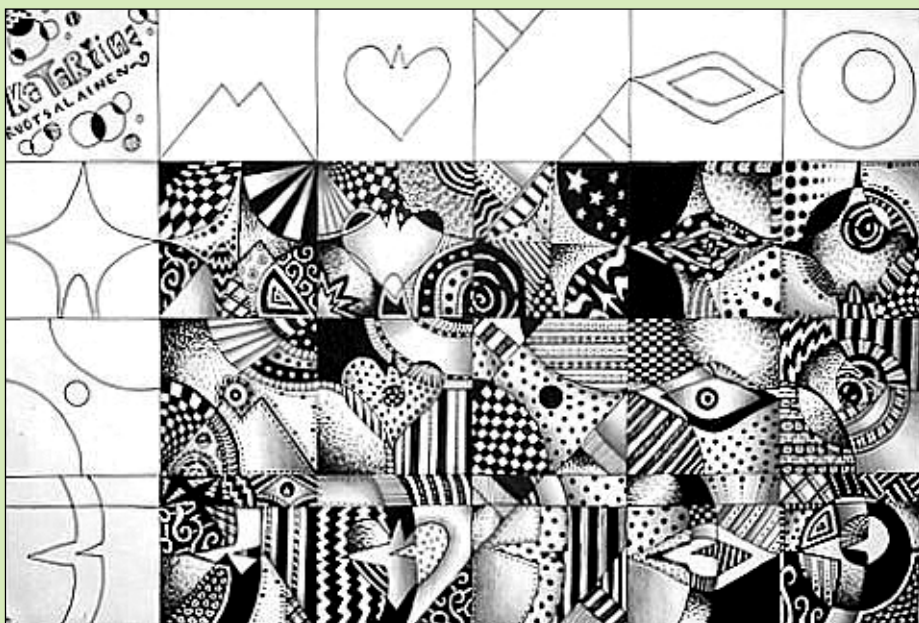
Students began by choosing a picture that showed line or mirror symmetry and that had enough potential to produce a variety of interesting shapes. Next, they covered half of a piece of black 11 x 11" (28 x 28 cm) four-ply railroad board with 80 lb. white sulphite paper. We used white glue. The actual positive and negative shapes were made with black construction paper and the white sulphite paper.

Students were asked to cut out large shapes first and then progress to smaller, more intricate shapes. Every shape that had been cut out in black

**Faith Jessup, Lisa Lipscomb, and Ricardo Ramirez**

**A**s three art teachers at the same high school, we are fortunate to work closely with our students. We have developed and implemented a sequence of design lessons we have found to be quite successful. They begin with ideas from the inventive use of design principles in Nicholas Roukes' *Design Synectics*. Roukes uses the term *synectics*, from the Greek word for "bringing different things into unified connection," in relation to design. According to Roukes, a design analog is a visual image or construction that looks similar to an object in terms of its form.

Our students used realistic nature illustrations from *Art Forms in*





was also cut out in white. This was easy to do, because they just used the first shape as a template for the one in the opposite color. The white glue made the paper a little wrinkly, but a couple of heavy books flattened them.

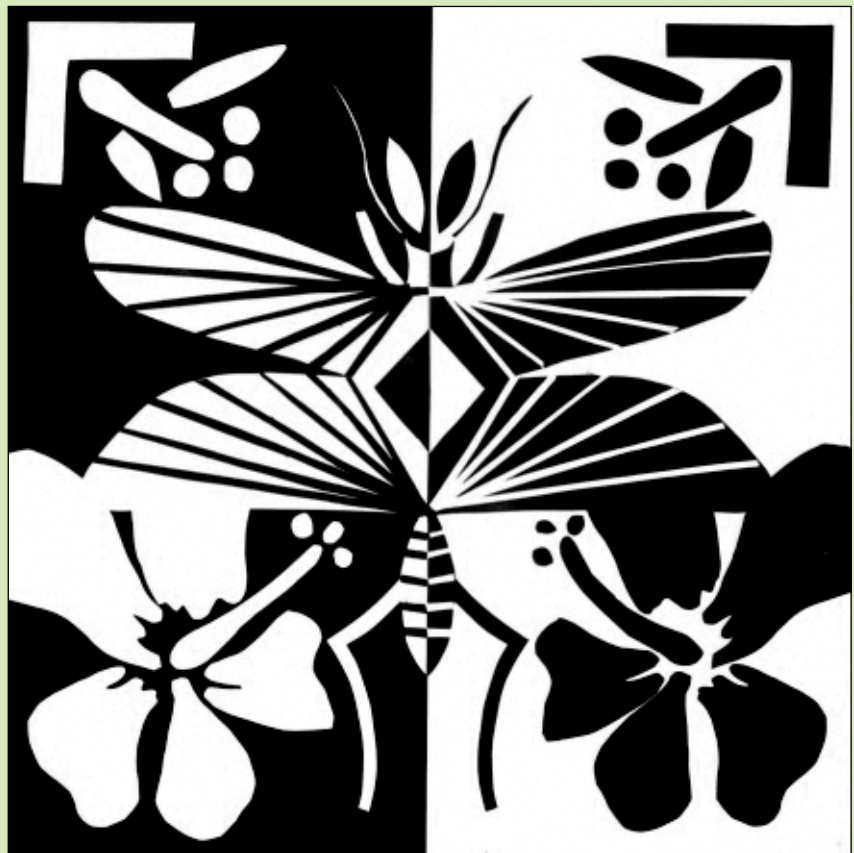
### Design Multiplication

We switched gears from symmetry to asymmetry in this project. Each student divided a piece of 12 x 18" (30 x 46 cm) four-ply white railroad board into 3" (8 cm) squares. This was a chance for them to use measurement skills and it took some of them a surprisingly long time to do this task. The top left square was left blank.

They made very simple designs across the top and down the side in pencil (five designs across the top and three down the side). Next, they repeated their designs horizontally and vertically so that they overlapped to create new, complex designs. They did worksheets first so that they could see how complex the combined designs would become. We really had to stress simplicity in the top and side designs.

After all of the designs were drawn in pencil, the creative part really started. The students were directed to turn each square into a mini-masterpiece that showed dynamic equilibrium. We used fine point and ultra-fine point black markers. They could leave some parts of the 3" (8 cm) square white, color in some of them solid black, and create value using lines of varying thickness or dots (stippling).

Mr. Ramirez's pre-AP students stretched the assignment by shading some of the squares with pencil. The students went over all of the pencil lines with an ultra-fine point marker and any stray lines were erased. The top left square was left for the students to make creative designs with their names.



### In Conclusion

We think that one of the reasons that these assignments were so successful is that the three of us (and our students) were continually coming up with creative ideas to stretch the parameters that we had made. Our collaboration has helped to maintain our interest in the projects and it has certainly benefited the students. ☺

### Resources

Haeckel, Ernst. *Art Forms in Nature*, Dover Pictorial Archives, 1974.  
Roukes, Nicholas. *Design Synectics*. Davis Publications, 1988.

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### NATIONAL STANDARD

*Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.*

### WEB LINKS

[www.nicholasroukes.com](http://www.nicholasroukes.com)