

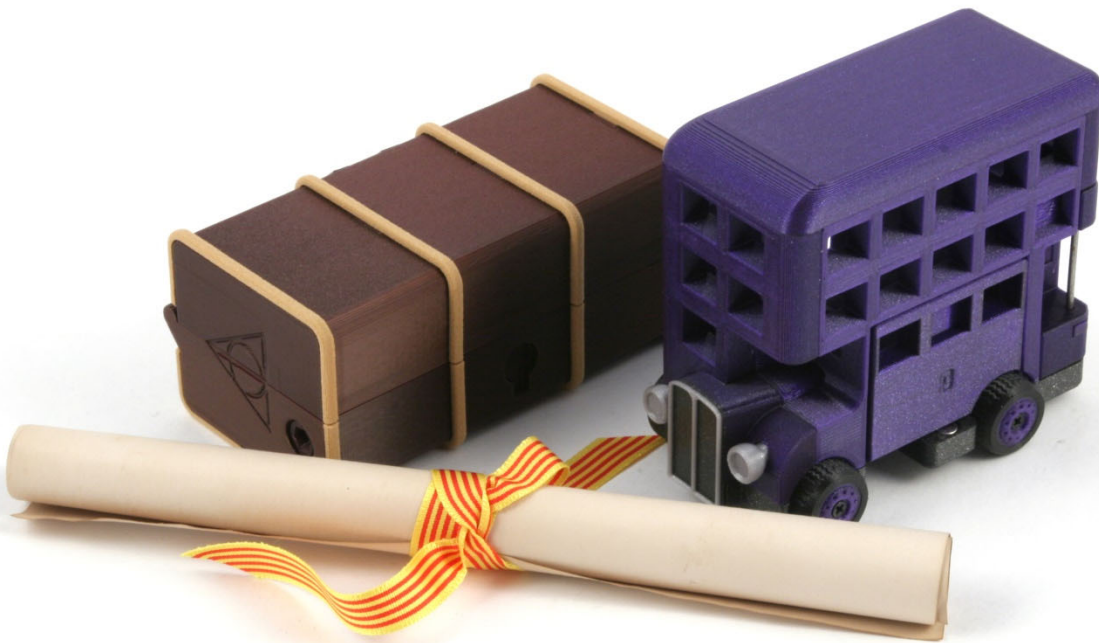
01

AI Bus

Puzzle Goal: The first goal is to find the wand. There are further instructions inside the trunk. The puzzle is solved when all the three goals have been achieved.

Materials: PLA, TPU, magnets, steel, brass and paper

Classification: Sequential Discovery



02

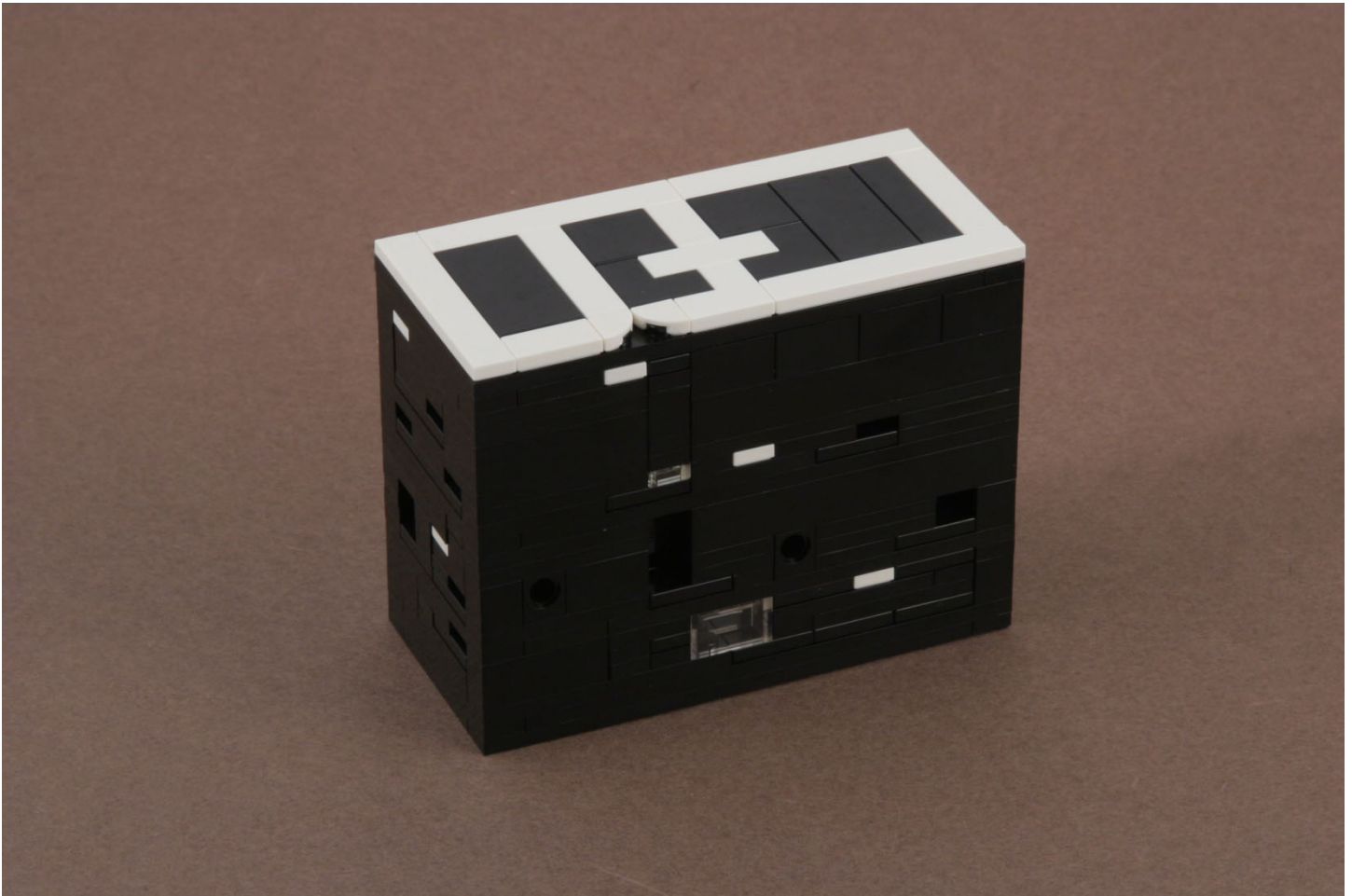
The aMAZEing PuzzleBox

Puzzle Goal: To find a golden bar hidden inside using sequential movement.

Materials: Original LEGO bricks

Classification: 5.6

Notes: Construction is durable, but please avoid separating the bricks!



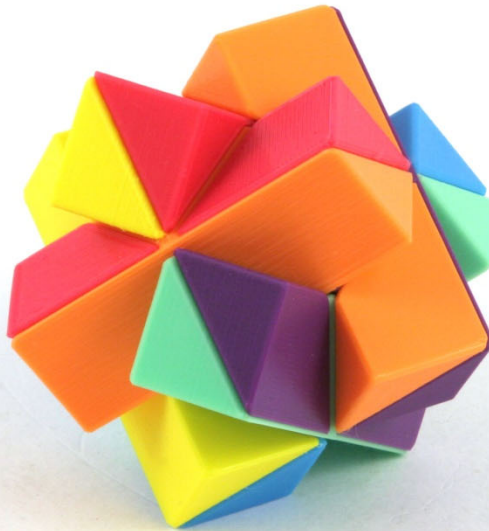
03

Another Broken Burr

Puzzle Goal: Assemble the puzzle so that the colors match. The finished appearance is six intersecting square sticks, each of a different color.

Materials: PLA plastic

Classification: [3.2] Geometric objects, INT-POLY Interlocking



04

Battery Operated Box

Puzzle Goal: Open the box.

Materials: Various hardwoods

Classification: Take apart



05

Bells

Puzzle Goal: Put all parts into the box so that you can close the lid.

Materials: Wood, brass

Classification: (1.2) 3D assembly puzzles



06

Bookmark Box

Puzzle Goal: Open the Box

Materials: Cherry, walnut, holly, darkened walnut

Classification: Take-apart



07

Carl Sagan's Galactic Orgy

Puzzle Goal: Disassemble the burr and have a blast doing it.

Materials: Ziricote, kingwood, pau amarello

Classification: 3.4 INT-CART

Notes: The burr is designed to be unusually stable in wild arrangements.



08

Chained Lumbers

Puzzle Goal: Pack all six lumbers and chain into the box and close the lid completely.

Materials: Wood, stainless

Classification: Put-together

Notes: No undue force required



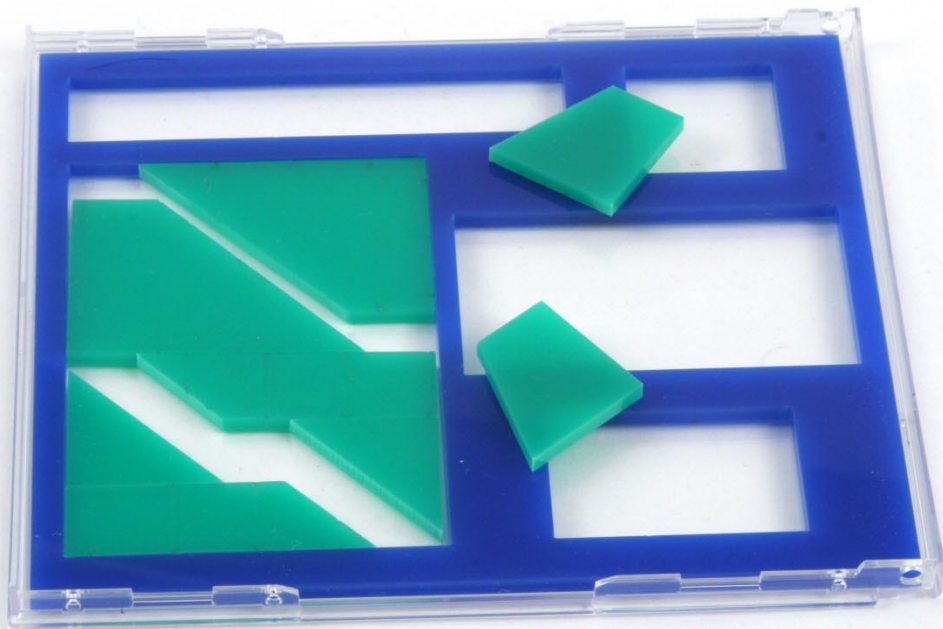
09

Chaos Maker

Puzzle Goal: Place eight pieces in the biggest frame.

Materials: Acrylic

Classification: 2D assembly



10

Cherry On Top

Puzzle Goal: There are three steps to fully solve this puzzle:

1. Find the cherry.
2. Place the ice cream in the bowl so that it lies perfectly flat.
3. Place the cherry on top of the ice cream.

Materials: Acrylic

Classification: 2.2



11

Coin Wallet

Puzzle Goal: Put the four coin pieces completely into the (rectangular area of the) wallet.

Materials: Acrylic

Classification: 3D Assembly

Notes: No undue force required



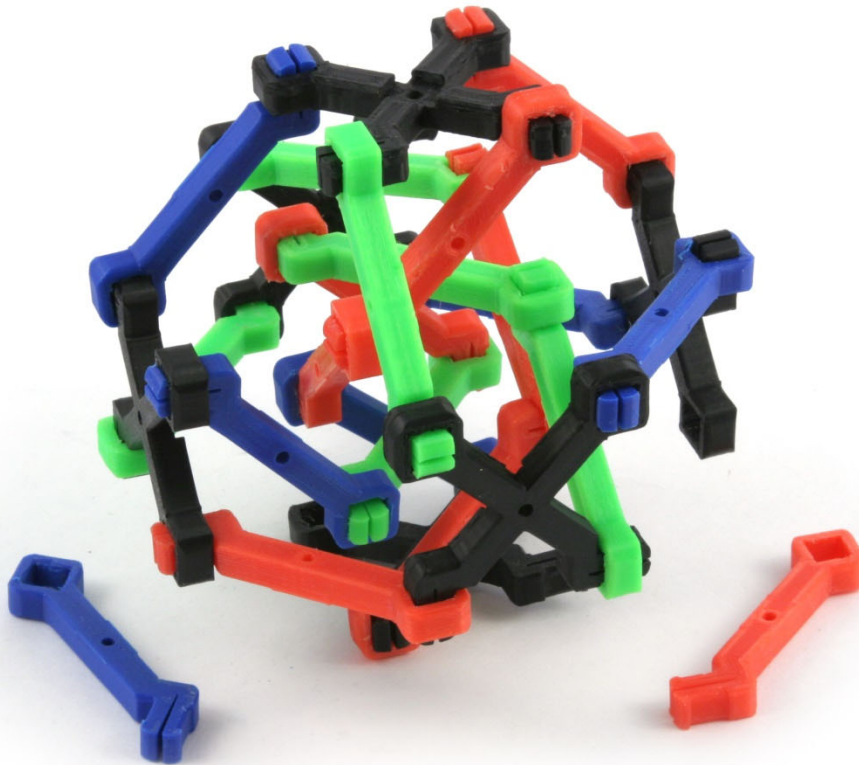
12

Cubicule26

Puzzle Goal: Assemble a cubic structure, fully using all connectors.

Materials: Plastic

Classification: 1.2 3D Assembly (Slocum)



13

Dial Case

Puzzle Goal: Open the box and reassemble it.

Materials: Wood, bamboo, metal

Classification: Sequential Discovery (2.1 Trick-opening)



14

The Diamond Safe

Puzzle Goal: Hide the diamond in the center of a symmetric burr.

Materials: Wood, acrylic

Classification: 3.2 Geometric objects



15

Fermat Meets Fuller

Puzzle Goal: Pack six triangles into the restricted box.

Materials: American walnut, merbau

Classification: Packing



Flip Flop

Puzzle Goal:

Flip-flop the 4x4 arrangement of dots and achieve any of the following goals:

- (Easy): Both sides of the puzzle displays four dots of each of the four colors.
- (Medium): Additionally, on both sides no two dots of the same color should be adjacent (rank and file) to one another.
- (Hard): Additionally, on both sides each row and column should contain only one dot of each color.

Materials: PLA, steel

Classification: Slocum 5.6



Four Noble Truths

Puzzle Goal: Open the box, guided by the Four Noble Truths of Buddhism.

Materials: Wood, metal, and magnets

Classification: Slocum 2.1 Trick or Secret Opening Puzzles

Notes:

The Four Noble Truths:

1. Dukkha (suffering)
2. Samudaya (the cause of suffering)
3. Nirodha (the end of suffering)
4. Magga (the path that leads to the end of suffering)



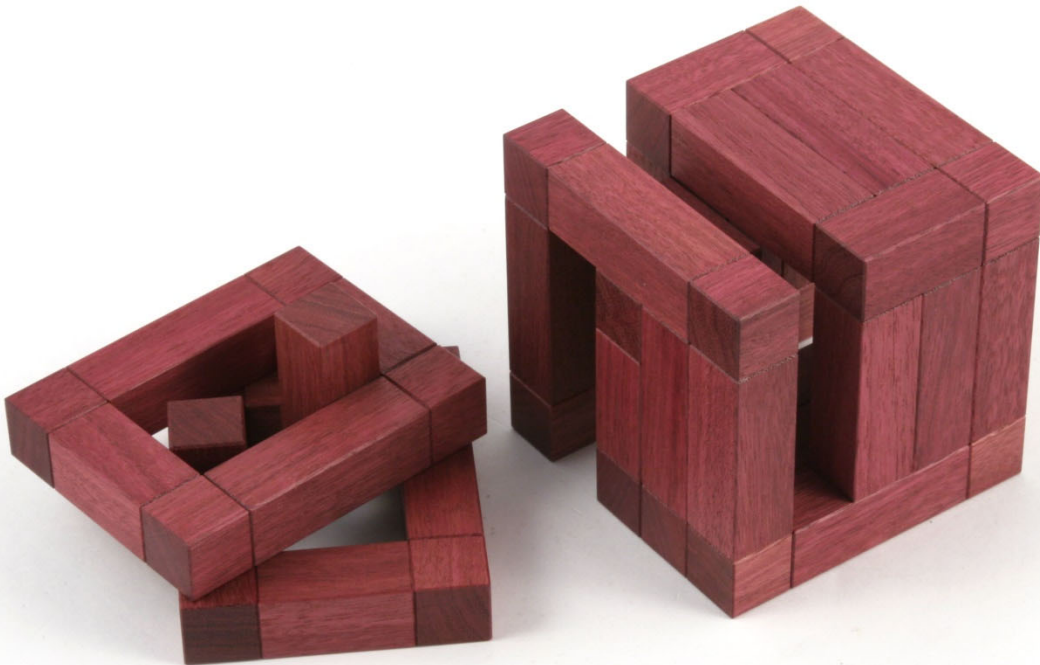
18

Gem

Puzzle Goal: Assemble three pieces fully inside the frame.

Materials: Wood

Classification: Interlocking



19

Hatching

Puzzle Goal: Open the block and discover the eaglet (off-spring).

Materials: Stainless steel, iron, titanium alloy, magnet

Classification: Take -Apart

Notes: The screw cannot be removed; do not use undue force.



20

Heart and Arrow Revised

Puzzle Goal: Both the hearts and the arrow are solid uncut pieces of plywood. How was it made?

Materials: Plywood (birch and mahogany a walnut stand)

Classification: Slocum 10. Impossible Puzzles



21

Hex Flex

Puzzle Goal: Open the box.

Materials: Maple burl, ziricote, English sycamore

Classification: Take apart



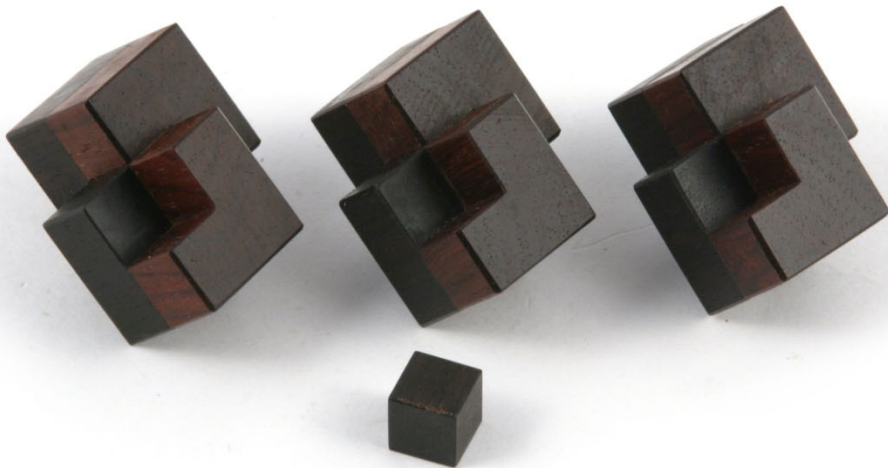
Hide

Puzzle Goal: Hide the cube with three pieces, and with the following conditions:

- Each of three pieces must touch two sides of the cube.
- The finished work is symmetrical in shape.

Materials: Rosewood, ebony

Classification: Put-Together



23

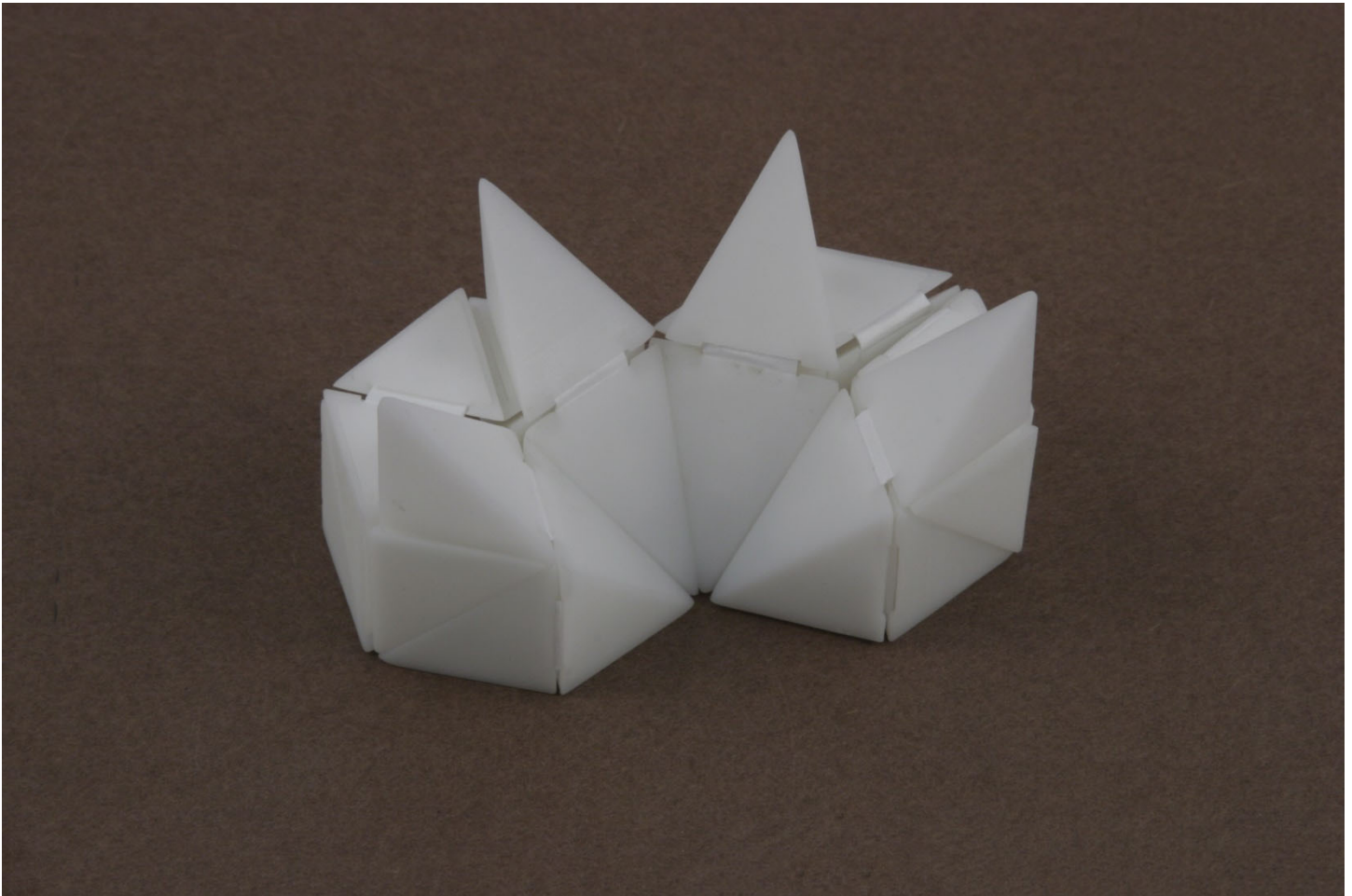
Hinge Cube

Puzzle Goal: Manipulate the flexible geometric structure to create the desired shape.

Materials: ABC, polyester

Classification: 3D Geometric objects

Notes: See opposite page for additional challenge shapes.



Hive Stars Hotel

Puzzle Goal: Put all five pentahex pieces into the tray and create:

- 12 separated rooms. (2 almost identical solutions)
- 6 separated double rooms. (19 solutions, can you find the one that is symmetric?)
- 4 separated trihex rooms. (20 solutions, only one contains three different trihexes)
- 3 separated tetrahex rooms. (many solutions, there is only one with three identical rooms)
- two separated rooms, 6 units each. (2 solutions)
- one big room for 12 bee eggs. (1 solution)

Put all five pieces into the hive and create:

- A shape with 120 degrees rotational symmetry. (1 solution)
- A shape with mirror symmetry that fills all 6 vertices of the hive. (1 solution)
- A shape with mirror symmetry leaving all 6 vertices in the hive empty. (3 solutions)

Bonus challenges (keeping pieces aligned with the hexagonal grid of the tray):

- Put 4 out of 5 pieces into the tray with rotational symmetry. (5 solutions)
- Put 4 out of 5 pieces into the tray, pieces cannot touch each other. (1 solution)

Materials: PLA

Classification: 2D assembly



Identical Shapes

Puzzle Goal:

Two challenges:

- Put the two pieces together to obtain a symmetrical shape.
- Put the two pieces together to obtain a non-symmetrical shape, so that the resulting shape can be cut into two identical pieces.

Materials:

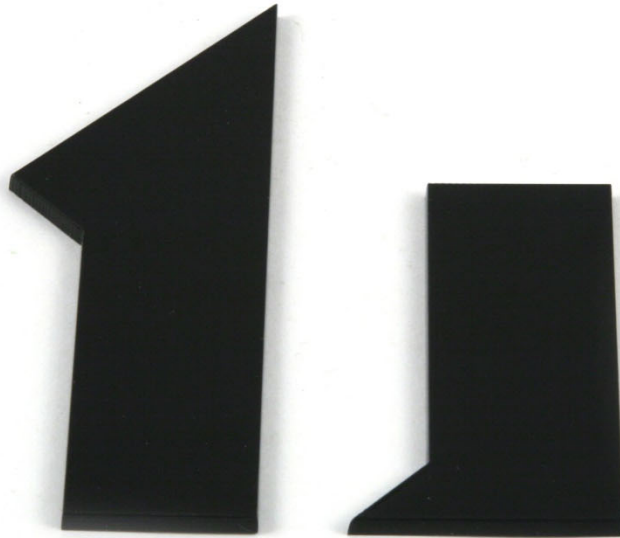
Plastic

Classification:

2D Assembly

Notes:

The pieces can not be flipped or overlapped.



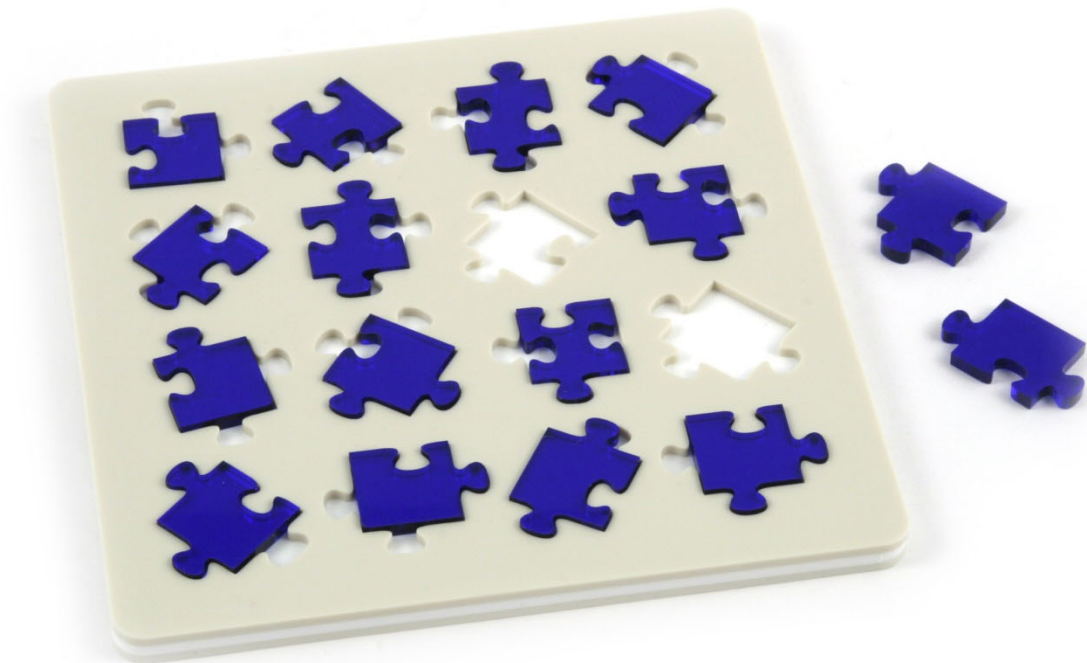
26

Jigsaw 16

Puzzle Goal: Put all the pieces into the frames.

Materials: Acrylic

Classification: 2D Assembly



27

KARAKURI Packing

Puzzle Goal: Pack all five pieces and two pins completely into the box.

Materials: Wood

Classification: 3D Assembly



28

The Last Piece

Puzzle Goal: You must solve a jigsaw puzzle with just one piece remaining—but it always pops out!

Materials: Poplar wood

Classification: OTH-MAGI

Notes: Do not force, shock, spin, or use tools other than your hands and mind!



29

Lock in Roll

Puzzle Goal: Pack the four padlocks completely inside the cylinder.

Materials: Plastic, brass, iron

Classification: 3D Assembly

Notes: You don't have to put four keys in the cylinder, but you can use the keys if you want. (And you can simply pull open a lock if any key is missing.)



30

Medousa

Puzzle Goal: Place the 24 snakes on the Medousa board such that all colors match at the four connection points of each snake.

Materials: Paper, PVC, plasticized paper

Classification: 1.1 2D Assembly



31

Mini Pack 3

Puzzle Goal: Build the apparent 3x3x2 block into the box. (The opening of the box is completely filled and any empty space is hidden within the box.)

Materials: Wood and MDF (color print)

Classification: Interlocking



New 15 Puzzle

Puzzle Goal: Starting with the numbers 1-15 in order but with the 1 and 15 tiles swapped, slide the tiles to get the numbers correctly in ascending order.

Materials: Acrylic

Classification: 5.3 Sliding piece puzzles

Notes: There is no number 8 tile; it is etched in the base.



33

Oceanside

Puzzle Goal: Make a flat shape that can be divided into two congruent shapes. There are $(5^\infty + 1)$ solutions.

Materials: PLA

Classification: 1.1 2-Dimensional assembly

Notes: The goal can also be achieved without the fan-shaped piece, and there are six solutions without it. Try to achieve this first, so you can have a better way to imagine the complete goal. Note that the final shapes can be disconnected.



34

Peeking

Puzzle Goal: Pull out the cylinder.

Materials: Wood (mahogany), magnet, metal ball, acrylic

Classification: Trick opening



Pickagram Magnetized 3D Art Puzzle

Puzzle Goal: Create geometric forms with the magnetic 3D tangram pieces. Each form is given in four challenge categories (point, line, shape, and form) of varying difficulty.

Materials: ABS plastic, and neodymium magnets

Classification: 1.2: 3D assembly puzzles -Non-Interlock

Notes: Sample challenge cards are given on the opposite page



36

Picolock

Puzzle Goal: Open the lock

Materials: Brass and stainless steel

Classification: OPN-LOCK



37

Pin-Up Box

Puzzle Goal: Pack all pieces inside the box and fix with the pin so that nothing drops out when you hold the box upside down. Four pieces have a pin-hole, each giving a solution.

Materials: Jatoba, wenge, bubinga, maple

Classification: 1.2 3D assembly



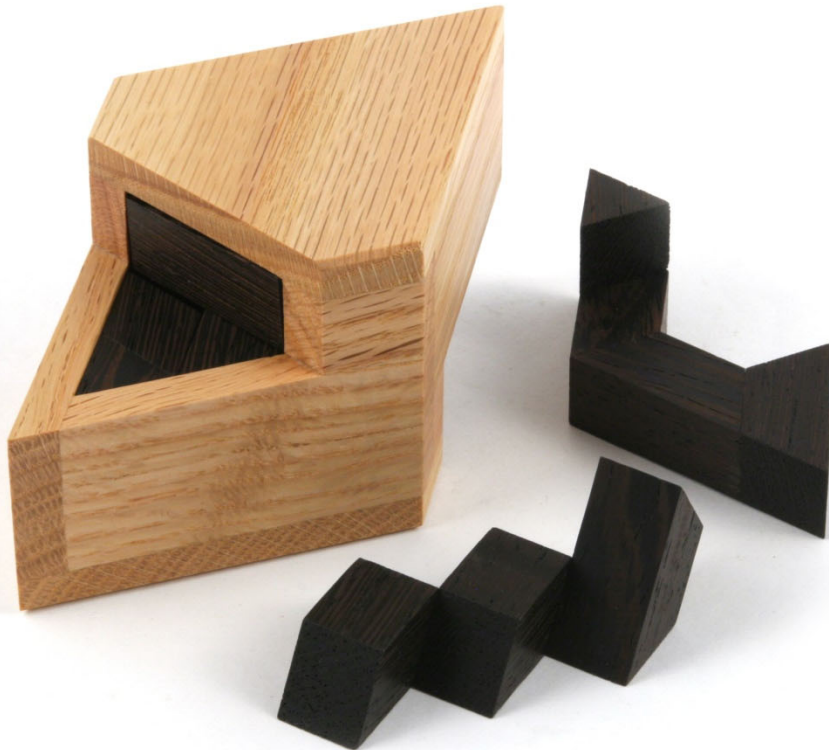
38

Play-Girl 2

Puzzle Goal: Put all the pieces into the box and completely fill both openings.

Materials: Pink oak, wenge

Classification: 3D Assembly



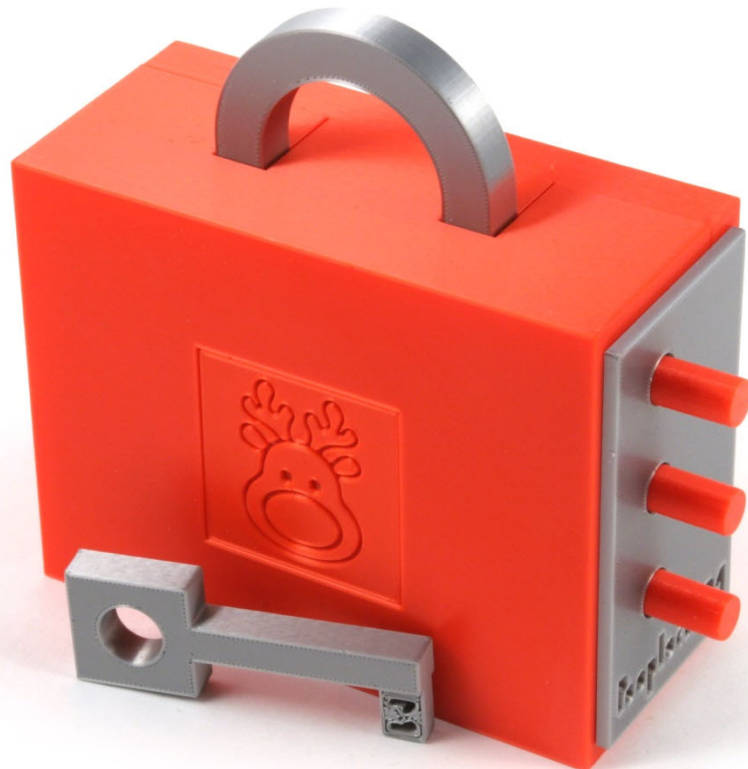
39

PoopLock P1

Puzzle Goal: Find the hidden treasure.

Materials: PLA, brass, magnets, springs, metal

Classification: Sequential Discovery (2.1 Trick opening)



40

Ripple

Puzzle Goal: Disassemble and reassemble the three mutually interlocked pieces.

Materials: Zinc alloy

Classification: Take-apart



41

Round

Puzzle Goal: The ball always rolls to one half when it is placed freely on a smooth and flat surface. Try to make it stay on the opposite half.

Materials: UV curable resin, graphite

Classification: 6.4 Miscellaneous dexterity



42

Six Blocks Away

Puzzle Goal: Pack the six identical blocks into the box.

Materials: Box: white oak, katalox; Pieces: chakte vega

Classification: Put-together



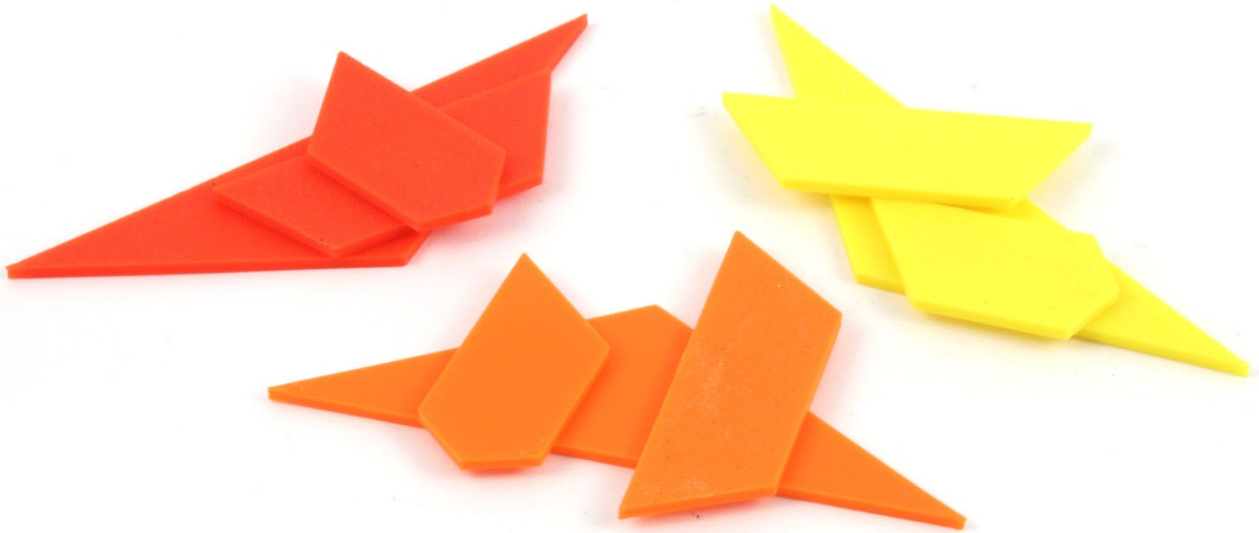
43

Skiff

Puzzle Goal: There are three identical sets of three pieces. Use each set to make a different flat shape that can be divided into two congruent flat shapes. Additionally, use all the pieces to make a regular hexagon.

Materials: PLA

Classification: 1.1 2-Dimensional assembly



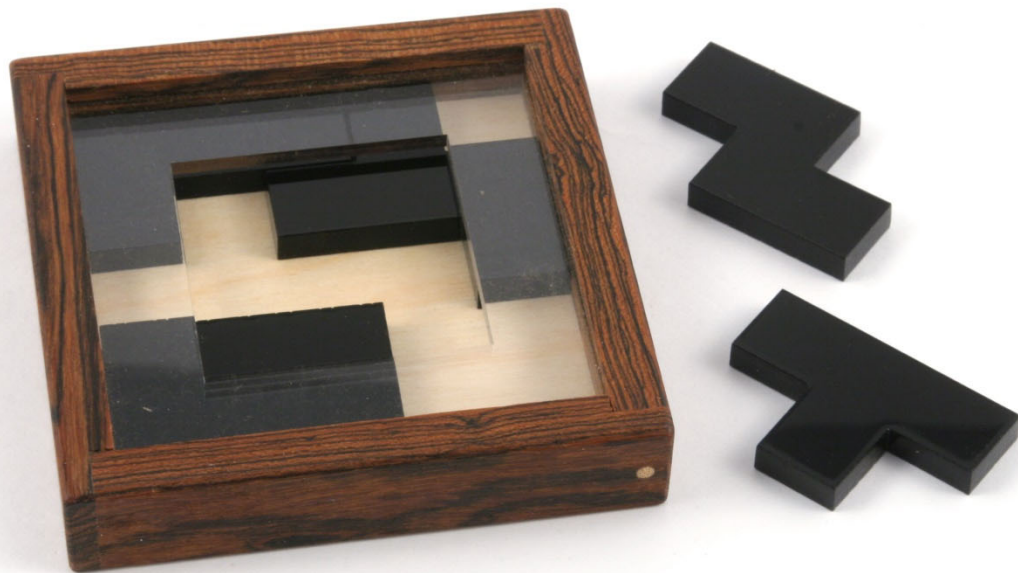
Slide Swipe

Puzzle Goal: Solve eight challenges, each requiring the insertion of selected polyomino pieces into the tray.

Materials: Bocote and acrylic

Classification: 5.3 Sliding piece puzzles

Notes: This and seven other challenges are given on the back of the tray.



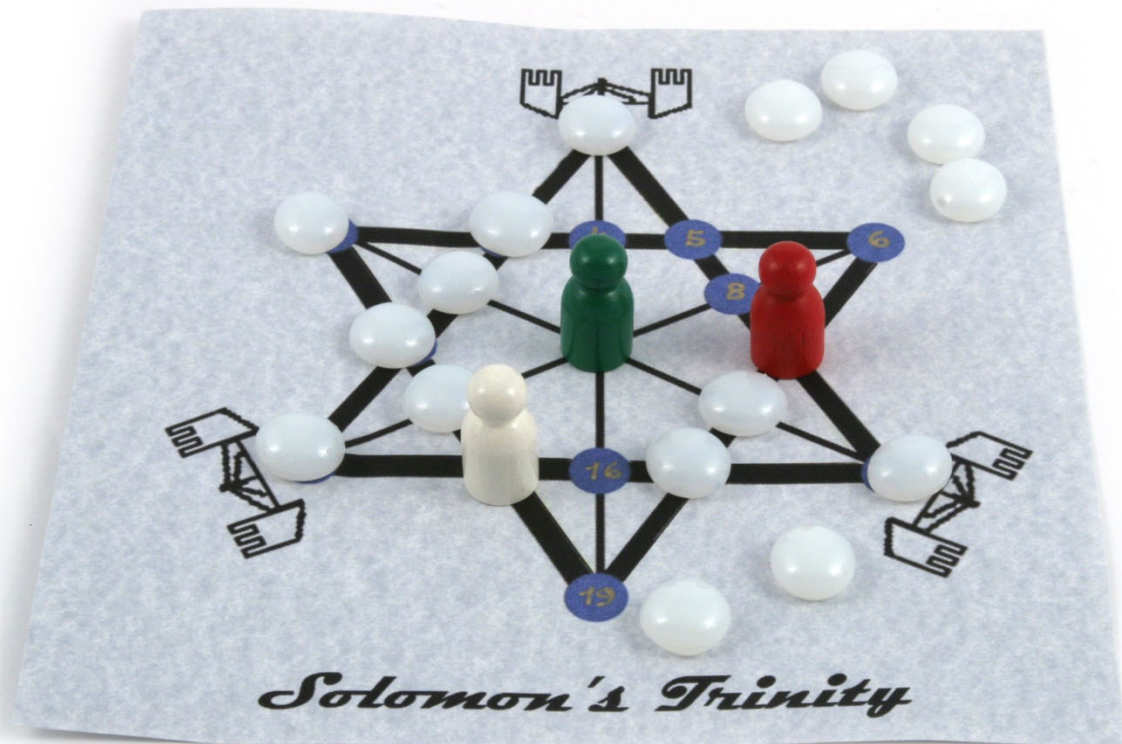
Solomon's Trinity

Puzzle Goal: Move three pawns in sequence to add stones on the Star of David board spaces and fill all spaces.

Materials: Textured cardstock grid, marbles, wood pawns

Classification: Sequential movement

Notes: Complete rules and additional challenges are given on the opposite page.



46

Space Burr

Puzzle Goal: Arrange the magnetic burr pieces within the cage, so that they do not contact with one another.

Materials: PLA

Classification: 1.1.3 and also 6.6.4 (Slocum)

Notes: Utilize the supplied spacers to accomplish this task.



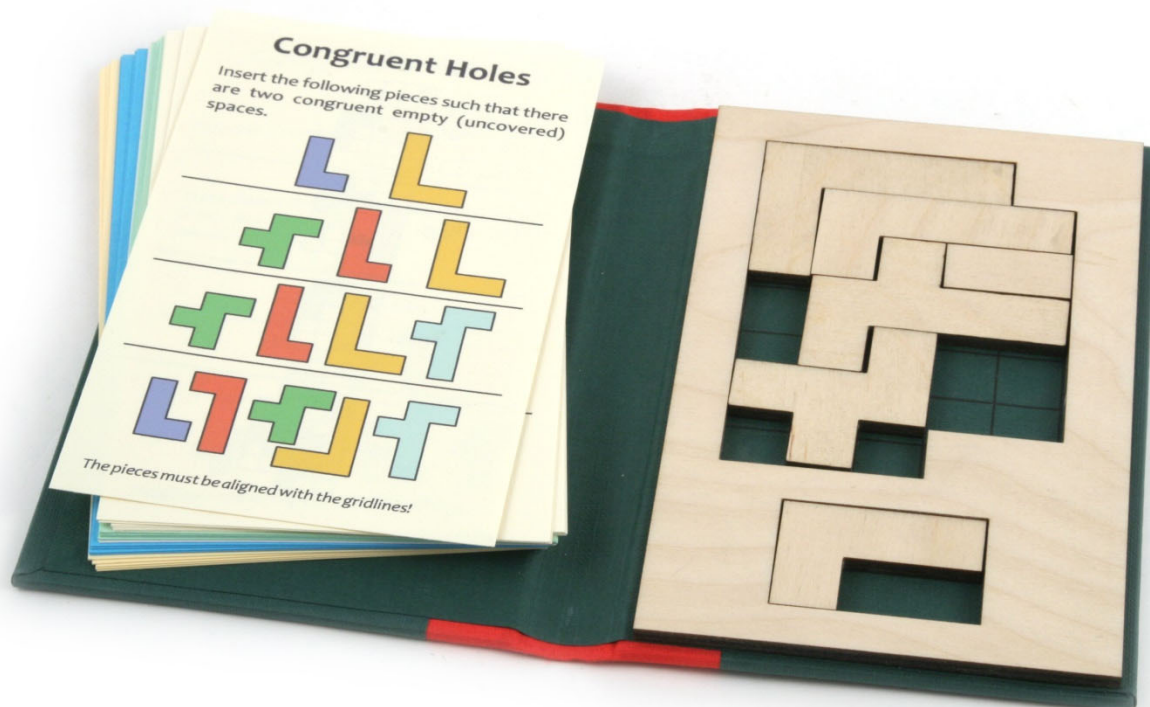
Spacing Out

Puzzle Goal: The booklet contains more than 100 challenges of five different types. The unusual feature here is that the problems do not refer to the shapes to be filled out but to the empty fields.

Materials: Paper, wood, rubber

Classification: 1.1 2D assembly

Notes: The accompanying cards contain one problem for each of the five types.



48

Strugg L

Puzzle Goal: Take out the pieces from the box and put them back in their original positions.

Materials: Wood, bamboo

Classification: 3D Packing



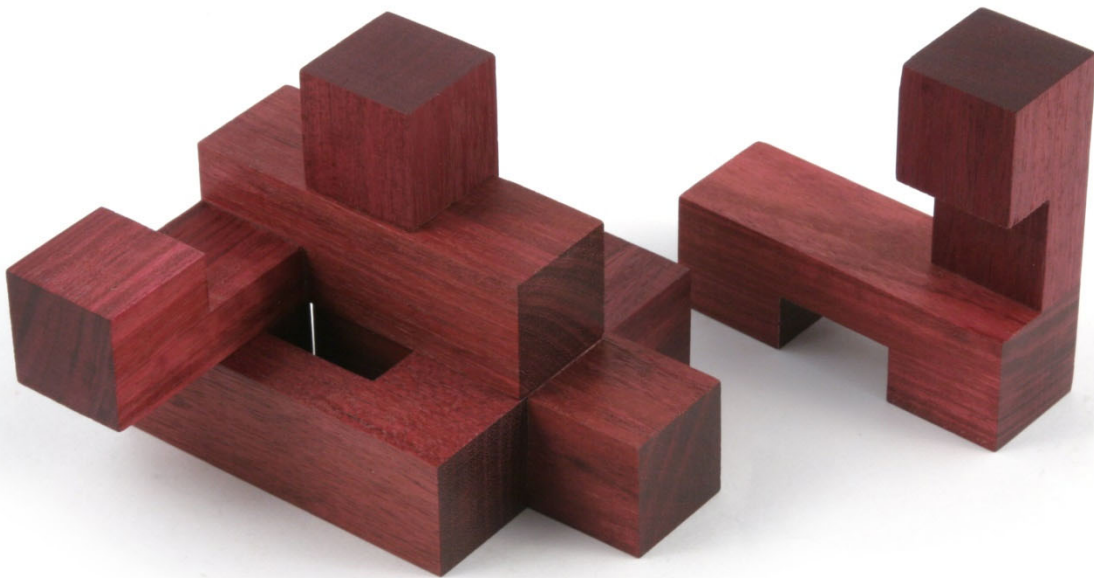
49

Stuffing Burr

Puzzle Goal: Assemble a shape where all the notches are filled.

Materials: Purpleheart

Classification: Put together



50

Supernova (Four Color Problem 36P)

Puzzle Goal:

Initial state is a stellated octahedron, with one color for each face

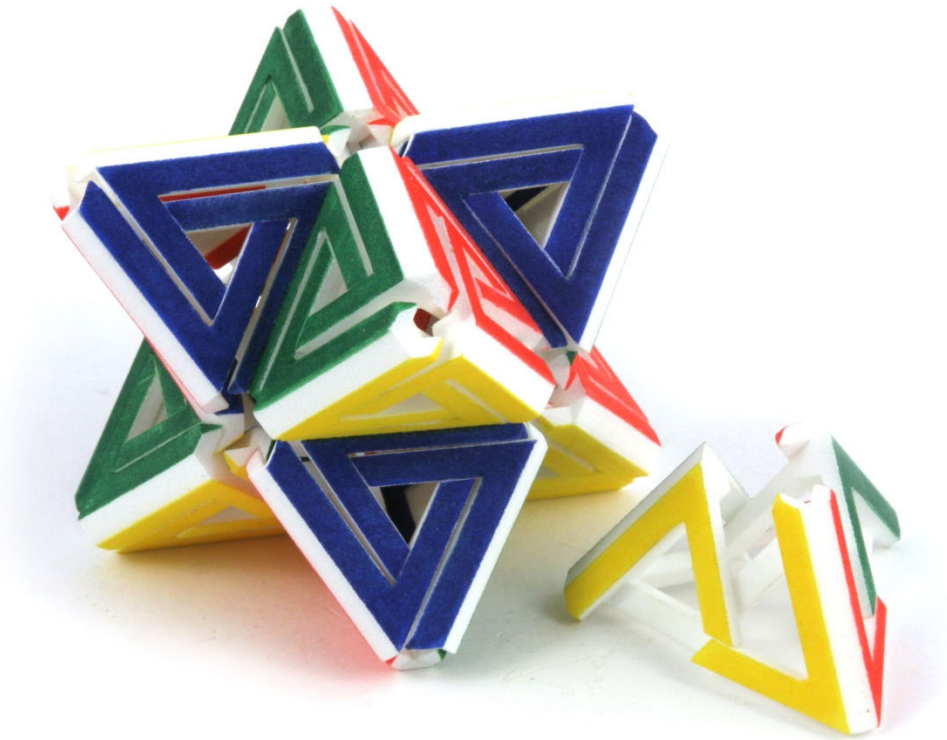
- Assemble a regular octahedron and four regular tetrahedrons (three colors for each face)
- Assemble the stellated octahedron, but with three colors on each face
- Return to the initial state

Materials:

Nylon plastic

Classification:

Interlocking Solid



51

Surround2

Puzzle Goal: Surround the cube with six parts, so that all magnets are engaged and the final shape is stable.

Materials: Rosewood, ebony, oak

Classification: Put-Together



3D Symmetric Silhouette

Puzzle Goal: Assemble the three pieces into various shapes with mirror symmetry.

Materials: Wood

Classification: ASS-CART / 1.2 D assembly

Notes: See opposite page for multiple challenges.



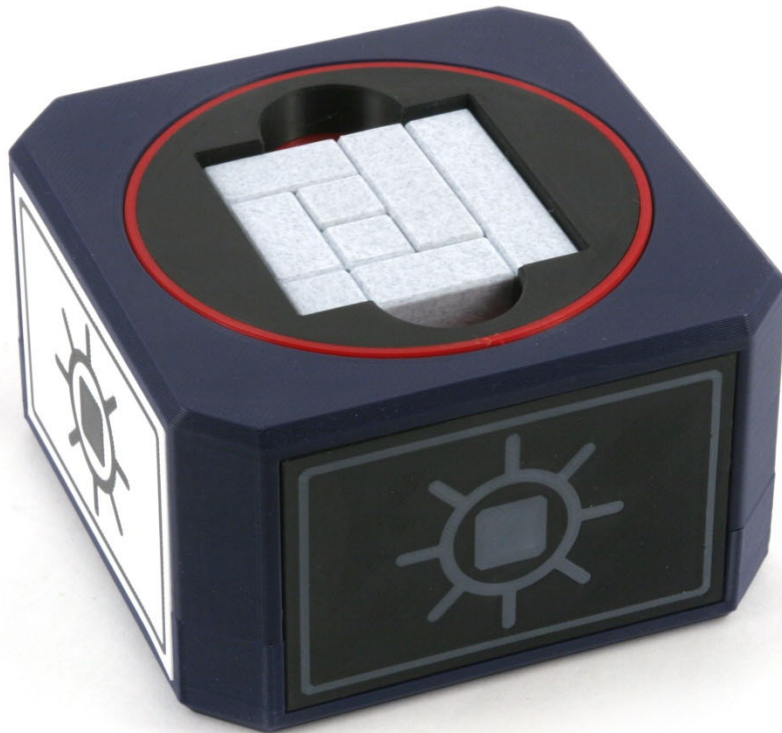
53

TIC Vault

Puzzle Goal: Open the vault and find the ID number/prize.

Materials: PLA plastic, magnets

Classification: Sequential Discovery / Interlocking



54

ze Tooth Fairy Puzzle Box

Puzzle Goal: Perform root canal surgery to open the drawer.

Materials: Wood, choppers, junk

Classification: Slocum 2.1



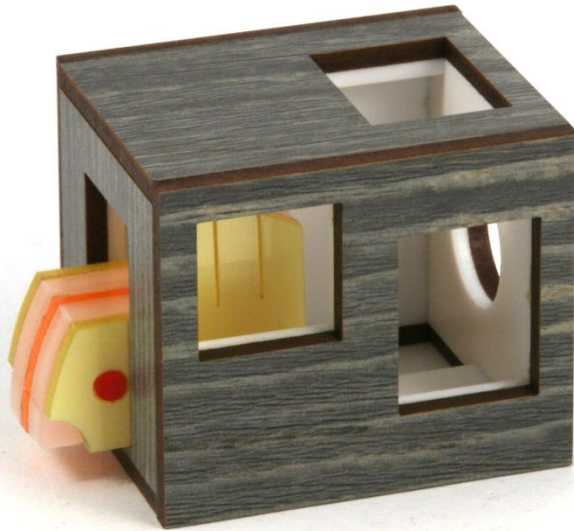
55

Trapped Bird

Puzzle Goal: Free the bird.

Materials: Acrylic, MDF

Classification: Take-Apart



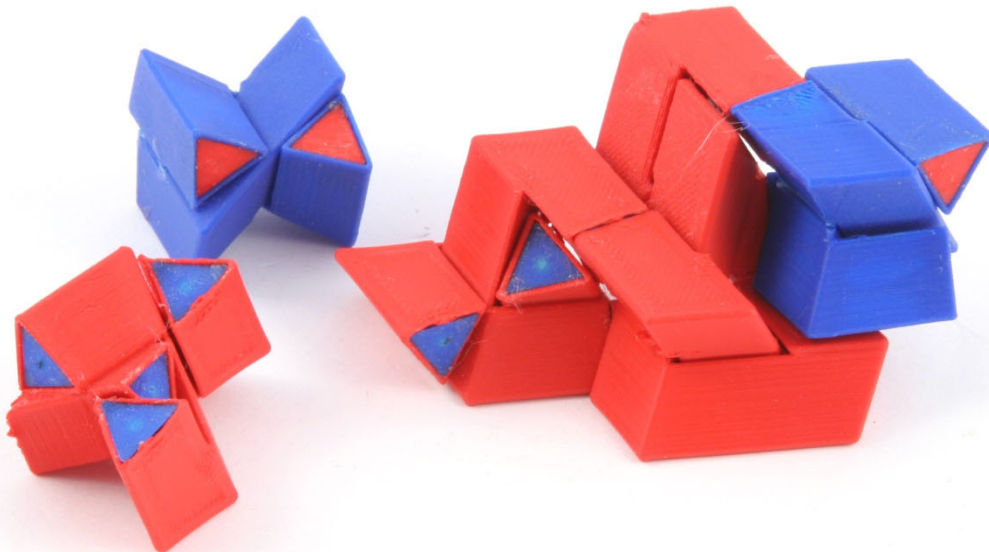
Triturn6

Puzzle Goal: Assemble a complete geometric form.

Materials: Plastic and magnets

Classification: 1.2 3D Assembly (Slocum)

Notes: Each piece has two pairs of magnetic connectors.



57

Tube in Cube

Puzzle Goal: Place the eight logs into the box.

Materials: Elm, bubinga

Classification: Packing



58

23

Puzzle Goal: Pack the four pieces fully into the frame.

Materials: Acrylic

Classification: 2D Assembly



59

Ultimate Snowflake

Puzzle Goal: Fit the pieces in the tray.

Materials: Maple and walnut

Classification: 2D Assembly

Notes: The tips of each snowflake fit into the sides of the adjoining snowflakes: four types of tips and four types of sides.



60

Walter's Radio

Puzzle Goal: Remove the DED chip to deactivate the radio

Materials: Wood, glue

Classification: Sequential Discovery



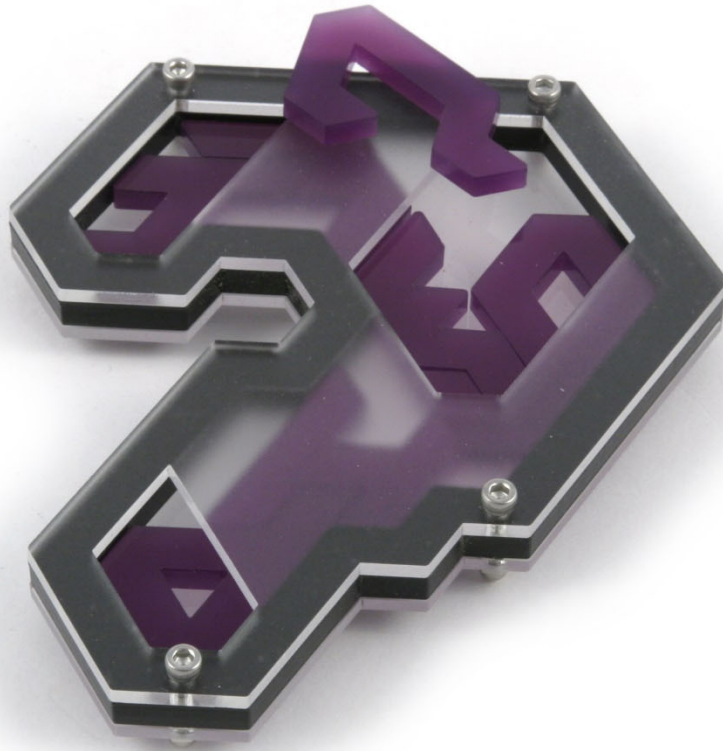
61

WDIGMI

Puzzle Goal: Fit all seven pieces fully into the frame.

Materials: Acrylic

Classification: 2D Assembly



Yes U can

Puzzle Goal:

Place the pieces on a flat surface, then cover completely the Y-shaped piece with the five U-shaped pieces.

Extra challenge: Assemble the six pieces in a 3x3x4 shape so that no holes pass completely through the shape, in any of the three axes. (Covering the Y-shaped piece does not matter.)

Materials:

PLA

Classification:

Slocum 1.2 : 3-Dimensional Assembly

