01

20 Ball Pyramid Puzzle "Twinten"

Puzzle Goal: **Make a 20 ball pyramid.**

Materials: Dogwood

Classification: Put-together

02

3D Silhouette H

Puzzle Goal: **Assemble the pieces in a free-standing arrangement so that in three directions the silhouette is an H-shape.**

Materials: Padauk

Classification: 3D Assembly

03 A Chance Meeting

Puzzle Goal: **Find the secret compartment.**

Materials: Oak, Purple Heart

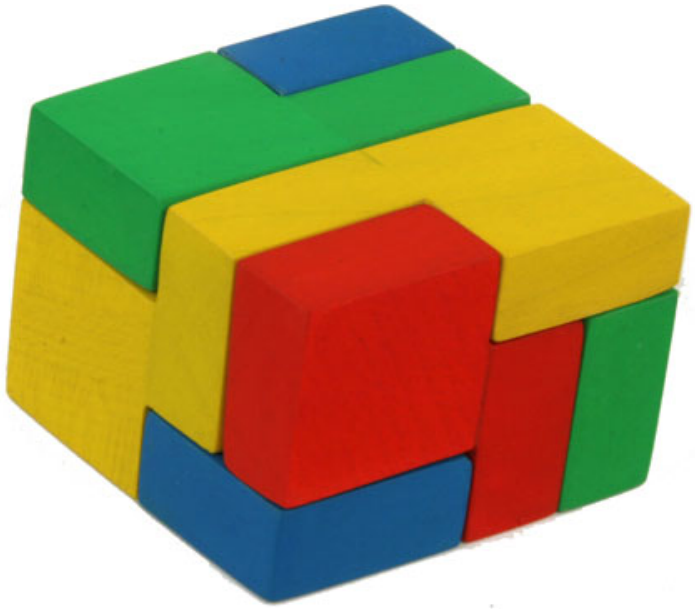
Classification: Trick opening

04 Albis Diamond

Puzzle Goal: **Put the 4 different pieces together to form a rhomboid (diamond).**

Materials: Wood

Classification: 3D Assembly



05

Anorexic Cube

Puzzle Goal: **Build a stable "cube" using the eight identical parts.**
Also, balance the figure on an edge.

Materials: Stainless Steel

Classification: 3D Assembly

06

Bolt in Bolt

Puzzle Goal: **Separate the ring from the bolt.**

Materials: Polished Iron

Classification: Take-apart

07

Box in Box

Puzzle Goal: **Find the secret compartment.**

Materials: Katura, chanchin

Classification: Secret opening

08

Box with a Tree

Puzzle Goal: **Find the secret compartment.**

Materials: Walnut, oak, acrylic board

Classification: Trick opening

09

Bump cube

Puzzle Goal: **Mix up, then restore the cube.**

Materials: ABS and Polyurethane resin

Classification: Rotating Cube

10

Cock-A-Doodle-Doo

Puzzle Goal: **Find the needle in the haystack.**

Materials: Wood, hay

Classification: Hidden Object

11

Cover it Up

Puzzle Goal: **Arrange the four dark wood pieces so that the seven light wood pieces cover all of the dark wood. The dark pieces are to lie flat and not overlap.**

Materials: Wenge and Yellow heart

Classification: Put-together

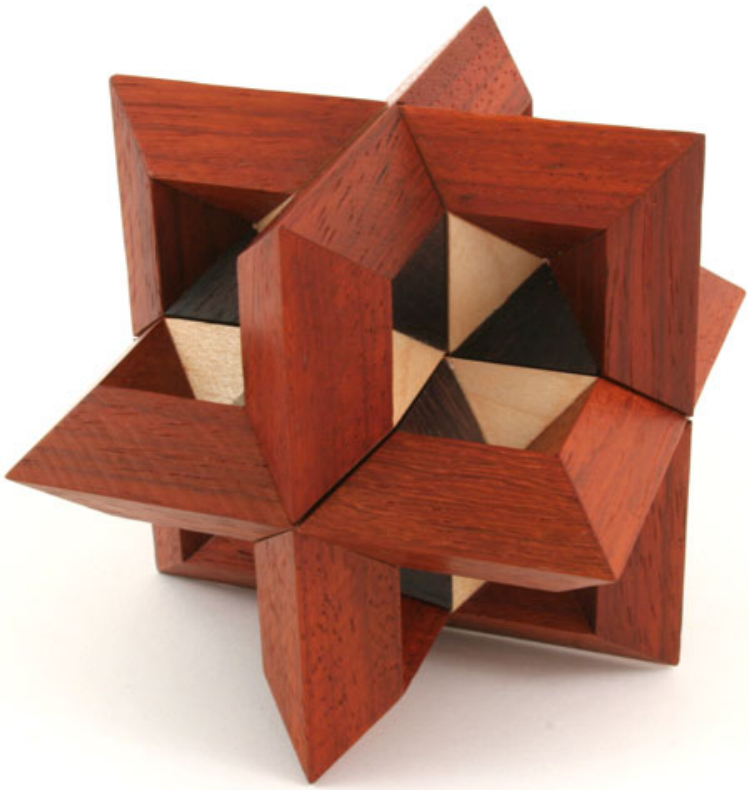
12

CrossWindows

Puzzle Goal: **Assemble the six pieces to form the pictured solid.**

Materials: Palissander, maple, padauk

Classification: Interlocking Solid



13

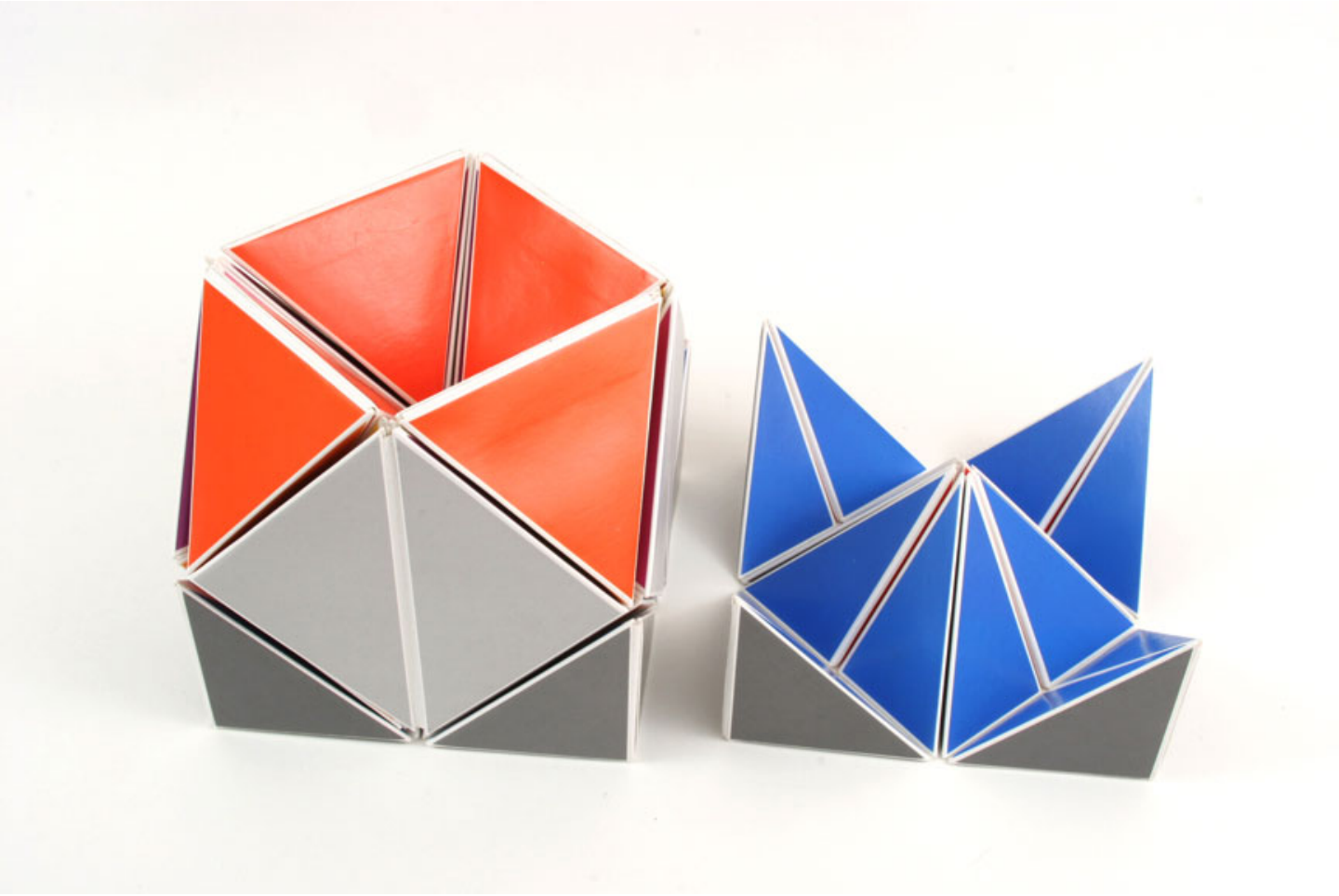
cube one

Puzzle Goal: **1. Form the two pairs of platonic solids: two octahedra and two tetrahedra.**

2. Put them together to form a cube (three variations).

Materials: Stiff cardboard

Classification: Take-apart, Put-together

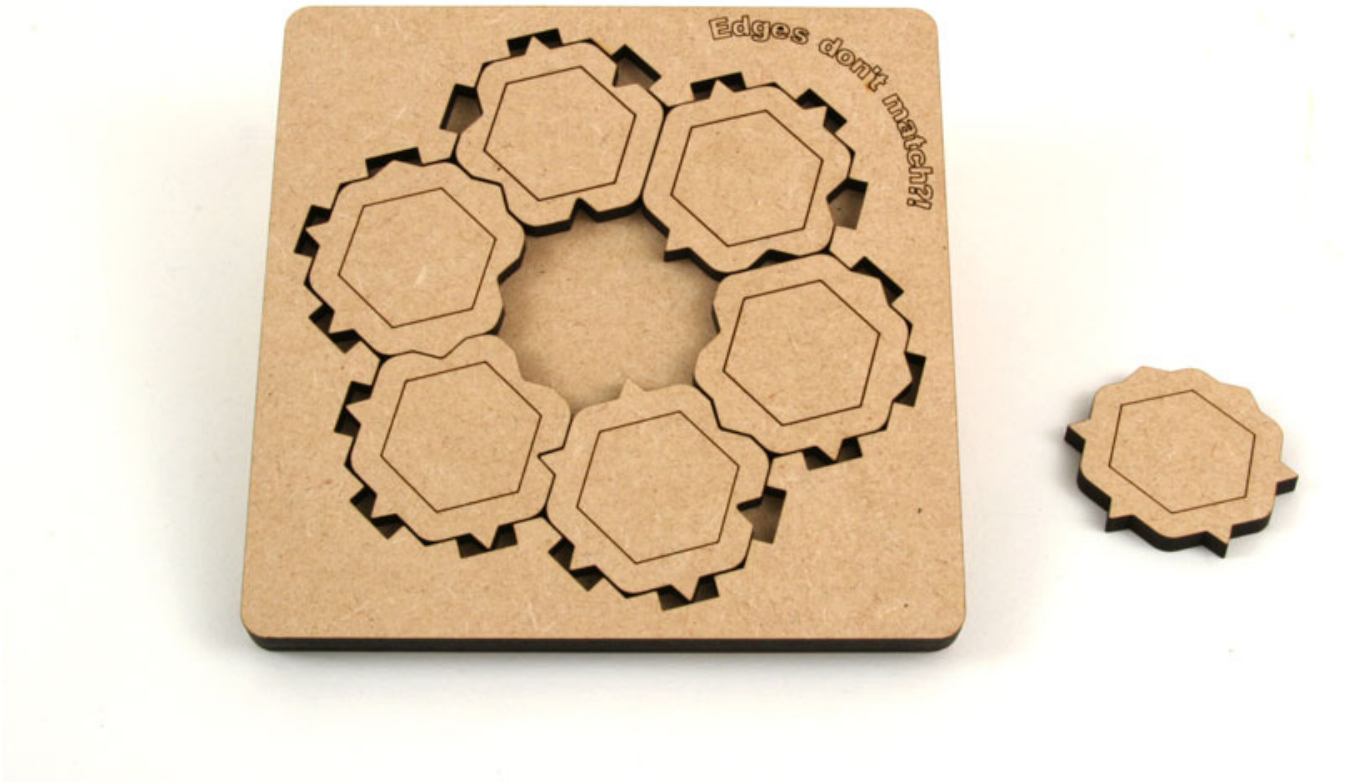


14 Edges Don't Match?!

Puzzle Goal: **Place the pieces in the tray with all pieces facing up.**

Materials: Laser-cut MDF

Classification: Edge-matching



15

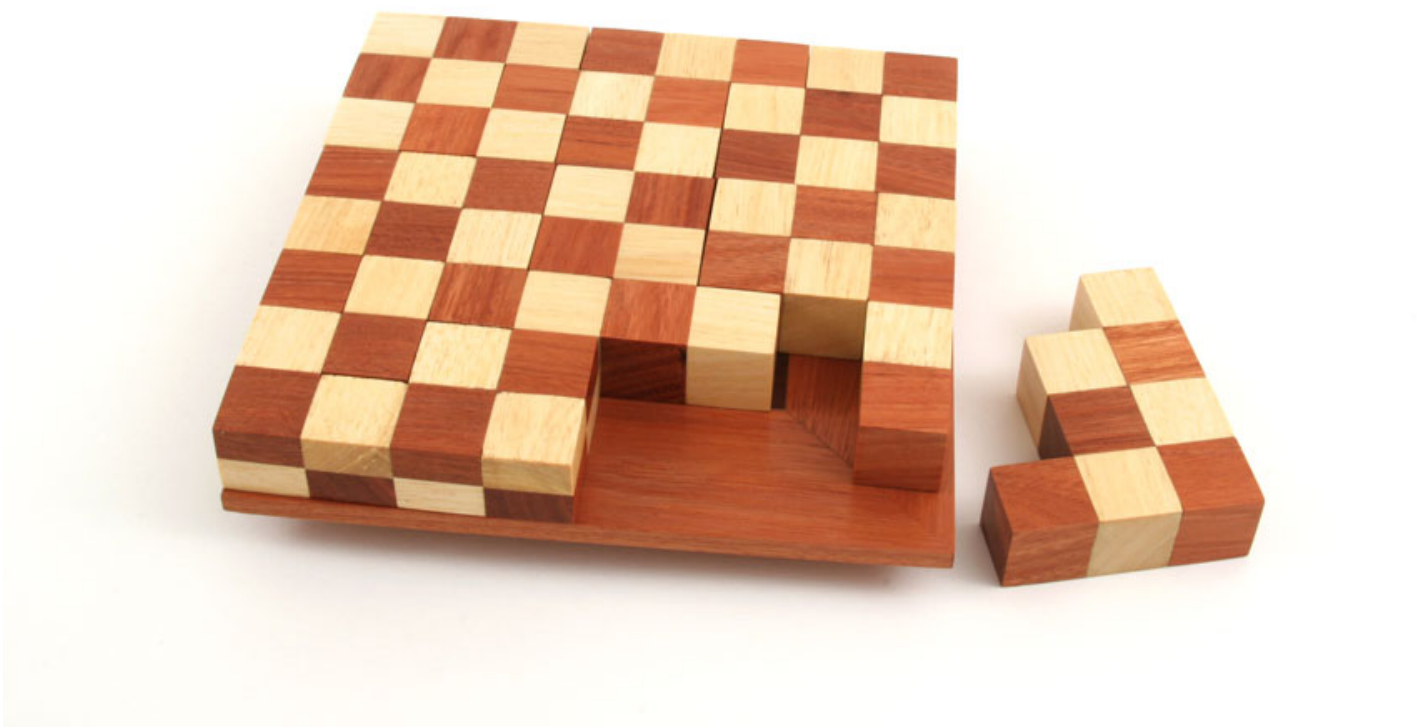
Eureka Puzzle

Puzzle Goal: **Put the 8 pieces in an 8x8 array in checkerboard pattern. Pieces may be turned over.**

The 8 pieces will also make a 4x4 cube in the square on the raised side of the base (it does not assemble in a checkerboard pattern).

Materials: Blue gum, silver ash, jarrah (base)

Classification: 2D/3D Assembly



16 Ezekiel's Wheel

Puzzle Goal:

The objective of the puzzle is to disassemble the Triple Linked Torbus and assemble each Torbus separately.

Then reassemble the "Ezekiel's Wheels" puzzle.

An interesting variation for any of the Torbus or segmented Toroid puzzles is to add a small Toroid

Materials: Wood

Classification: 3D Assembly

Notes: The spiral cut is made by rotating the cross section one half a degree as the Toroid turns one degree. By making, two such parallel cuts (one on either side of the toroid cord) a Mobius ring emerges from a Torus. I call this geometric form a Torbus.

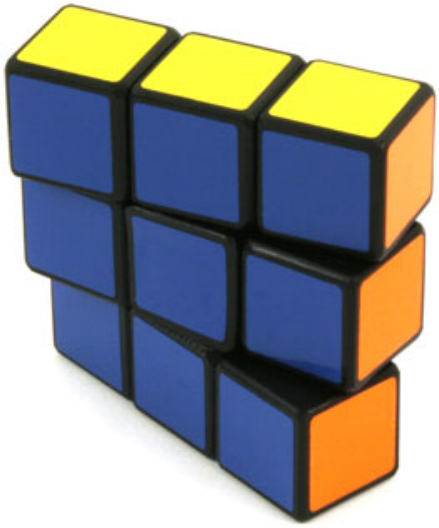
17

Floppy Cube

Puzzle Goal: **Scramble first, then restore all faces, like Rubik's Cube.**

Materials: ABS resin, POM

Classification: Rotating Cube



18

Hurly Burly

Puzzle Goal: **Take apart and then put together.**

Materials: ABS 3D print

Classification: Interlocking solid

19

Ichigo Shortcake

Puzzle Goal: **Find the secret compartment.**

Materials: Padauk, Dogwood, Zelkova, Maple

Classification: Secret opening

20

In Brackets

Puzzle Goal: **Take apart the trapped cube.**

Materials: Pine and mahogany

Classification: Take-apart

21

Integrity

Puzzle Goal: **Disassemble and reassemble.**

Materials: Maple and mahogany

Classification: Interlocking burr

22 Intersecting Truncated Tetrahedra

Puzzle Goal: **To dismantle and re-assemble the puzzle.**

Materials: American oak, pine

Classification: Interlocking solid

23

Jigsaw Ring

Puzzle Goal: **To remove the three jigsaw pieces from the ring.**

Materials: Sterling silver

Classification: Take-apart

24

Jukebox

Puzzle Goal: **Continue inserting disk in such an order that the red disks end up in the red tray at the left and the green disks end up in the green tray at the right. Notice the 2:1 switches. They only flip after inserting a second disk.**

Materials: Laser-cut walnut wood, cast tin, acrylic window, metal bolts, red and green felt

Classification: Sequential Movement

25

LES-Board-um

Puzzle Goal: **Put together the two-sided checkerboard.**

Materials: Brass, Plexiglas

Classification: 3D Assembly

26

Love Secret

Puzzle Goal: **Remove the rope ring from the heart.**

Materials: Stainless steel, rope

Classification: Disentanglement

27

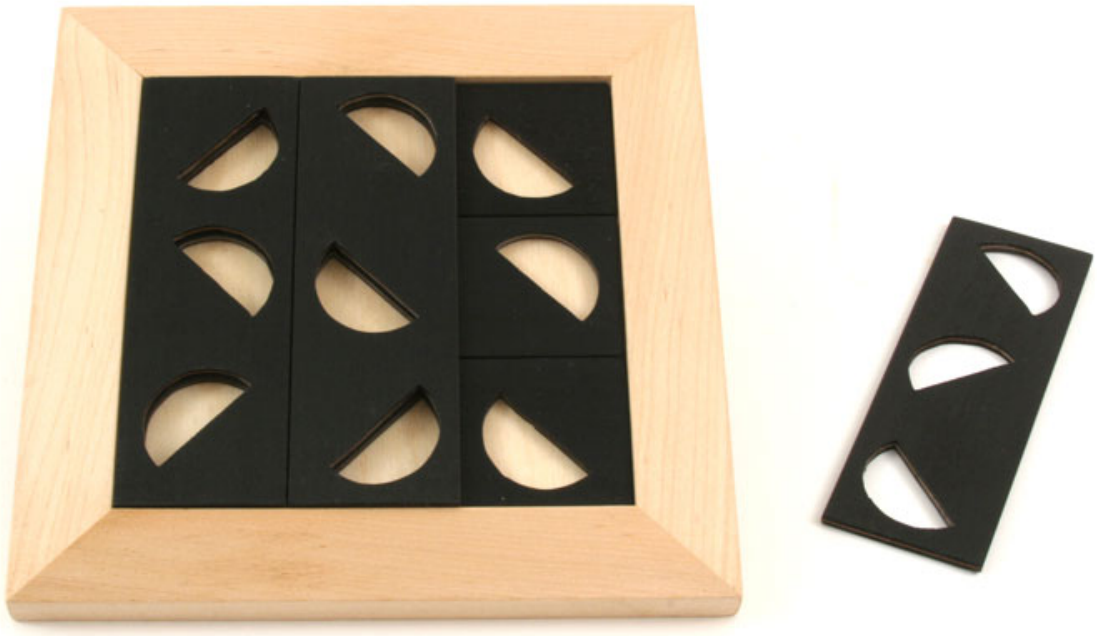
Nine Halves

Puzzle Goal: **1. Put the pieces in the tray so you have all nine halves closed and you do not see the bottom.**

2. Put the pieces in the box so you have all nine halves open.

Materials: Maple and plywood

Classification: Put-together



28

NZanity

Puzzle Goal: **1. Make a cube with each face a different color, and NZ appearing face up in the top row on all six faces.**

2. Make a cube with four colors on each face, the with the NZs in the same arrangement as 1.

Materials: Wood

Classification: Misc. Put-together

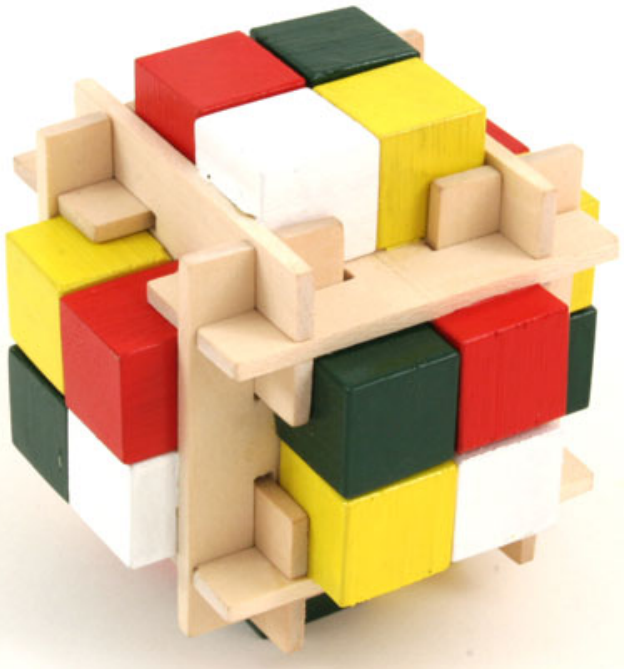
29

Orthogenesis

Puzzle Goal: **The object is to assemble the pieces into a cube so that each face contains one block of each color.**

Materials: Painted wood

Classification: 3D Assembly



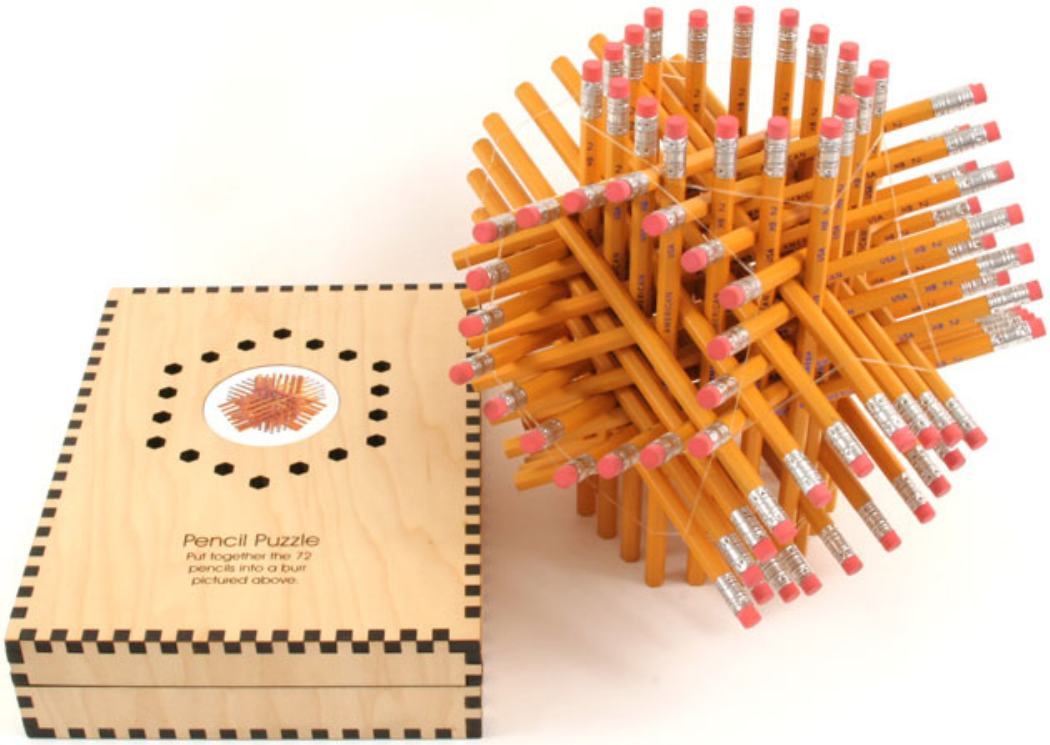
30

Pencil Puzzle

Puzzle Goal: **Assemble the pencil arrangement shown.**

Materials: 72 pencils and rubber bands

Classification: 3D Assembly



31

Pentangular Jam

Puzzle Goal: **From the starting position (shown), slide the pieces so that the colored piece can exit the tray through the slot in the front of the tray.**

Materials: Wood and MDF

Classification: Sequential Movement

32

Polymorphic 12

Puzzle Goal: **Put the pieces in the tray so that 12 different colors are visible.**

Materials: Painted wood

Classification: 2D Assembly

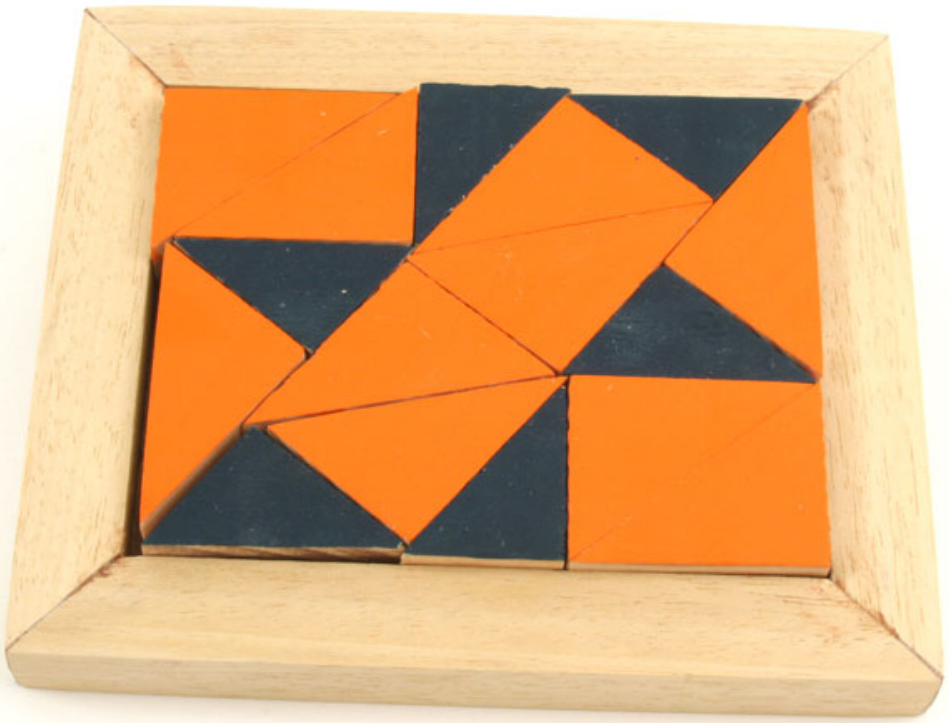
33

Polymorphic 16

Puzzle Goal: **Find all the arrangements of the 16 pieces (10 orange and 6 blue) that will fit in the tray.**

Materials: Painted wood

Classification: 2D Assembly



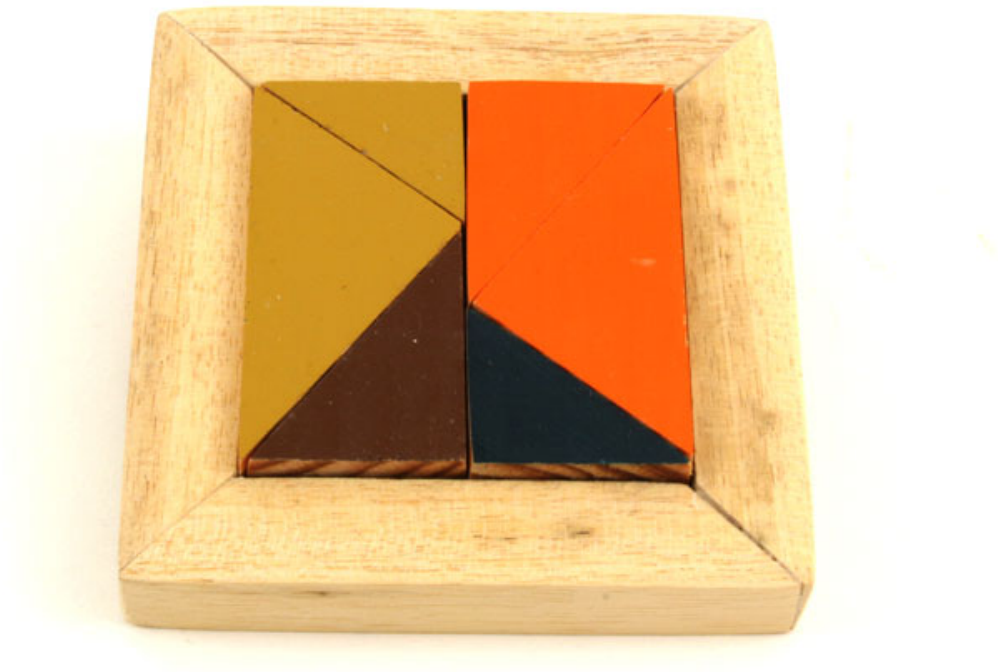
34

Polymorphic 6

Puzzle Goal: **Put the pieces in the tray so that 6 different colors are shown.**

Materials: Painted wood

Classification: 2D Assembly



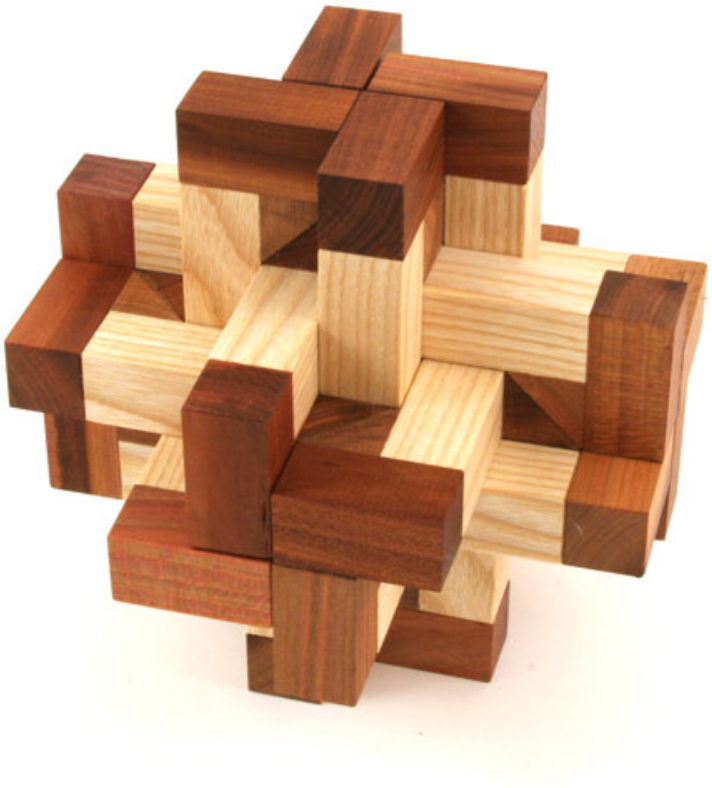
35

Procross

Puzzle Goal: **Take apart and put together.**

Materials: maple, plum

Classification: Interlocking solid



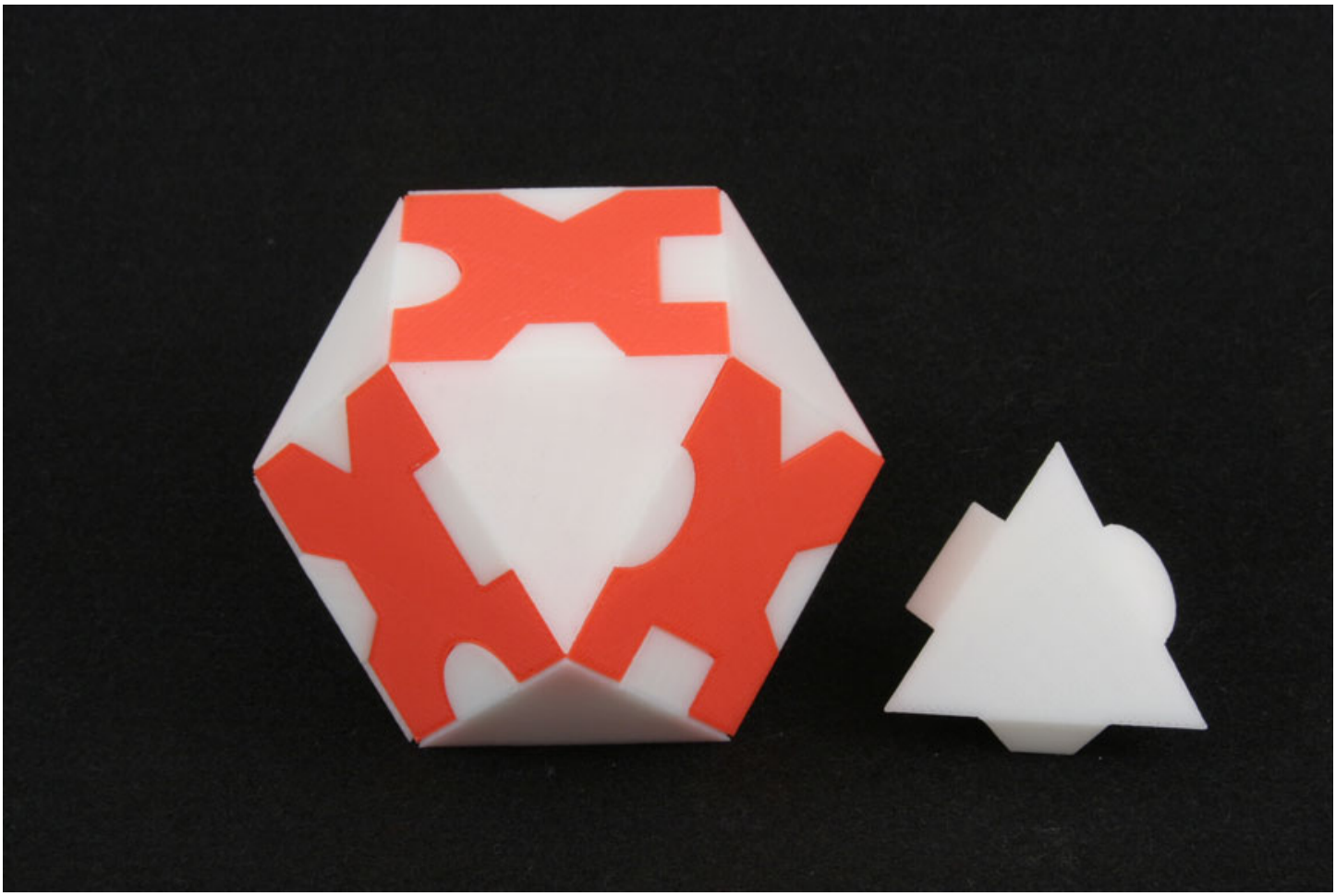
36 Pyramid Power

Puzzle Goal: **Take apart and then put together.**

Materials: ABS, steel and NdFeB magnet

Classification: Edge-matching

Notes: Using four edge patterns no more than once, there are 6 possible squares and 8 possible triangles. The pieces of this puzzle use each of these patterns.



37

Rescube

Puzzle Goal: **Release the inside shape from the cube.**

Materials: Pine and plywood

Classification: Sequential movement

38

Sequential Star

Puzzle Goal: **Disassemble and reassemble.**

Materials: Bois de rose, verawood, narrah, steel pins

Classification: Interlocking soli

39

Simple Three Piece Burr

Puzzle Goal: **Assemble three pieces into an interlocking burr. Absolutely NO FORCE is required.**

Materials: Cherry wood

Classification: Interlocking burr

40

Sliding Bar Puzzle Box

Puzzle Goal: **Open the box by operating the box's locking mechanism and sliding open the box.**

Materials: Purpleheart, walnut, padauk, yellowheart, cocobolo

Classification: Trick-opening

41

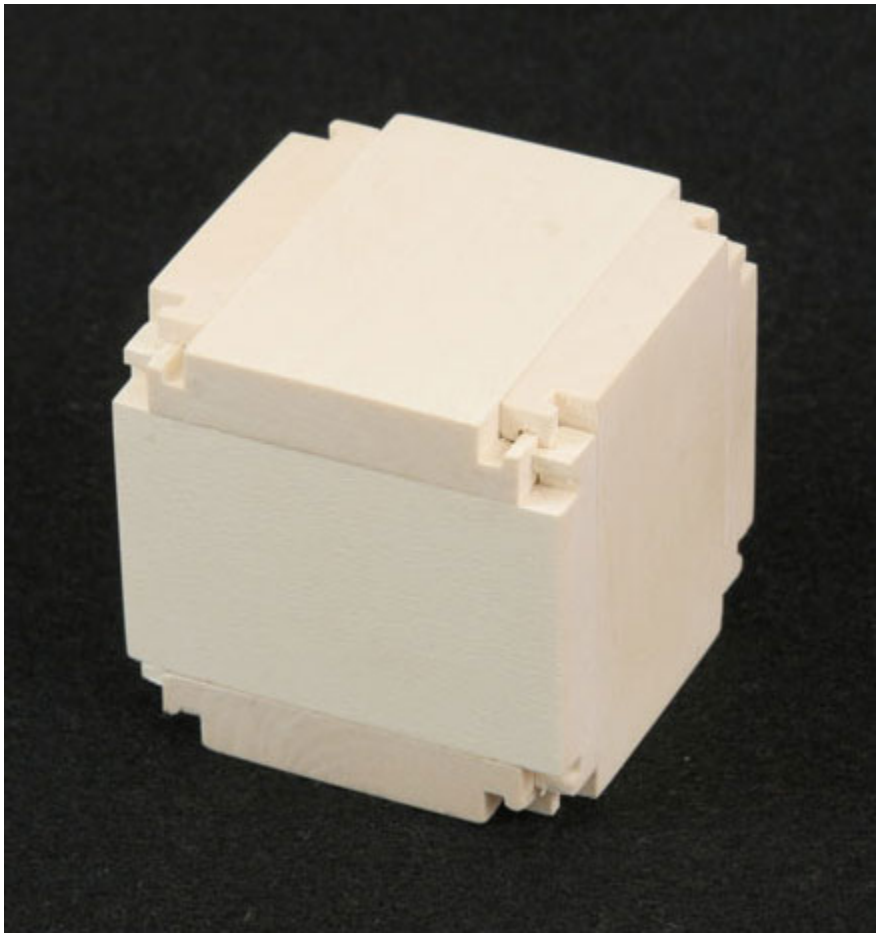
Snowflake

Puzzle Goal: **Open the box through seven sequential steps.**

As a secondary goal once the box is open, the entire box can be dismantled into its 6 individual pieces and reassembled back into a working puzzle box.

Materials: Holly

Classification: Take-Apart



42

Soleilla

Puzzle Goal: **Put the 5 identical pieces together to form a cylinder (sun) with 10 edges.**

Materials: Wood

Classification: 3D Assembly

43

Square Dissection

Puzzle Goal: **The puzzle is a wooden square, dissected into five pieces. The problem is to take the pieces apart, without breakage and then to re-assemble.**

Materials: Wood

Classification: Dissection/Interlocking

44

Square Ring

Puzzle Goal: **To disassemble the ring, and reassemble.**

Materials: Sterling silver

Classification: Take-apart

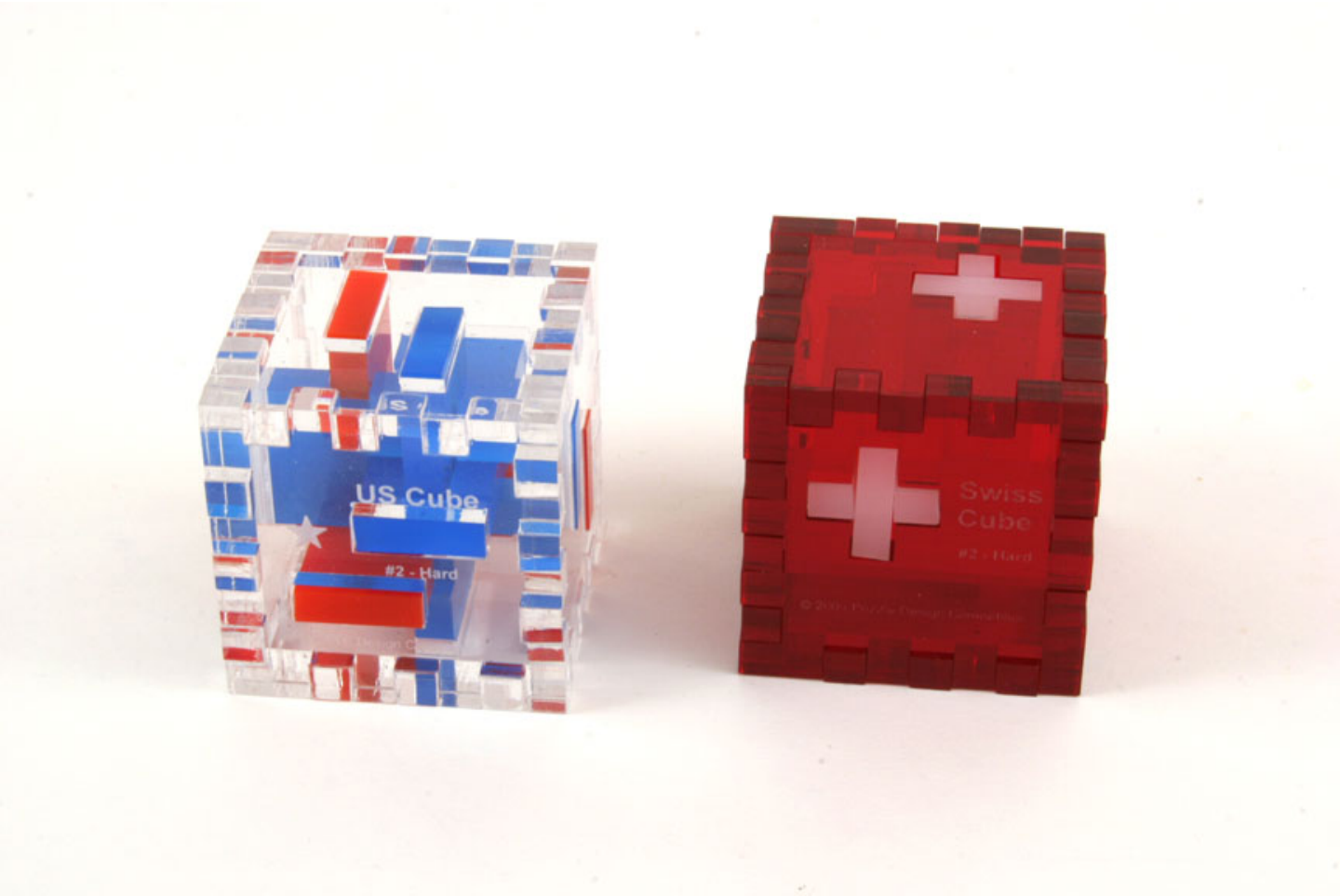
45 Swiss and US Cubes

Puzzle Goal: **The objective of the Swiss Cube is to remove the three Swiss cross pieces. For the US Cube it is to remove the blue and red pieces. Then put them all back into the cubes.**

Note: Don't try to take the cubes apart

Materials: Acrylic

Classification: Framed Burr



46

The Hill

Puzzle Goal: **Assembly the six pieces to form the polyhedral solid.**

Materials: Maple

Classification: Interlocking Solid

47

The Maze Burr

Puzzle Goal: **Solve the sequence to open up the Maze Burr, take it apart, and re-assemble it.**

Materials: Ebony, Cylon, Satinwood, Maple

Classification: Take apart

48

The Trouble With U

Puzzle Goal: **Remove the pieces and construct various shapes: a 4x4x4 cube, a 5x5x2 prism, an 8x4x2 prism, and a 7x4x2 prism.**

Materials: Exotic hardwood: pink ivory, kingwood, tulipwood, bois de rose, Macassar ebony, Ziricote, Chakte Viga, cocobolo, figured Tasmanian blackwood, African blackwood

Classification: 3D Assembly

49 Three Totally Trapped Sages

Puzzle Goal: **Remove the three pieces from the cubic structure, and reassemble the cube.**

Materials: Walnut and canarywood

Classification: Interlocking, framed burr

50

Three Trapped Sages

Puzzle Goal: **Remove the three pieces from the cubic structure, and reassemble the cube.**

Materials: Walnut and canarywood

Classification: Interlocking, framed burr

51

Toblerone Puzzle

Puzzle Goal: **Take the puzzle apart, eat chocolate, purchase new chocolate, re-assemble.**

Materials: Nut and hornbeam

Classification: Interlocking

52 Trick Domino Aligned

Puzzle Goal: **Mix up, then restore the cube.**

Materials: ABS and Polyurethane resin

Classification: Rotating Cube

Notes: Despite the 2x2x2 appearance, this is really a 3x3x2 Domino puzzle.

53 Trick Domino Twisted

Puzzle Goal: **Mix up, then restore the cube.**

Materials: ABS and Polyurethane resin

Classification: Rotating Cube

Notes: Despite the 2x2x2 appearance, this is really a 3x3x2 Domino puzzle, with the orientations of the top and bottom halves "twisted".

54

Triples

Puzzle Goal: **Assemble the 8x4x3 block.**

Materials: Wood

Classification: 3D Assembly