01

All Right - All Wrong

Puzzle Goal: **Arrange the pieces in four 4x4 squares, base square pieces with no holes, second layer with small holes, third layer with medium holes, and top layer with large holes. Two challenges:**

- **Match all the colors in each small square**
- **Four different colors in each small square**

Materials: MDF

Classification: 3D Assembly

02

Armadillo

Puzzle Goal: **Disassemble and reassemble the 3×3×3 cube.**

Materials: Beechwood, metal

Classification: Interlocking

03

Artefacts

Puzzle Goal: **Two challenges:**

- **Put the brass rod and the five wooden pieces flat into the tray.**
- **First, insert the brass rod in the hole. Then, put the five wooden pieces flat into the tray.**

Materials: Brass, wood (padauk, ebony, cherry, maple)

Classification: Put-together

04

Big Ben

Puzzle Goal: **Find Big Ben (a small bell). Along the way you will also find Queen Elizabeth's crown (small disk) and other useful objects. Reassembling the puzzle correctly (including setting the clocks to 9 o'clock) is part of the challenge.**

Materials: Papua New Guinean Rosewood

Classification: 2.1 Trick or Secret Opening

Notes: Use only the tools you find inside the puzzle.There are magnets and springs in the puzzle, but you do not need to hit this puzzle to release any locks.

05

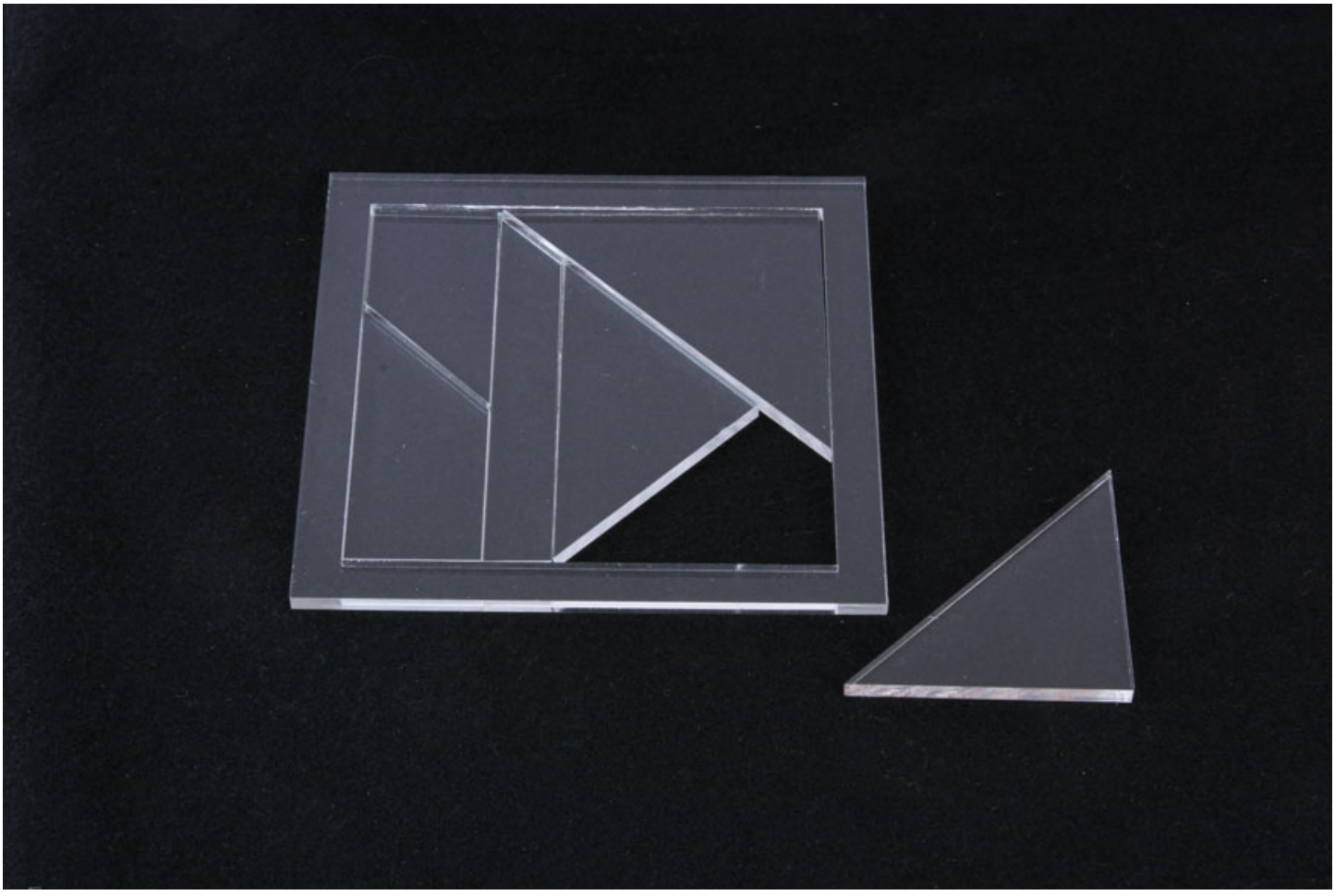
Big Conflict, Small Conflict

Puzzle Goal: **Fit all six pieces into the square frame without conflict.**

Materials: Acrylic

Classification: 2D assembly puzzle

Notes: No undue force is required.



06

Binary Pin Burr

Puzzle Goal: **Remove the key piece by moving pieces that represent the binary bits 1 to 4.**

Materials: Bloodwood, jatoba, ebony, metal pins

Classification: Interlocking

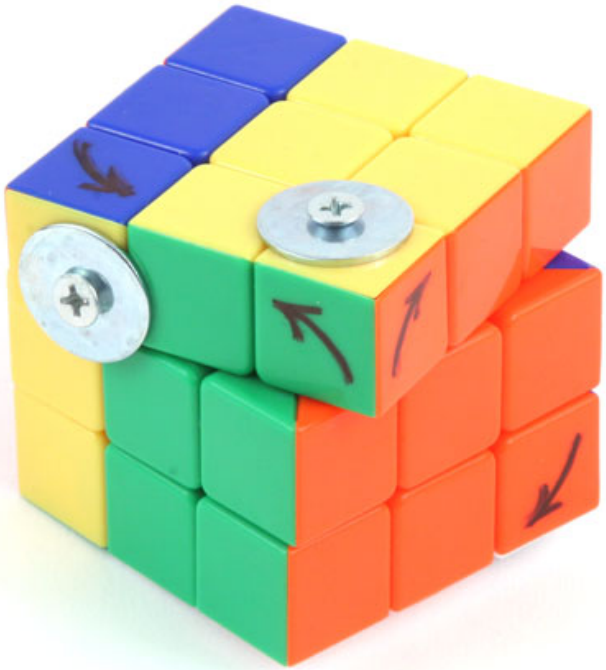
Notes: The 4 bit pieces need to be moved in a binary numerical sequence (not Gray code).

07 Corner Latch Cube

Puzzle Goal: **Scramble and then restore all faces, like Rubik's Cube but with restricted movement, as indicated by the arrows on the corners.**

Materials: Plastic

Classification: 5.4. Rotational



08

Cracked! (Plato's Egg)

Puzzle Goal: **Crack Plato's egg into its constituent parts (shell, white, yolk), then put it back together again.**

Materials: 3D-printed PLA

Classification: Interlocking

Notes: Each of the three stages requires a degree of coordinate motion.

09

Crocodile

Puzzle Goal: **Take the coin out.**

Materials: Acrylic, metal

Classification: Secret opening box

10

Crypsis

Puzzle Goal: **Open the puzzle box without touching the very sensitive lid.**

Materials: Curly maple, walnut, purpleheart, lacewood, holly

Classification: Puzzle Box

11

Cubane

Puzzle Goal: **Separate the ring from the cube and return it to the starting position (as shown).**

Materials: Ebony, wenge, padauk

Classification: Disentanglement Puzzle

12

Devilish Dice

Puzzle Goal: **Drop the ball bearing into the "one" hole and then try and extract it from the inner cage and then out through the semi-visible maze, as it visits each and every spot on the dice before it escapes.**

Materials: 3D-printed ABS, magnets and a steel ball bearing

Classification: Route Finding

13

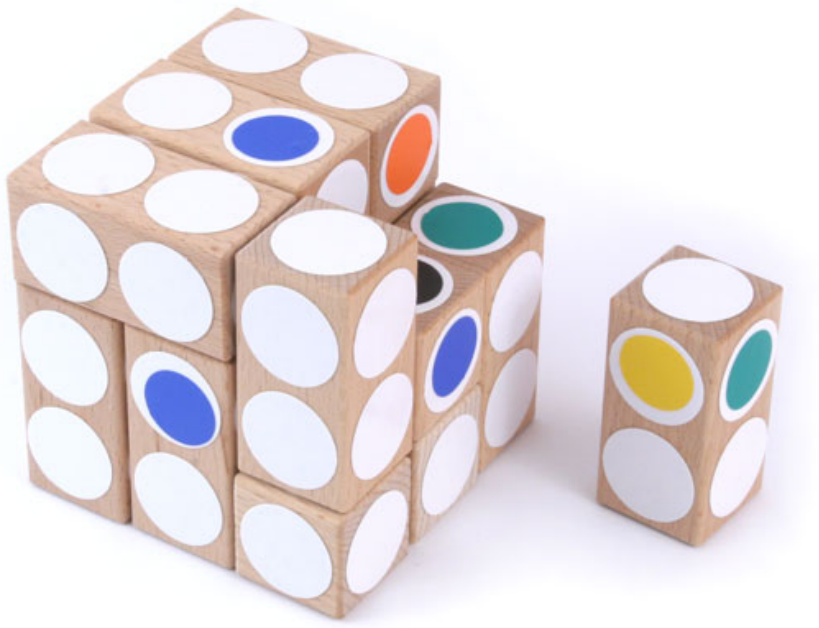
DIY 6 Color Cube

Puzzle Goal: **Place all the 36 stickers on the blocks so that you can build all of the following 3x3x3 cubes with the blocks, each of which is white, with:**

- **A red dot in the center square of each face**
- **An orange dot in the center square of each face**
- **A yellow dot in the center square of each face**
- **A green dot in the center square of each face**
- **A blue dot in the center square of each face**
- **A black dot in the centre square of each face**
- **A different coloured dot in the center square of each face**
- **No colored dots visible anywhere.**

Materials: Wood, sticker sheet, vinyl stickers

Classification: 3D Assembly



14

Dot Box

Puzzle Goal: **Three problems:**

- **Open it**
- **Close it**
- **Explain it**

Materials: ABS Plastic, neodymium, and brass

Classification: 2.1 Open Box / OPN-BOX

15 Double Circle Real 5x5x5

Puzzle Goal: **Solve the 5x5x5 cube, where all 125 cubies have a unique position and orientation in the solved state.**

Materials: Laser sintered nylon, screws, and vinyl stickers

Classification: 5.4 Rotating cube puzzles (3D-Rubik's cube, etc.)

Notes: A normal 5x5x5 cube only has 98 solvable (surface) cubies.

16 Double Slideways Burr

Puzzle Goal: **Take apart and put it back together again.**

Materials: Black walnut, mahogany, and maple

Classification: Slocum 3.4

17 Double Symmetry

Puzzle Goal: **This is a double sided puzzle. Place the blocks in the square box with all the black dots on one side and all the red dots on the reverse, and symmetric patterns simultaneously on both sides. There is a second identical challenge with orange and blue dots.**

Materials: Wood

Classification: Assembly

18 Dress Code

Puzzle Goal: **Dress the wooden cube by only using the two fabric bands, such that each side of the cube is a single color, and no neighboring sides have the same color.**

Materials: Wood and fabric

Classification: Pattern Matching

Notes: This puzzle is dedicated to my precious dad, who passed away on the 21st of May 2015.

19

Edelweiss Puzzle Box

Puzzle Goal: **Open both compartments of puzzle box by arranging puzzle pieces to produce both a flower and a snowflake.**

Materials: Walnut / Maple Woods

Classification: Put Together

20

Ze Eggs!

Puzzle Goal: **Open the large egg. Inside you will find the Balancing Egg For Dummies--it balances on both ends! Your challenge is to un-balance it.**

Materials: Colored pencils, magnets, pins, electronics

Classification: Slocum 2.1 and 6.4

21

8 Stars Labyrinth

Puzzle Goal: **Insert then remove the ball.**

Materials: Trespa, steel ball, polycarbonate

Classification: Routefinding puzzle

22

Eurofallen 04

Puzzle Goal: **Free the Euro coin.**

Materials: Bubinga, acrylics, MDF

Classification: 2.1 Trick or Secret opening puzzle

23 Every Which Way

Puzzle Goal: **Arrange the cubes in a row so that all four long sides have an arrowhead pointing in each of the four directions.**

Materials: Cherry wood

Classification: 1.3 Miscellaneous put-together

24

Festival in Ottawa

Puzzle Goal:

- **Put six pieces into the rectangle(6x4) on the left, all through the entrance gate. After entering, only sliding is permitted.**
- **Put six pieces into the box on the right.**

Materials: Wood and MDF

Classification: Put-together, Sliding pieces

25

Fire

Puzzle Goal: **Open the puzzle and enjoy what you find inside.**

Materials: Anodised aluminium

Classification: Route Finding / Opening / Seqiential Movement

Notes: The solution page includes 10 crucial hints for solving the puzzle.

26

4 Ducks & A Duckling

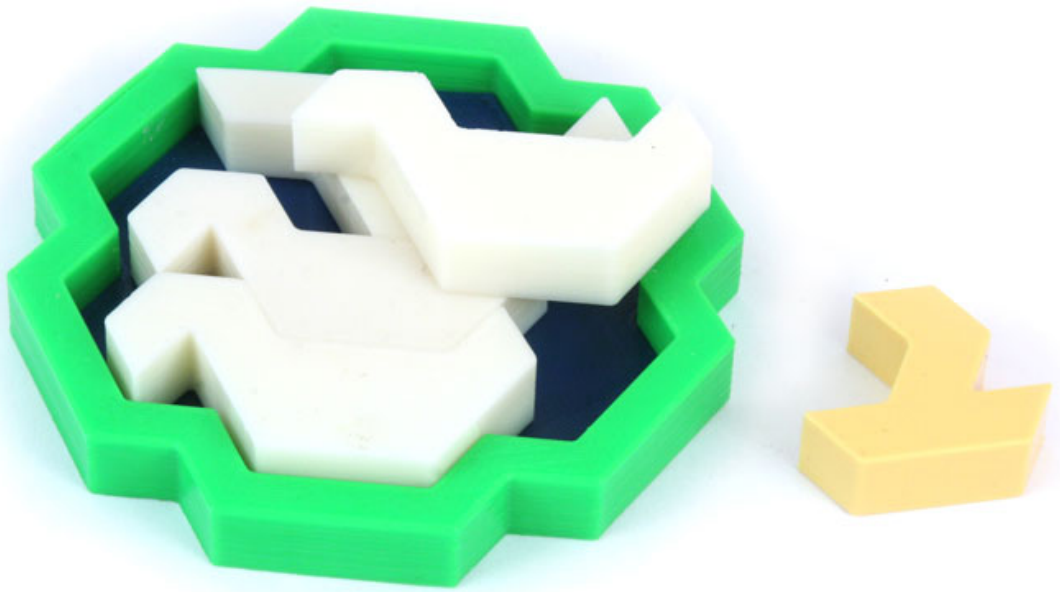
Puzzle Goal:

Three problems:

- **Fit all 4 ducks into the pond**
- **Fit all 4 ducks and the duckling into the pond**
- **Fit all 4 ducks into the pond to form a symmetrical shape.**

Materials: ABS resin

Classification: 2D Packing



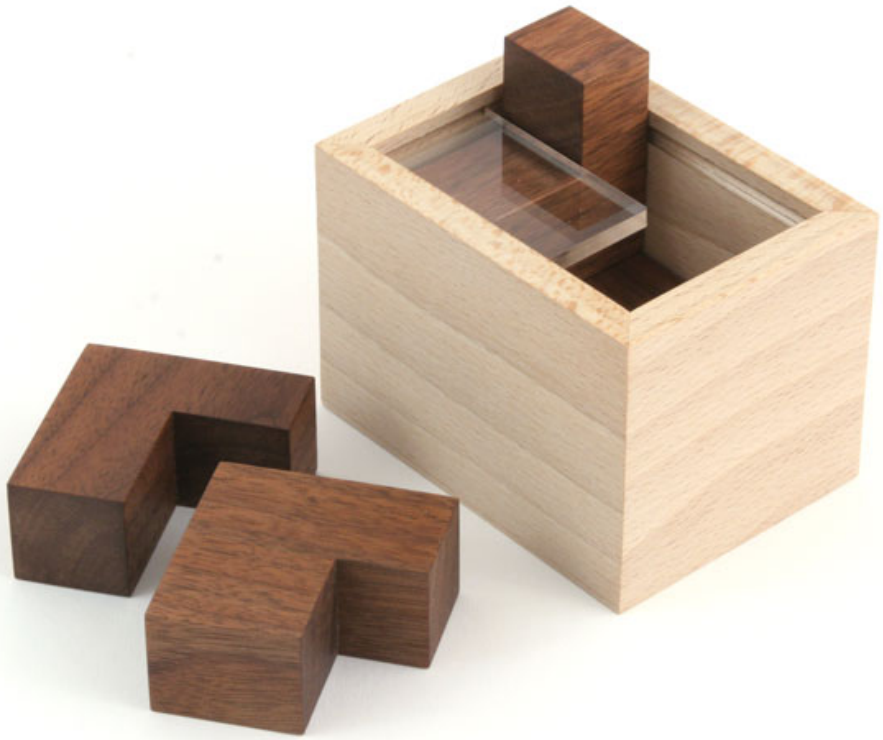
27

4L

Puzzle Goal: **Pack the 4 L-shaped pieces into the box.**

Materials: Wood (walnut, beech), acrylic board

Classification: 3-Dimensional assembly



28 Framed Non-Planar Symmetric Hexacubes

Puzzle Goal: **Select a set of pieces (out of 148 possible), and place the pieces inside the light box.**

Materials: Wood

Classification: 1.2. 3-Dimensional assembly

29 Heptagon 40 (Heptagon Series No.2)

Puzzle Goal:

- **Put the two sets of five tetrahepts (total 40 heptagons) into the tray.**
- **Find the solution with all dark surfaces (two solutions).**

Materials: Wood

Classification: Put together

Notes: There are two types of the regular heptagon tiling with pentagonal space; this puzzles is based on one of those.

30

Icosaix

Puzzle Goal: **Scramble and solve, like any twisty puzzle. Try the special shapeshifting "jumbling" moves.**

Materials: Injection-molded plastic

Classification: 5.6 Misc. sequential movement / 8 SEQ-OTH

31 Igayaki Pottery Puzzle

Puzzle Goal: **Pull the Kunai (Ninja's sword) from the scroll**

Materials: Ceramic, wood

Classification: Disentanglement

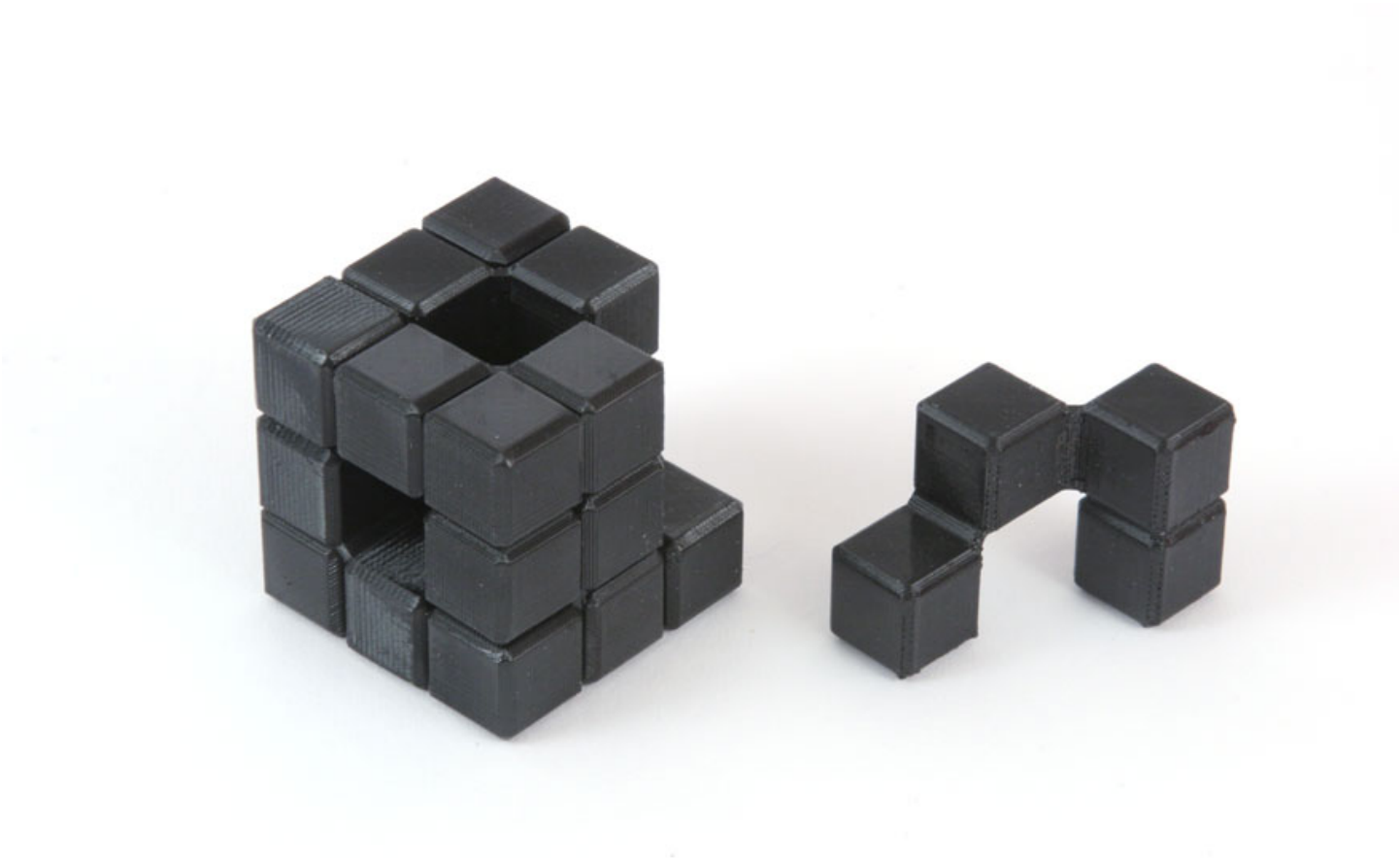
32

Liberal Cube

Puzzle Goal: **Assembly the seven pieces to form an interlocking 3x3x3 cube.**

Materials: Plastic

Classification: INT-CART



33

L-I-vator Cube

Puzzle Goal: **Pack the pieces into the box with restricted opening.**

Materials: Sapele, plywood

Classification: 1.2 3-Dimensional assembly puzzle

Notes: The pieces form a logical set: each smaller piece is formed by removing one cube from the next largest piece, from seven down to two units.

34

MixTer-MaxTer

Puzzle Goal: **Gather the red switches on one of the disks. Then return them to proper disks pairwise.**

Materials: Vinyl, polystyrene

Classification: Sequential movement

35

Nose Ring

Puzzle Goal:

- **Remove the chain from the ring**
- **Loop back the chain on the ring.**

Materials: Glass, rubber, metal

Classification: 4.3 Disentanglement/string puzzle

36

Number Blocks

Puzzle Goal: **Rearrange the pieces to give the correct sequence 1-4.**

Materials: Sapele box with maple pieces and walnut numbers

Classification: Sequential movement, burr

37

Oh Ding!

Puzzle Goal: **Open the box.**

Materials: Ebony and mahogany

Classification: Slocum 2.1 Trick or secret opening puzzles

38 Ze Orange

Puzzle Goal: **Navigate through the six locks and open the two compartments inside. There you will find the kids' inheretence!**

Materials: Wood, magnets, electronics

Classification: Slocum 2.1

39

Pair Shape

Puzzle Goal: **Dismantle the cube into four separate pieces (each is a joined pair of blocks), and then re-assemble.**

Materials: Old mahogany, 2mm plywood, small screws

Classification: INT-OTN

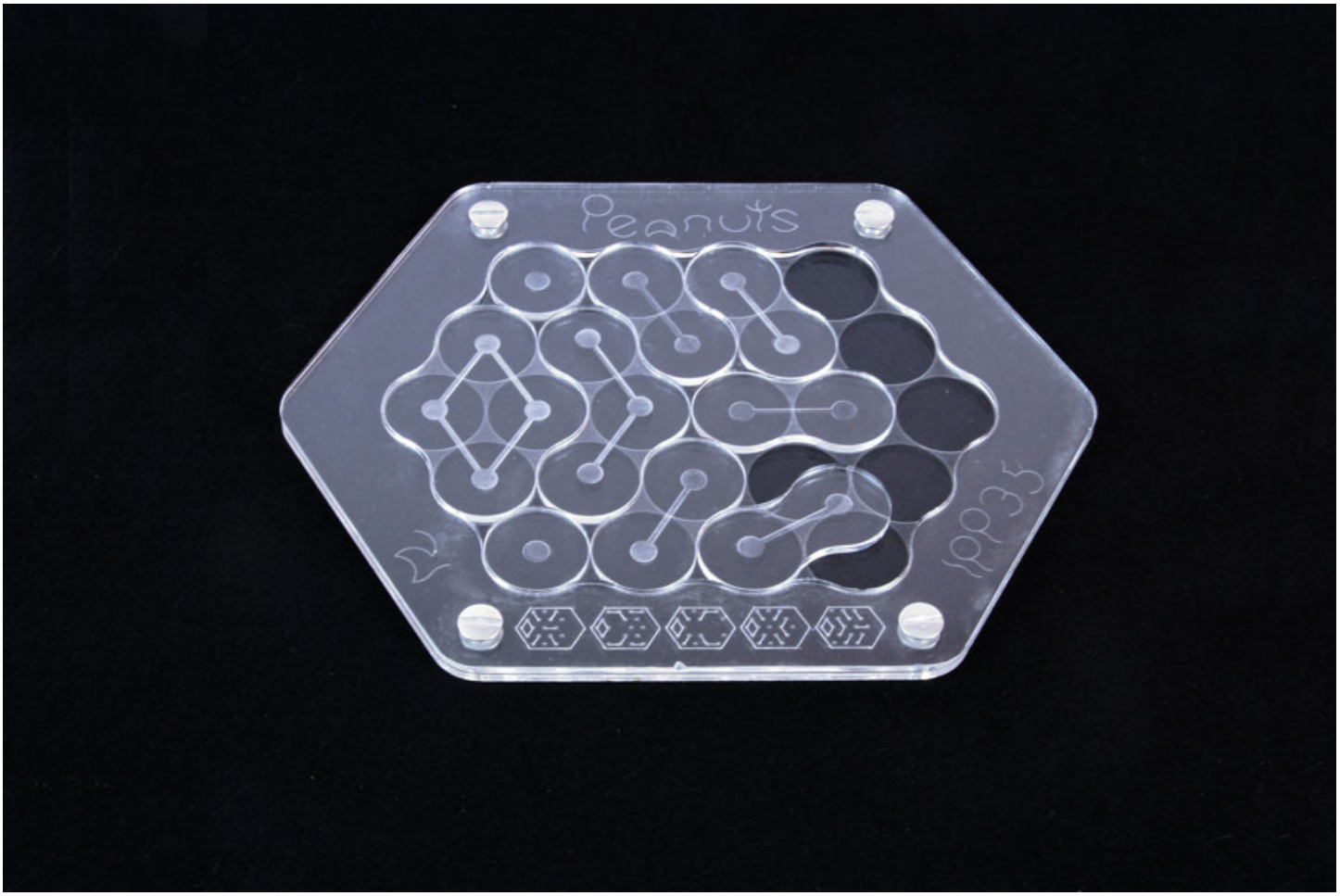
40

Peanuts

Puzzle Goal: **Select one of the starting arrangements etched on the tray. Then move the large key piece to the opposite corner of the board. Only one piece may move at a time, and can move by any combination of sliding or rotating within the tray not blocked by stationary pieces. The piece must be in alignment with the grid at the end of the move.**

Materials: Acrylic

Classification: 5.3 Sequential Movement - Sliding Piece



41

Pi-Balled

Puzzle Goal: **Assemble the twelve pieces into a sphere.**

Materials: Hand-cast urethane rubber

Classification: Put Together/Assembly

42

Pure Donuts

Puzzle Goal: **Disassemble into four pieces and reassemble.**

Materials: 3D-printed nylon

Classification: Take-Apart and Put-Together

43 Racktangle

Puzzle Goal: **Remove the plates from the rack and reassemble.**

Materials: Canarywood rack, walnut corners and pieces

Classification: Interlocking

Notes: Plates can be reconfigured to give various mixed-based puzzles.

44

Road Blocks

Puzzle Goal: **Pack the four blocks into the box**

Materials: Maple box with pieces from various hardwoods

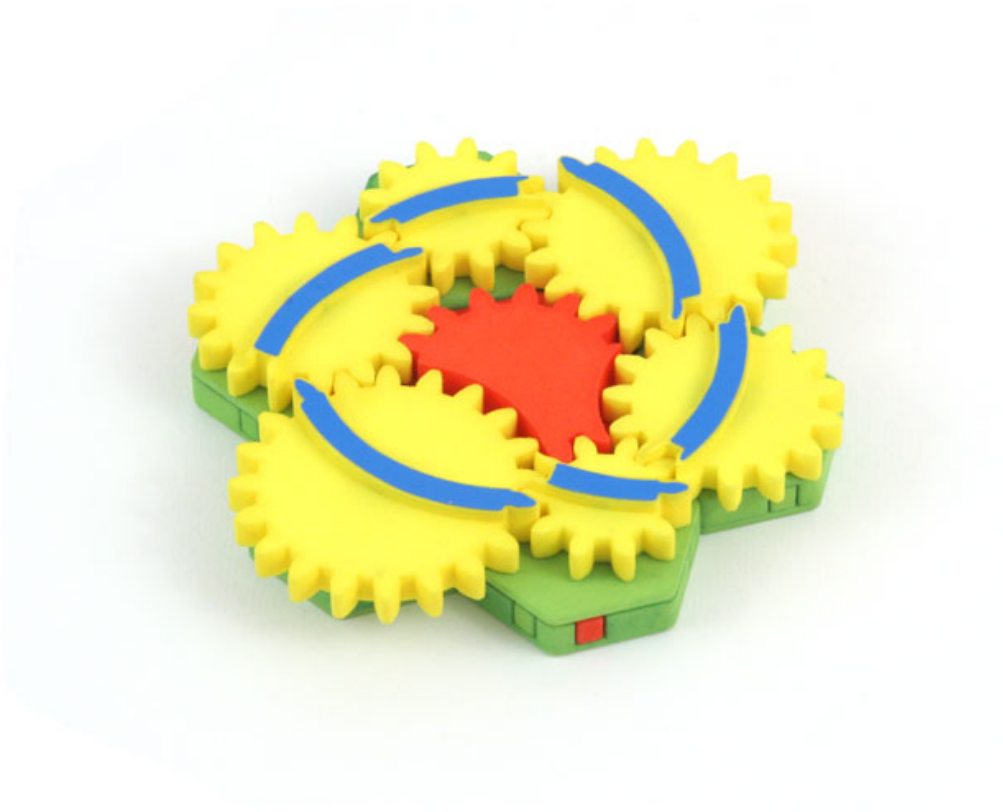
Classification: Packing

45 Shift Happens

Puzzle Goal: **Slide the hexagonal base apart in any of the three directions and spin the gears randomly to scramble the puzzle. Then solve the puzzle and complete the ring again.**

Materials: 3D-printed nylon, dye, glue, stickers

Classification: 5.6 Misc. sequential movement / 8 SEQ-OTH



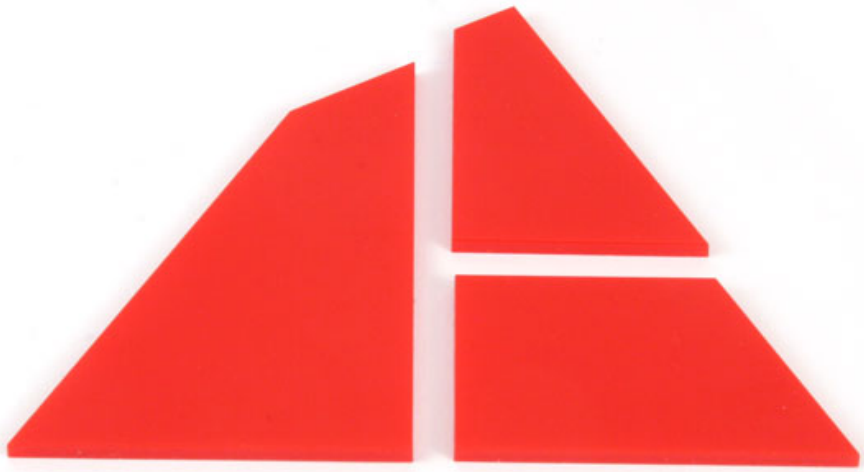
46

Shuriken

Puzzle Goal: **Make a symmetrical shape using the three pieces.**

Materials: acrylic and plastic

Classification: 1.1 2-Dim Assembly Puzzles /ASS-STRA



47 **69**

Puzzle Goal: **Re-arrange the pieces in the box to form the #9.**

Materials: Walnut and maple

Classification: 3.2 Interlocking Solid

Notes: The orientation of the box cannot change.

48

Soccerit

Puzzle Goal: **Assemble and disassemble the four pieces.**

Materials: Wood

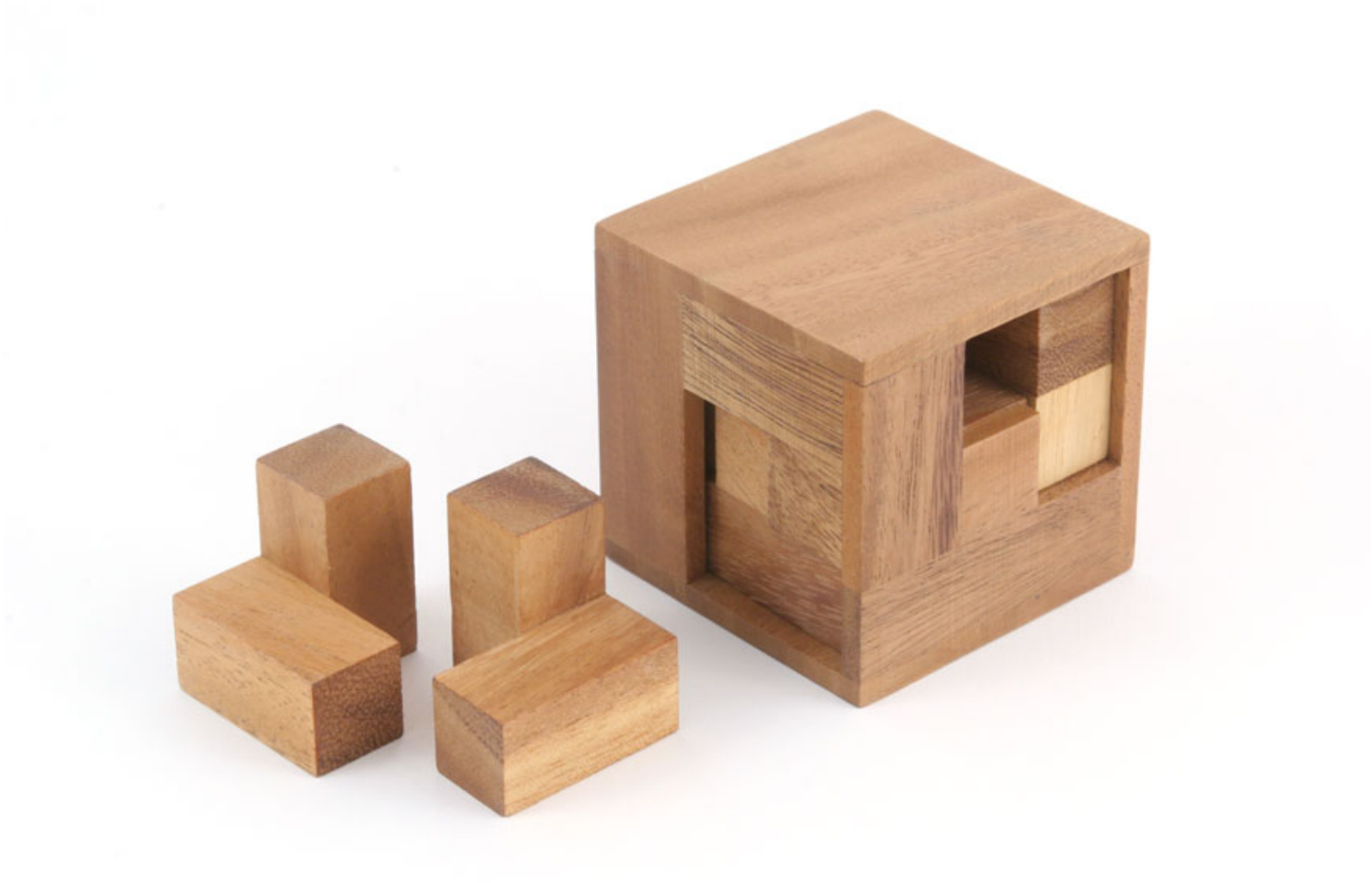
Classification: INT-POLY

49 SOMA Pack

Puzzle Goal: **Pack the SOMA cube into the box. Pick one opening or the other, then use only that one opening to solve.**

Materials: Samena wood

Classification: 1.2. 3-D assembly



50

TaiJi - 69 Puzzle

Puzzle Goal: **Take all pieces apart.**

Materials: Aluminium alloy

Classification: Take Apart / Disassemble

51

Tetro-Billes

Puzzle Goal: **Assemble the pieces so that the marbles form the five different tetromino shapes--three in blue and two in yellow.**

Materials: Wood (Japanese beech), colored glass marbles

Classification: 1.1 2-Dimensional assembly

52

Triangles

Puzzle Goal: **Arrange the three triangles flat on a surface to make a single mirror symmetric shape.**

Materials: Wood

Classification: 1.1 2-Dimensional assembly puzzles

53

Trifecta

Puzzle Goal: **Three copies of three different types of pieces assemble to form the given configuration, both with and without the**

optional three cube bonus piece.

Materials: Santos rosewood and holly

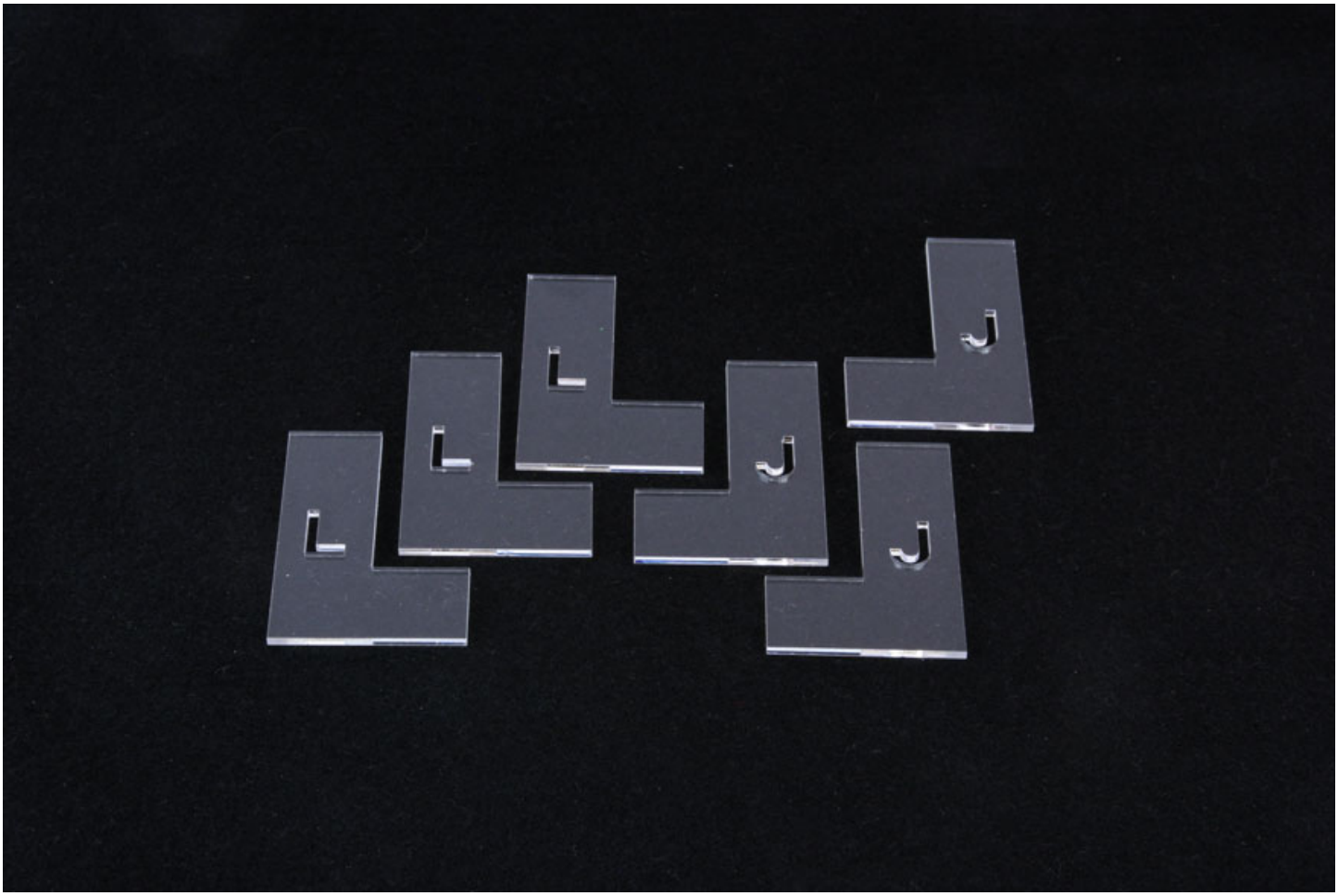
Classification: Interlocking

54 Twins of Triplets

Puzzle Goal: **Make a shape using all three L pieces, and the same shape using all three J pieces. You can not flip over any pieces.**

Materials: Acrylic

Classification: 2D assembly puzzle



55

2&2

Puzzle Goal: **Assemble two pieces at center of the double plate.**

Materials: Wood

Classification: Interlocking

56

l'Unifolié

Puzzle Goal: **Free the maple leaf piece.**

Materials: Maple, bubinga

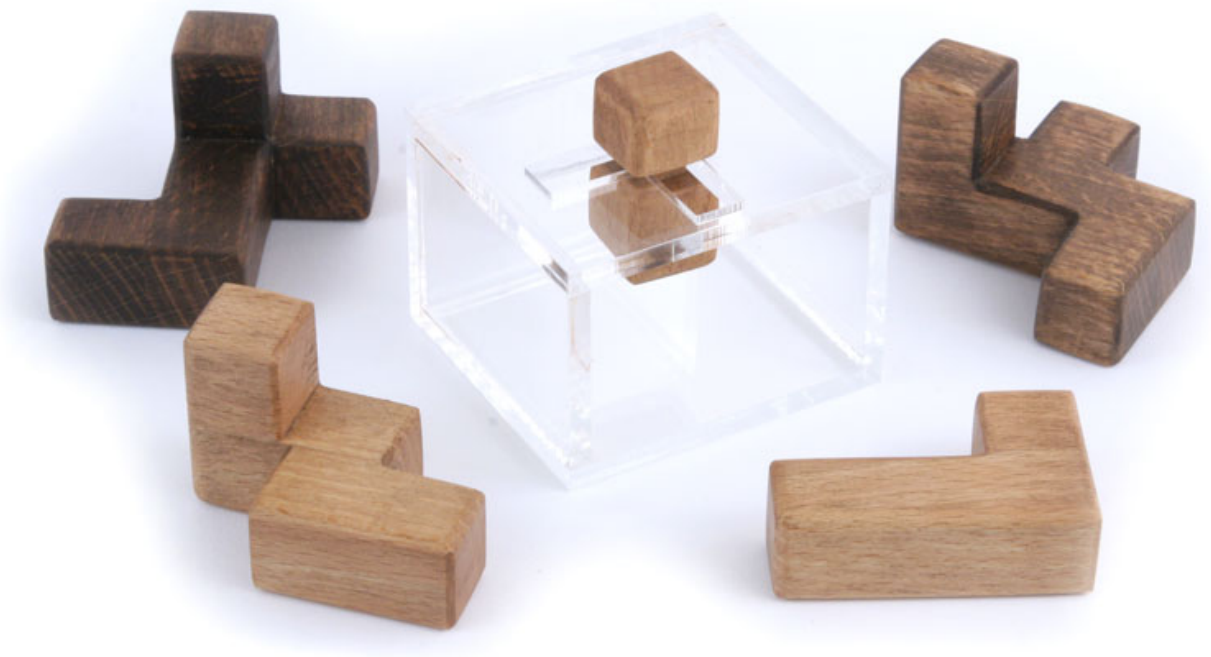
Classification: 2.1.Take-Apart Puzzles - Trick opening

57 Wandering Cubes

Puzzle Goal: **Put the two light pieces and just one of the dark pieces into the box.**

Materials: Wood, acrylic

Classification: 1.2. 3-Dimensional assembly



58 Wow-puzzle

Puzzle Goal: **Pack the pieces into the tray (each side) so that no piece can move. Packing into the smaller tray can be regarded as the main challenge/objective, and packing into the larger tray as the warm-up.**

Materials: Acrylic plastic

Classification: Put-together Puzzle, 1.1 2-Dimensional Puzzle

59 Xenia Table Puzzlebox

Puzzle Goal: **Open the table top, put the discovered pieces in the center and then put everything back together.**

Materials: Kotibe wood, palisanter, Mexican ebony

Classification: Discovery, opening

60 Zipper

Puzzle Goal:

- **Close (only) the red zipper completely with one or two sliders.**
- **Close all the zippers completely with one or two sliders.**

Materials: Plastic zippers

Classification: Miscellaneous put-together.