

# 3D Doodles



tetrahedron



cube

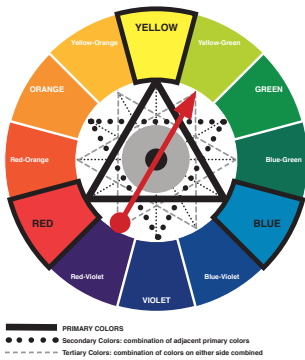


octahedron



icosahedron

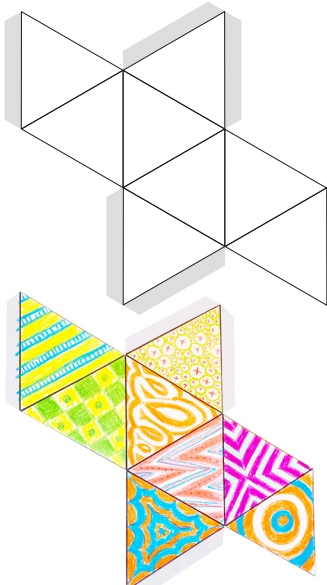
## Color Wheel



## Patterns



## Octahedron Template



## STEPS

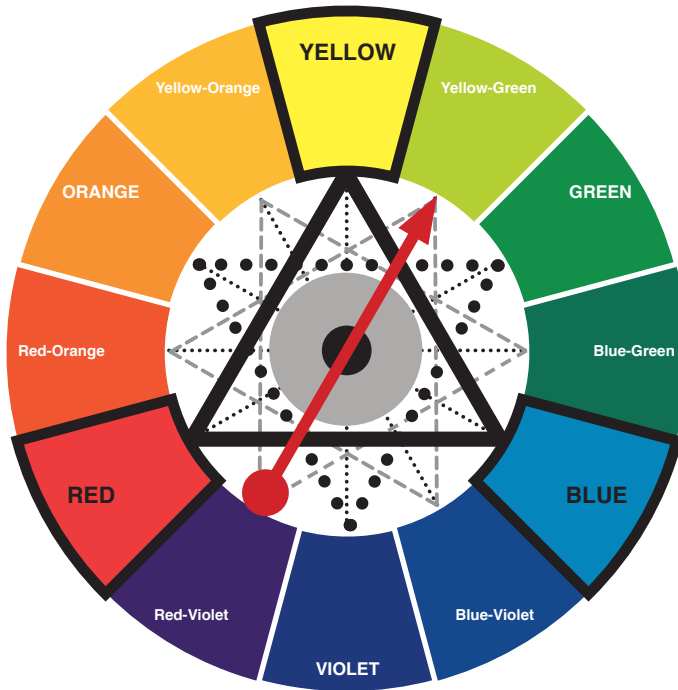
- Using colored pencils or markers, fill in the spokes of the color wheel. To get a desired color, you may need to combine and overlay colors **Templates are available at [LookWhatIDid.org/3d-doodle](http://LookWhatIDid.org/3d-doodle)**.
- With a black marker, draw a pattern in each wheel spoke.

A **pattern** is a design in which lines, shapes, forms or colors are repeated. Patterns can be regular or irregular. Dots in patterns can be different sizes and shapes. Lines can be straight, curved, short, long, dashed, thick or thin. See how many patterns you can come up with!

- Cut out the center circle of each wheel and insert the spinner.
- From our assortment of 3 dimensional shapes, select, output and trim a template. If you have a utility blade, lightly and carefully scoring the black lines to get sharp fold edges. **Download templates at [LookWhatIDid.org/3d-doodle](http://LookWhatIDid.org/3d-doodle)**.
- Take turns spinning for a color and a pattern. Using the spun color, draw the spun pattern. There's no need to exactly copy the pattern – feel free to try something new! When selecting a panel to draw on, try to avoid having the same colors in adjacent panels.
- Color in the white sections of the paper with the complementary color. For instance, if you spun red, you'd use green to fill in the white since it's the color opposite red on the color wheel.
- Once all the panels are filled in, it's time to form it into a 3D shape. Decide which corner you want on top for the hanging and glue the twine inside (with the knot inside to keep it from slipping out).
- Glue the tabs to form the 3D shape. You can also tape or glue gun the shape together, depending on what supplies you have available.
- If you've done this project with another person, step back and admire your work and the wonder of the variety of solutions. There's no right or wrong with art, just different approaches!

*Good luck and have fun!*

## Color Wheel



## Patterns















- PRIMARY COLORS
- Secondary Colors: combination of adjacent primary colors
- Tertiary Colors: combination of colors on either side combined
- Complementary Colors: colors opposite one another on the color wheel

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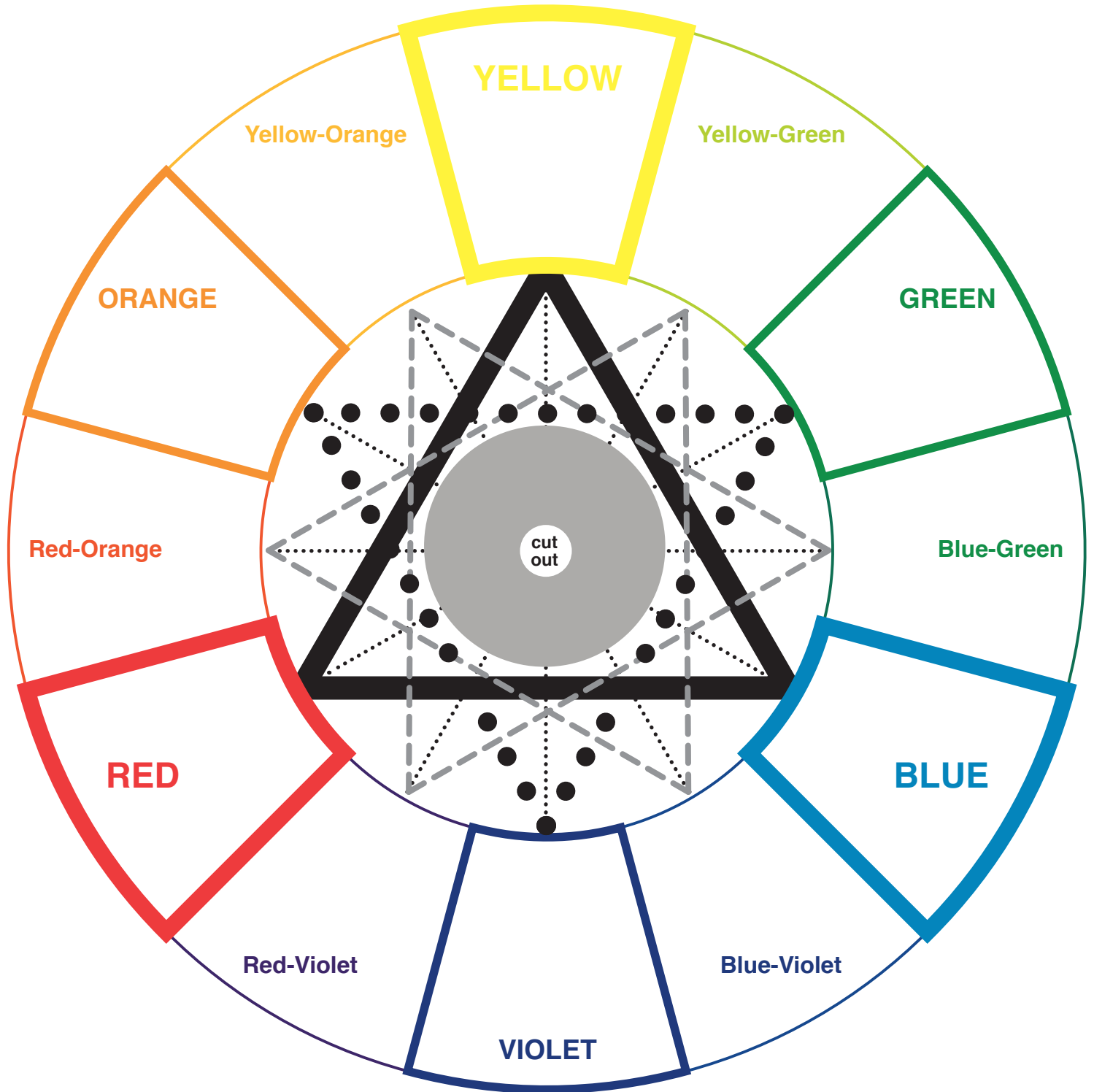
## The Geometry of Solid Shapes

Download templates to make your own 3D shapes at [LookWhatIDid.org/3D-doodle](http://LookWhatIDid.org/3D-doodle)

| Number of faces/sides | Face Shape  | Solid Shape   | Name of Solid Shape      | Platonic Solid: are faces regular polygons?* | Notes   |
|-----------------------|---|---|--------------------------|--|---|
| 4                     | <br>equilateral triangle |  | tetrahedron              | yes  | <b>D4:</b> Each face has three numbers placed at each corner. The roll is the upright number. These die are tossed since they don't roll well.  |
| 6                     | <br>square               |  | cube                     | yes  | <b>D6:</b> The most common die. Typically numbered 1-6 with dots (pips), the opposite faces add up to 7.  |
| 8                     | <br>equilateral triangle |  | octahedron               | yes  | <b>D8:</b> Uncommon die. When numbered 1-8 with dots (pips), the opposite faces add up to 9.  |
| 10                    | <br>kite                 |  | pentagonal trapezohedron | no   | <b>D10:</b> Very uncommon die. The opposite faces typically add up to 9 (0-9) or 11 (1-10).   |
| 12                    | <br>pentagon             |  | dodecahedron             | yes  | <b>D12:</b> The sum of the numbers on opposite faces is typically 13.   |
| 20                    | <br>equilateral triangle |  | icosahedron              | yes  | <b>D20:</b> The oldest known die shape, they are sometimes numbered 0-9 twice. The sum of the numbers on opposite faces is 21 if numbered 1-20. |

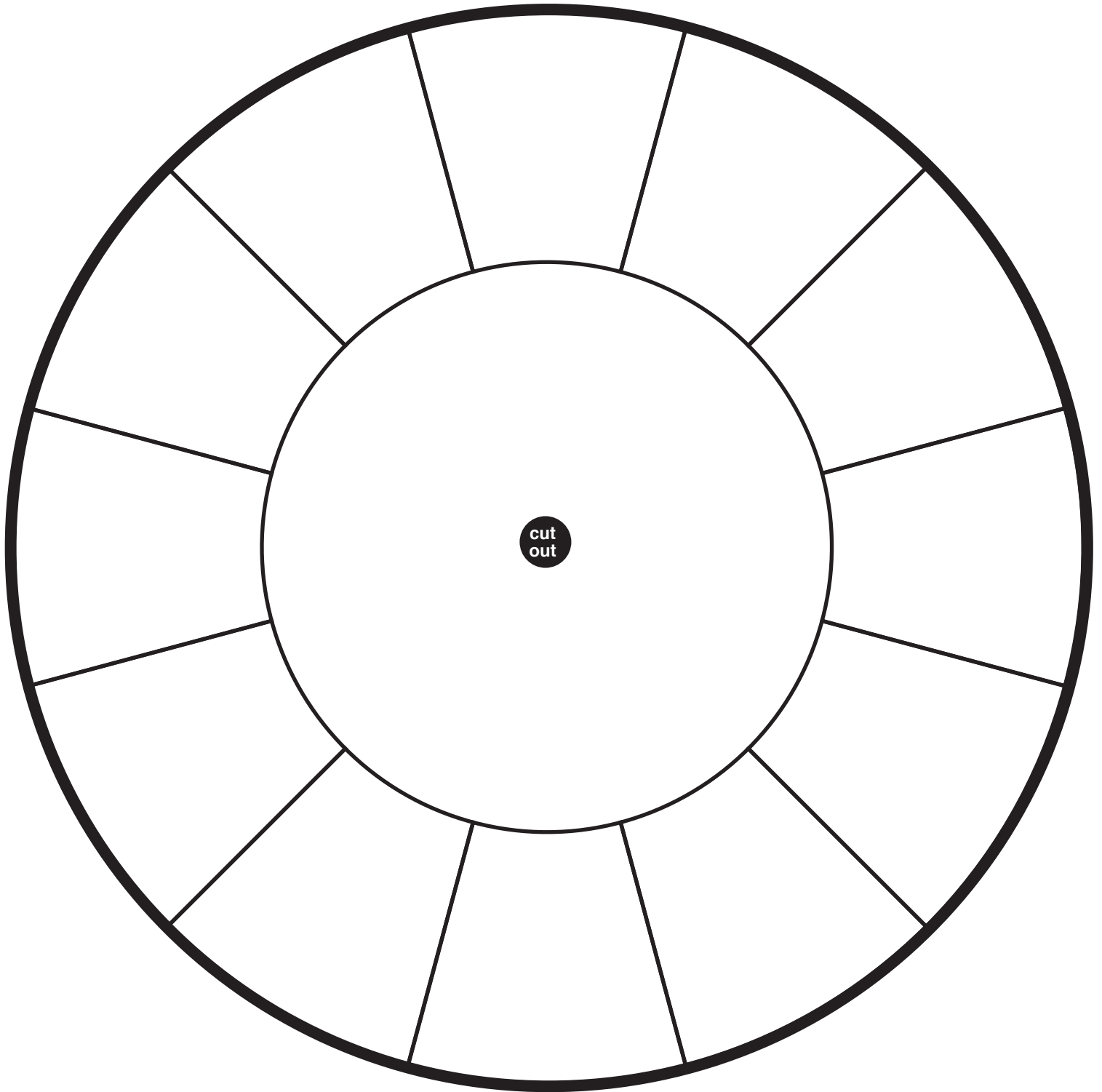
\* **Regular polygon:** a plane figure that is equiangular (all angles are equal in measure) and equilateral (all sides have the same length)

# Color Wheel



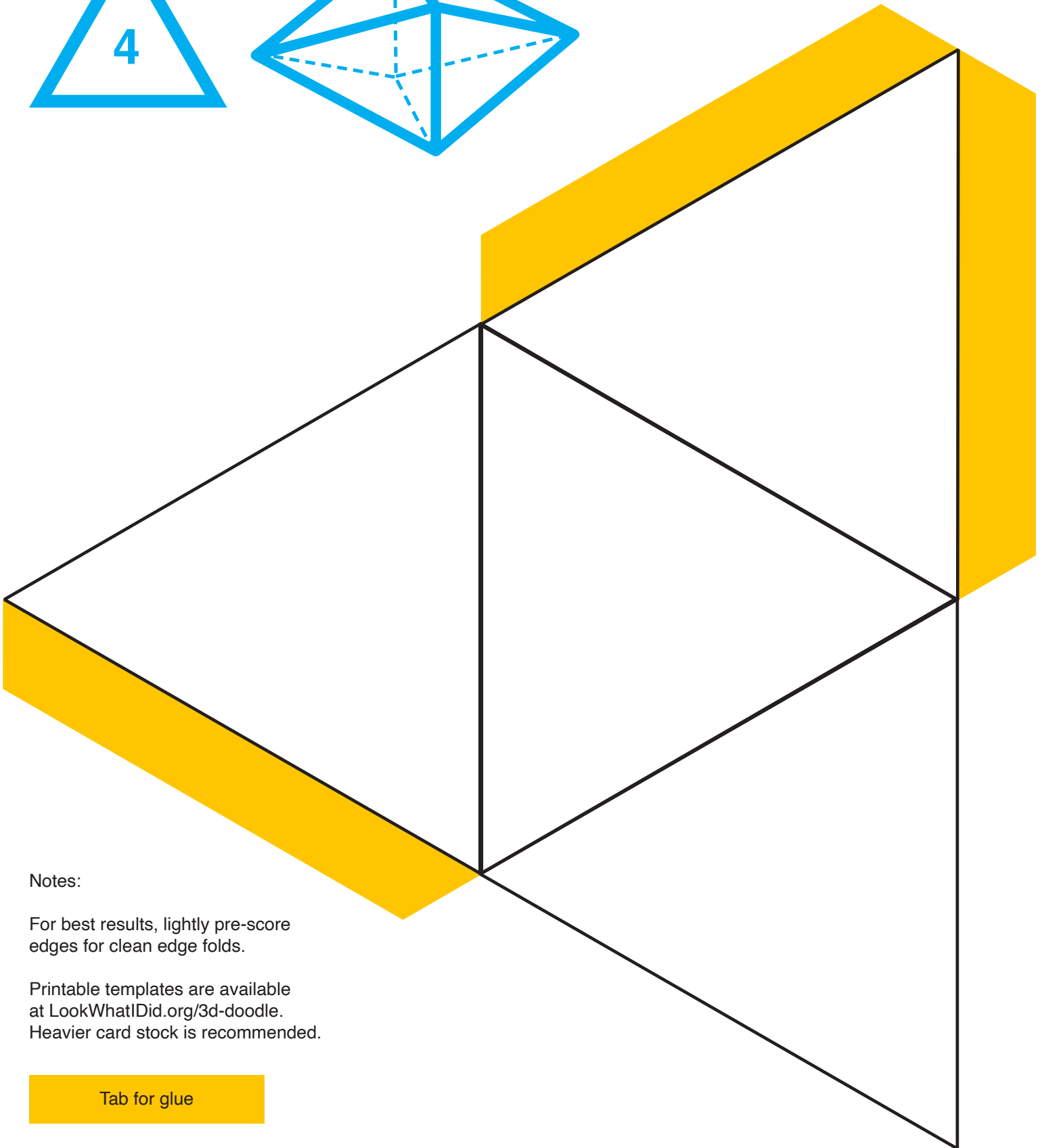
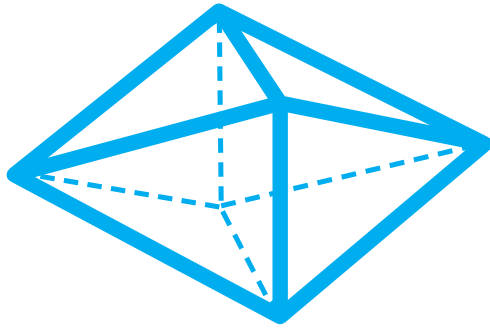
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# Patterns



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See how many patterns you can come up with!**

# tetrahedron / *tetraedros*



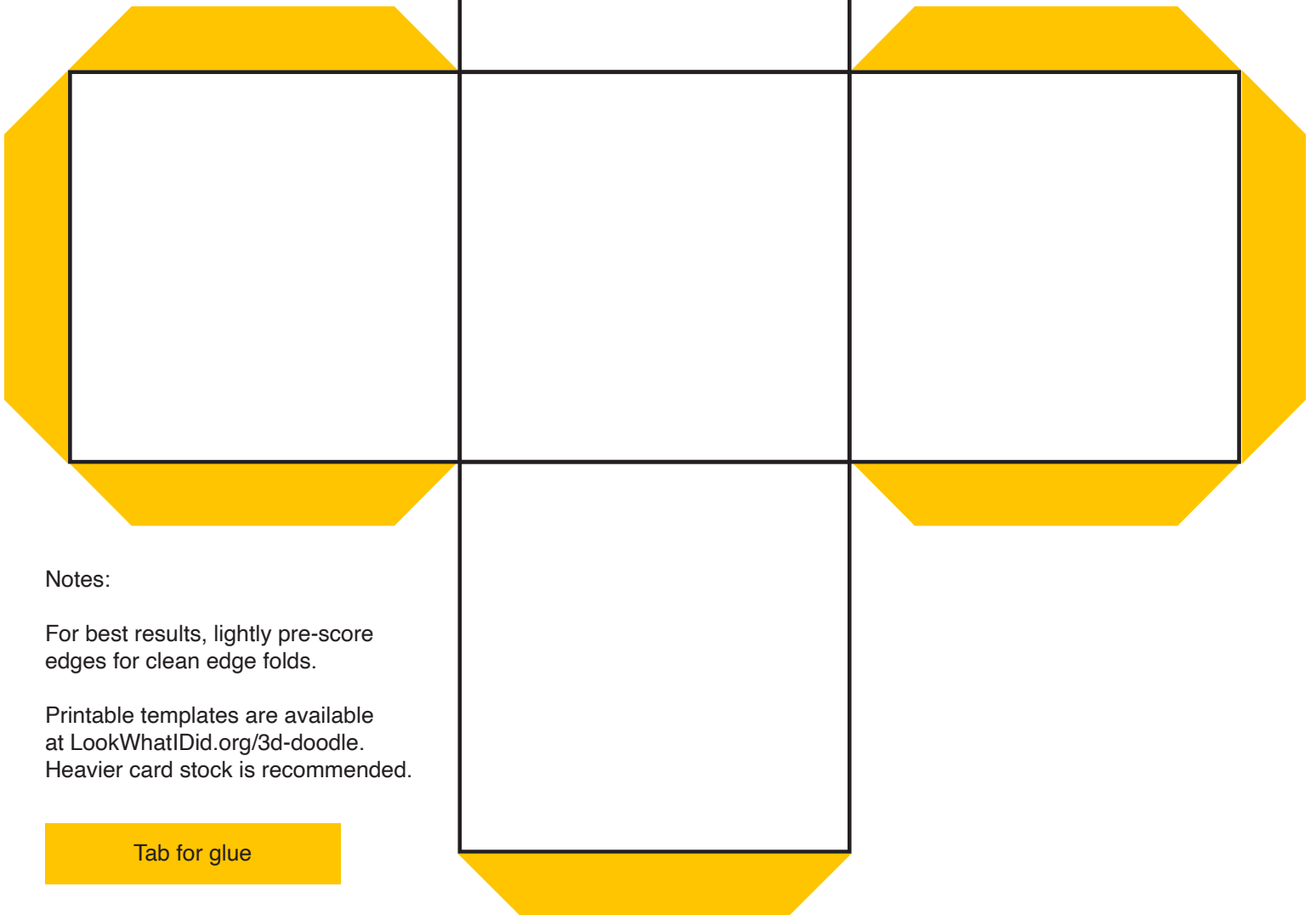
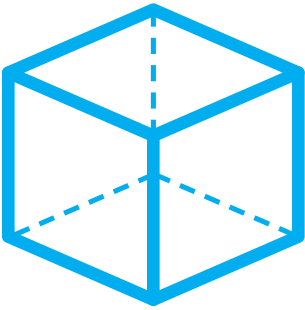
## Notes:

For best results, lightly pre-score edges for clean edge folds.

Printable templates are available at [LookWhatIDid.org/3d-doodle](http://LookWhatIDid.org/3d-doodle). Heavier card stock is recommended.

Tab for glue

# cube / *cubo*



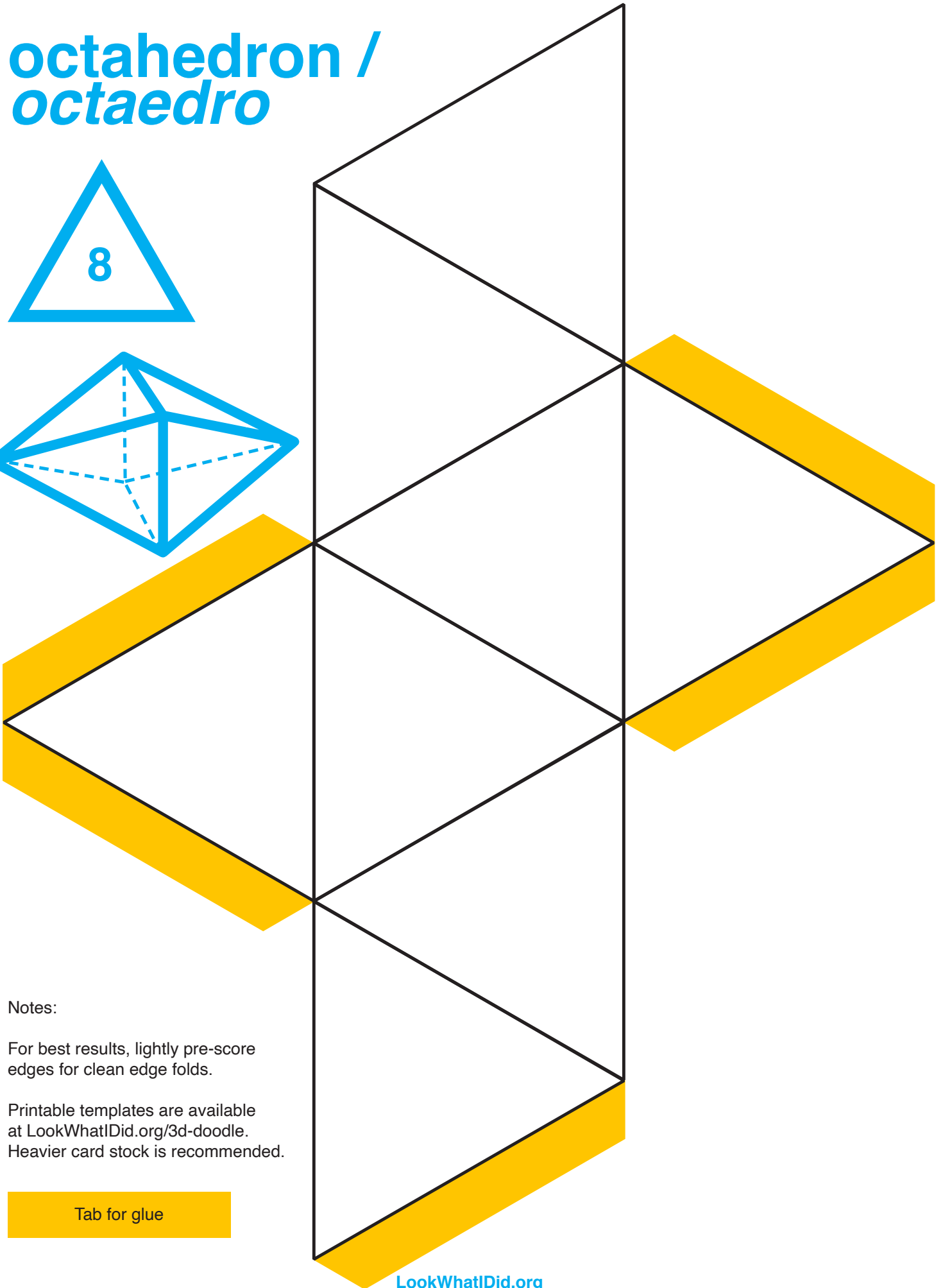
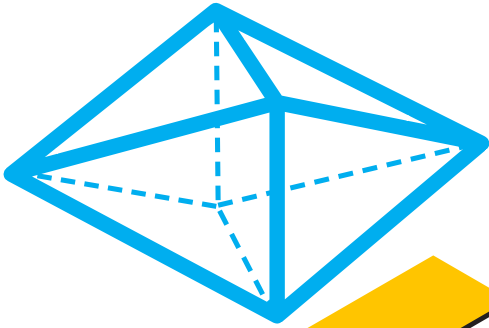
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# octahedron / *octaedro*



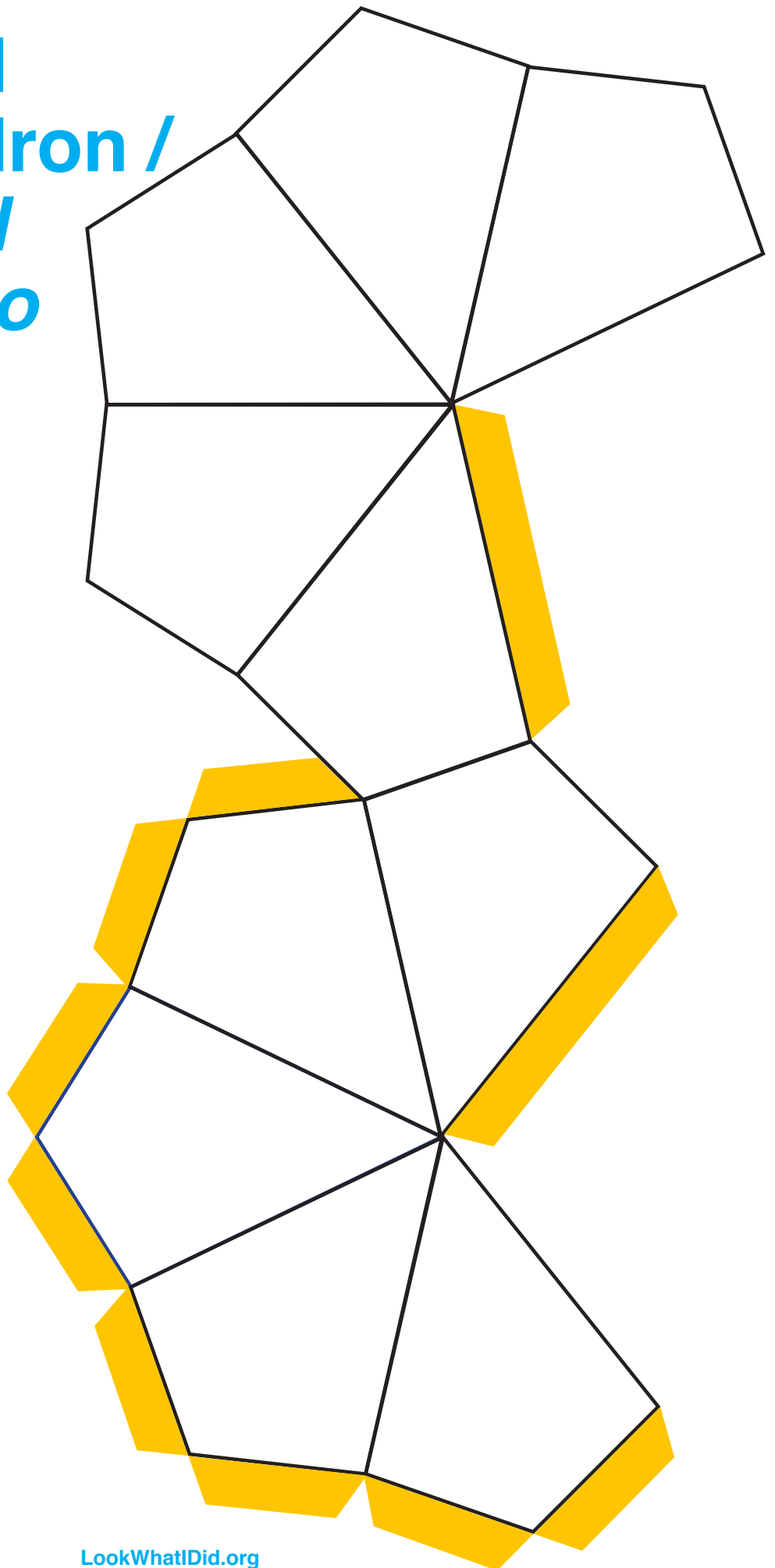
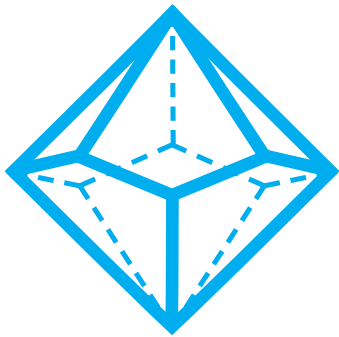
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Tab for glue

# pentagonal trapezohedron / *pentagonal* *trapezoedro*



## Notes:

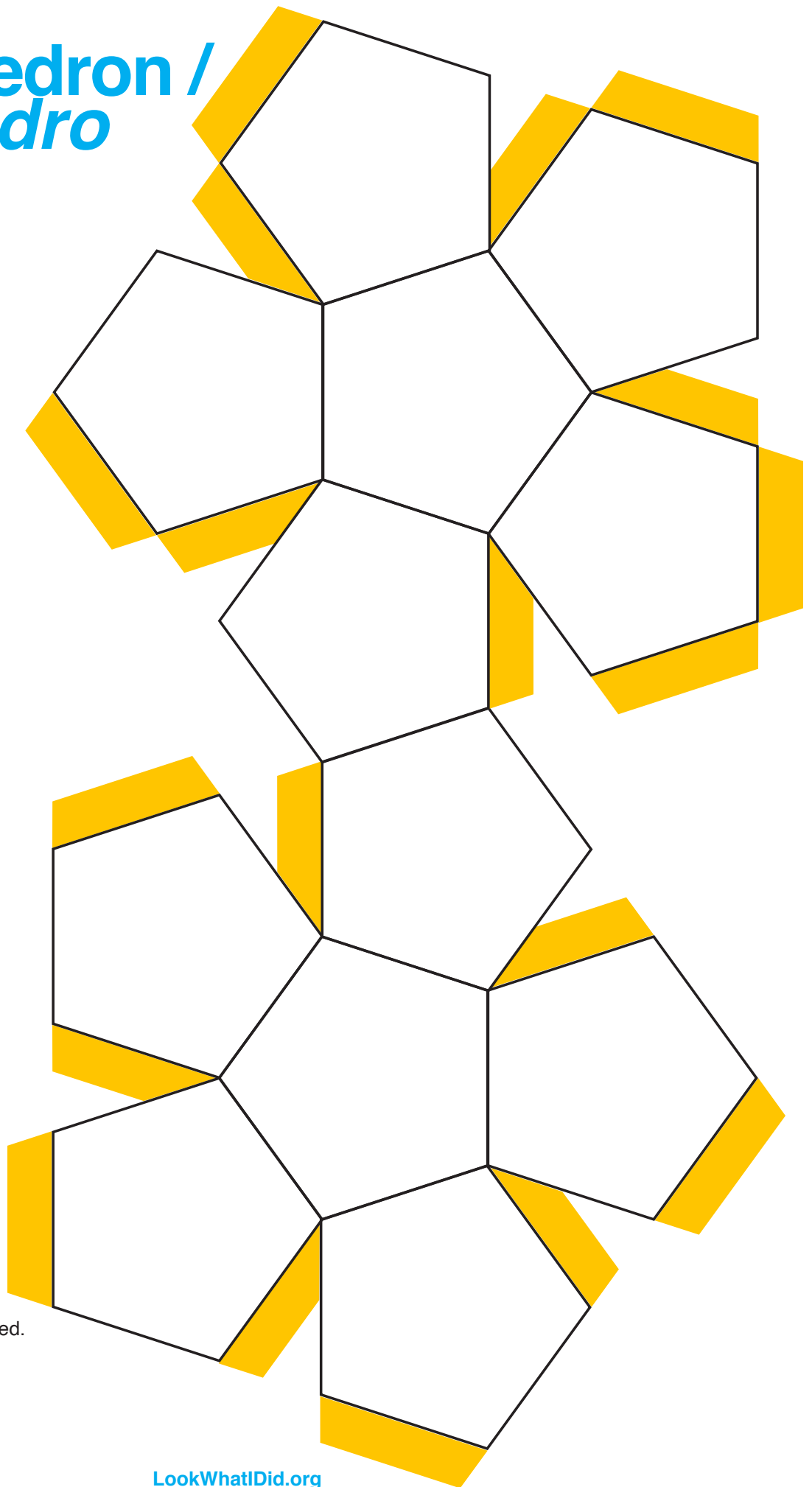
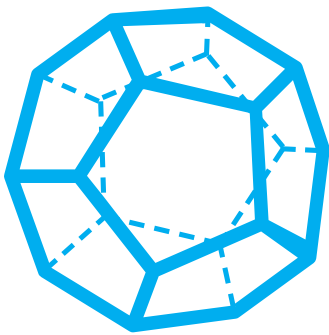
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Tab for glue



# dodecahedron / *dodecaedro*



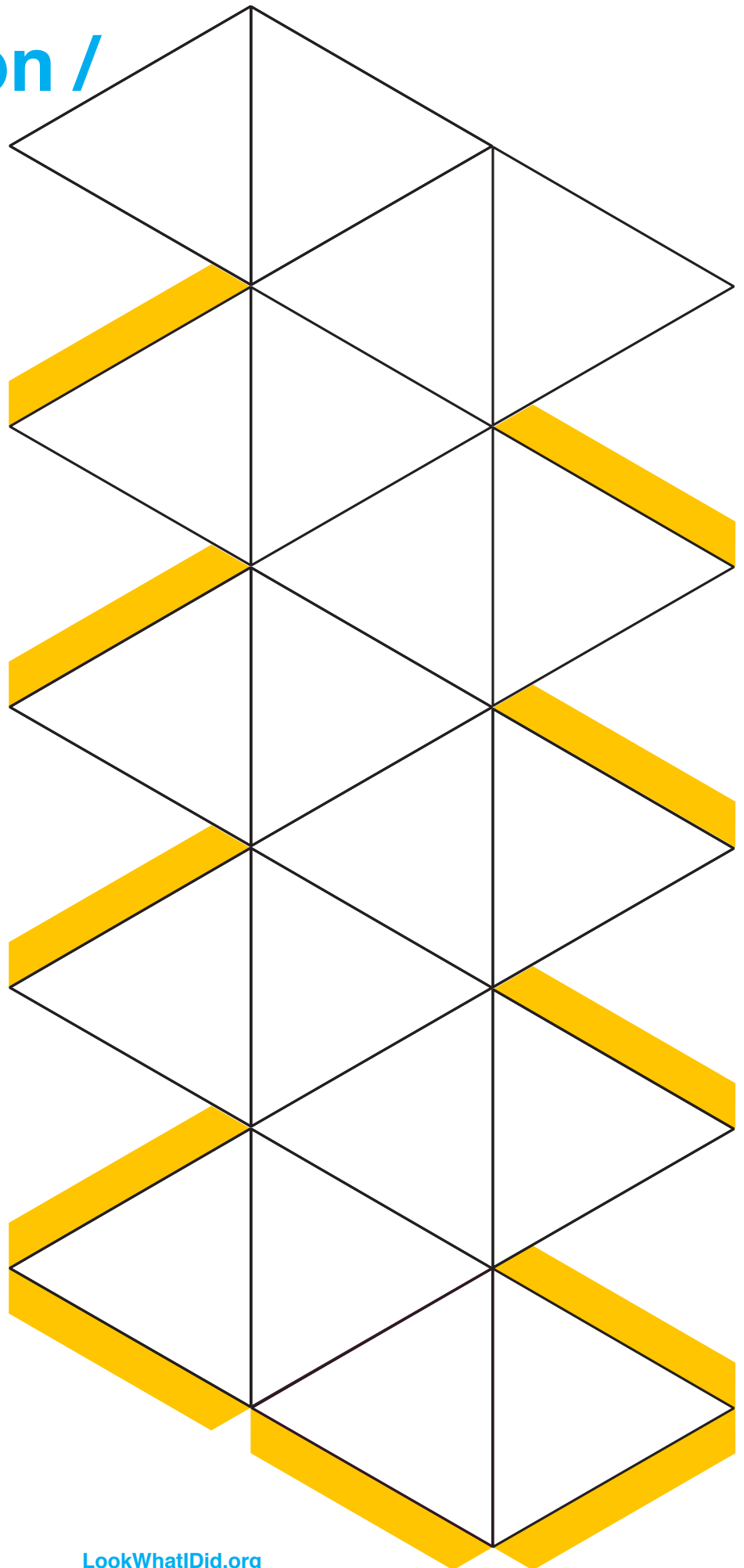
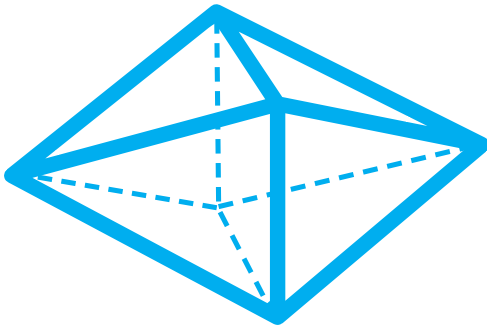
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Tab for glue

# icosahedron / *icosaedro*



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Tab for glue