Presented by

MUSEUM OF OUTDOOR ARTS

Design and Build Competition

2025

Sacred Geometry: Platonic Solids

A National
Art, Architecture & Design Competition

Sixth Annual

Design Brief Launches: November 22, 2024
Opens January 3, 2025
Closes April 19, 2025
Competition Website

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Design and Build Competition Abstract

The Museum of Outdoor Arts (MOA) in Greenwood Village, CO seeks ***conceptual design proposals*** for its 6th annual *Design and Build Competition* from art, architecture, landscape architecture, design and other creatively focused USA based collegiate students, teams, and/or classes.

This year's theme is ***"Sacred Geometry: Platonic Solids"*** and submissions should address the challenge of designing an architectural walk-in structure(s), sculptural form, or landscape installation utilizing one or more of the five platonic solids found in sacred geometry (Dodecahedron, Icosahedron, Octahedron, Hexahedron, Tetrahedron) as the root structure of their design. The design should utilize architecture, landscape architecture, and/or sculpture / art installation as a solution while considering environmental impact and sustainability in use of materials. The final design may also incorporate programming elements, such as music, lighting, projection or other features that enhance the overall experience of the form and user interaction. Furthermore, the design should be situated in one of five provided national park natural settings (sites) and adhere to a budget of $500,000 USD. Contestants' designs will need to respond with their conceptual project under the premise that the structure / sculpture will be utilized by the general public in a publicly accessible setting.

There is **no entry fee** to submit a proposal.

Pre-Register your team for the competition by February 1, 2025.
Proposals are **due by no later than April 19, 2025 (11:59PM MST). Early submissions are encouraged.**

MOA will award the top four entries with the following prize structure*:
1st place- $10,000
2nd place- $7,500
3rd place- $5,000
Honorable Mention- $1,500
*Prizes are divided evenly among all team members.

Winning submissions will be placed on the MOA Design and Build Competition archive website.

Read further for full competition brief with complete entry details.
Visit the competition website to register your entry.

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Design and Build
2024-25 Competition Brief

Organization and Program Background

Museum of Outdoor Arts (MOA)- Greenwood Village, Colorado
The mission of MOA is to *make art a part of everyday life.*

Founded in 1981 by commercial real estate Developer, John W. Madden Jr., Marjorie Madden and their daughter, Cynthia Madden Leitner, ***MOA*** is an arts focused non-profit, private operating foundation, based in the Denver metro area. MOA offers a robust outdoor sculpture collection of over 85 pieces throughout the Englewood and Greenwood Village communities, maintains an indoor art collection, hosts student exhibitions and provides education programs. MOA also owns Fiddler's Green Amphitheatre, which it operates in partnership with AEG Presents. More information can be found at www.moaonline.org.

***Design and Build*- Program Background**
The mission of *Design and Build* is to *motivate invention through collaborative creativity*.

Since 1991, MOA's *Design and Build* education program has provided an opportunity for emerging artists, students and creative minds to express their creativity in collaborative art, architecture and design projects. Since the inception of the program thousands of students have collaborated on a variety of projects. Participants find creative solutions to practical challenges as they master the skills to transform their creative ideas into finished pieces. There are several facets to the program including a summer internship, fellowship, outreach, alumni projects and now a national design competition.

Design and Build Competition
After operating the *Design and Build* program for over 30 years in the Denver metro area, MOA has expanded *Design and Build* to include a national design competition as part of the program. 2024-25 marks the sixth annual national art, architecture & design competition. The goal of the competition is to cultivate potential from emerging artists, architecture, landscape architecture and design students and to allow these creatives the space to conceptualize inventive ideas within a set of boundaries.

The competition garners an online repository of art, architecture, landscape architecture and design concepts. The competition is based on an annual theme and/or challenge provided by MOA and cash prizes are awarded to the top four submissions. It is the goal to one day realize physical prototypes of future winning entries. For now, the competition is purely conceptual.

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Faculty / Educator Note

Key Learning Objectives and Benefits of Student Participation

Participating in an awarded, conceptual art / architecture competition can have several benefits for students, including the following learning outcomes:

- Developing critical thinking skills: Competitions often require participants to approach a problem creatively, which encourages critical thinking and problem-solving skills.
- Gaining real-world experience: Competitions provide students with the opportunity to apply theoretical knowledge in a practical setting. This experience can help prepare students for their future careers.
- Building a portfolio: Competitions provide students with the opportunity to showcase their work and build a portfolio that can be used when applying for jobs or further education.
- Networking: Competitions often bring together professionals from different areas of the industry. This can be an opportunity for students to network and potentially make connections that can help with future career opportunities.
- Building confidence: Participating in a competition can be a confidence booster for students. It can help them develop a sense of pride in their work and build their confidence in their abilities.
- Understanding the importance of design concepts and how to apply them: Competitions often require participants to create a design that meets specific criteria. This can help students understand the importance of design concepts and how to apply them in a real-world setting.
- Learning about collaboration: Competitions often require teamwork and collaboration. This can help students learn how to work effectively in a team and how to communicate effectively with others.
- Developing technical skills: Competitions often require participants to use specific software or tools. This can help students develop technical skills that can be applied in future projects.
- Learning about project management: Competitions often have deadlines and specific requirements. This can help students learn about project management and how to prioritize tasks to meet deadlines.
- Exposure and recognition: Winning or placing in a competition can provide participants with exposure and recognition. This can be particularly valuable for emerging designers who are looking to establish their reputation in the industry.
- Professional development: Participating in a competition can provide participants with a valuable opportunity for professional development. They can gain experience working on real-world design challenges, develop new skills and techniques, and learn from feedback and critiques from judges and other participants.
- Cash prizes or other rewards: Many design competitions offer cash prizes or other rewards for the winners. These rewards can provide participants with financial support and recognition for their work.

Overall, applying to a conceptual design competition can be a valuable experience for designers at all levels of experience. It can help them develop their skills, build their portfolios, and gain exposure and recognition in the industry. In addition, designing for public use can encourage contestants to create designs that are responsive to the needs of the general public, promote inclusivity and accessibility, and contribute to positive social change in the community.

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Eligibility Requirements
The competition is open to any undergraduate or graduate student currently enrolled in any US university (recent graduates are eligible to enter for up to one year from competition open date, post graduation). Students should be studying in the field of art, architecture, landscape architecture, design, engineering, and/or other similar / interdisciplinary programs. Entries can be submitted by individuals or teams. Instructors may choose to implement the competition into their curriculum. Collaborative designs are highly desired. Previous year's competition winners must observe a one-year waiting period before entering future competitions.

Introduction of Theme
Sacred geometry has profoundly influenced architecture and design throughout history, serving as a foundation for the harmonious proportions and symbolic meaning in many iconic structures. Ancient cultures, such as the Egyptians and Greeks, employed sacred geometric principles like the golden ratio and the Fibonacci sequence in constructing temples, pyramids, and other monumental buildings, believing these patterns reflected the divine order of the universe. The intricate patterns of Islamic mosques, Gothic cathedrals, and Hindu temples also embody sacred geometry, with shapes like circles, triangles, and spirals symbolizing unity, balance, and the infinite. This timeless approach continues to inspire modern architecture and design, connecting aesthetic beauty with spiritual resonance.

Plato's platonic solids—five perfect geometric shapes representing the fundamental elements of nature—have deeply influenced art, architecture, and design throughout history. Revered for their symmetry and perfection, these solids inspired classical Greek architecture and Renaissance art, where they symbolized harmony and the cosmos' underlying order. Architects and designers have incorporated their forms into structures like domes, facades, and ornamental details to evoke balance and universal truth. In modern art, they have been reinterpreted in abstract sculptures and minimalist designs, demonstrating their timeless appeal and connection to both mathematical precision and creative expression.

Sacred geometry and Plato's platonic solids are intrinsically linked, with both embodying the mathematical principles and universal harmony that have shaped art, architecture, landscape architecture, and design throughout history. Sacred geometry's patterns—circles, spirals, and ratios—intertwine with the symmetry and elemental symbolism of the platonic solids, inspiring the proportions of classical buildings, intricate mosaics, and sacred landscapes. From the symmetry of Gothic cathedrals to the geometric layouts of Renaissance gardens, these concepts foster a sense of balance and spiritual resonance. Together, they continue to influence contemporary design, blending aesthetic appeal with a profound connection to the natural and metaphysical worlds.

The Challenge
This year the Museum of Outdoor Arts seeks conceptual designs for its next Design and Build Competition. This year's theme is *Sacred Geometry: Platonic Solids* and submissions should address the challenge of designing an architectural walk-in structure(s), sculptural installation, or landscape installation utilizing one or more of the five platonic solids found in sacred geometry (Dodecahedron, Icosahedron, Octahedron, Hexahedron, Tetrahedron) as the root structure of their design. The design should utilize architecture, landscape architecture, and/or sculpture / art installation as a solution while considering environmental impact and sustainability in use of materials. The final design may also incorporate programmatic elements, such as music, lighting, projection or other features that enhance the overall experience of the form and user interaction. Furthermore, the design should be situated in one of five provided national park settings (sites). Contestants' designs will need to respond with their conceptual project under the premise that the structure / sculpture will be utilized by the general public in a publicly accessible setting. The structure(s) can be designed as a temporary or permanent installation. (See Appendix B for examples of the five Platonic Solids).

The concept should be designed for one of five hypothetical national parks sites, within the US. Site options for the 2024-25 challenge include the following US national parks **(choose one site for your design to respond to)**: Glacier National Park (Montana), Arches National Park (Utah), Denali National Park (Alaska), Grand Canyon National Park (Arizona), or Yosemite National Park (California) (see reference images in Appendix A. **Download images**). Contestants may choose any terrain within the boundaries of their selected national park. The site should be assumed to be located in an open space and primarily an undisturbed, natural setting. The final design should not only respond to the selected hypothetical site, but it should also be functional, economical, efficient, environmentally friendly, unique in character and aesthetically pleasing. The final design should not exceed a footprint of three (3) square acres or 130,680 square feet and should utilize primarily natural materials native to the site (earth, natural stone, grasses etc.). The structure / installation does not need to be contiguous within the site and there are no structural square footage restrictions within the 3-acre site. For example, a team may design several structures or installations that fit within the site, but they do not need to be attached and there is no square footage or height limitation, as long as all elements are contained within the 3 square acre site. Winning students may have an opportunity to be engaged in further concept development after the competition concludes.

Furthermore, we want to know how the space would function as a usable space for the public. Are there particular activities, design elements or technologies that will be implemented as part of the design? Please address this through the narrative portion of your proposal by addressing the questions found in the "items to include in your proposal" section of this competition brief.

All contestants must build a physical scale model as part of their proposal. The model may be requested in case of finalist presentation, however, images of this model should be incorporated into the final proposal.

The concept should not exceed a design and build budget $500,000 USD (see budget section for additional information).

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Budget

Concepts should not exceed a budget of **$500,000 USD**. For the purposes of this competition, please assume that the following costs are covered, and do NOT need to be accounted for in the final budget:

- Land acquisition.
- Permitting.
- Environmental assessments.
- Design, engineering, and drawing fees.
- Site preparation (assume a pristine, build ready site).
  - Site-preparation equipment rental.
- Administrative and project management costs.

Budgets **should include** the following categories:

- Foundation work.
  - Additional excavation that is not included in site preparation.
- Structural framework
- Exterior finishes.
- Interior construction.
- Construction Labor.
- Specialized equipment.
- Specialty features / technology / electrical systems.
- Landscaping / Hardscaping.
- Contingency.

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Collaboration
The spirit of *Design and Build* has always been to solve problems and create through collaboration. Collaborative team projects are strongly encouraged and desired, however, all proposals must include narrative about how collaboration would be utilized in realizing the design (i.e. fabricators, engineers and architects must work together to realize any design).

Prizes
MOA will award the top four entries with the following prize structure*:
1st place- $10,000
2nd place- $7,500
3rd place- $5,000
Honorable Mention- $1,500
*Prizes are divided evenly amongst all team members.

Winning submissions will be placed on the MOA Design and Build Competition archive website.
*If entered as a team, prize will be split evenly amongst team members (i.e. If 1st place has 2 team members, each collaborator will receive $5,000).

Competition Review Panel
A panel comprised of MOA Board of Trustees and Executive Staff, and, in some cases, an outside expert(s), will evaluate submissions. While all entries will be submitted digitally, the top proposal teams will be invited to submit a pre-recorded virtual presentation of their submissions for the panel to review. The jury may also request a video conference with finalist teams to answer any additional questions in the decision making process.

2024-25 Panelists
-This year's panelists are comprised of the staff and board of the Museum of Outdoor Arts.

Entries will be scored based on the following criteria. These criteria are worth up to 5 points each:
- Originality
- Artistic/creative expression
- Professionalism
- Addressing the challenge
- Technical proficiency
- Safety
- Collaboration
- Presentation

See items to include in your proposal and important dates on the following pages.

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Items to Include in your Proposal

Proposals should be submitted electronically via the registration website available at: https://moaonline.org/design-and-build-2025-competition/.

Your proposal MUST be submitted as **one multi-*page PDF* file**. The file size may not be larger than 50mb. **Files not in PDF format and multiple file submissions will be automatically disqualified!**

Your proposal MUST include all of the below items **in THIS order**. Incomplete proposals will be disqualified. All pages of proposals must be formatted for horizontal tabloid sized paper (11"x17").

- **Cover Page**
  - Project Image(s)
  - Project title
  - List all contestant names, year in schooling, major/program and affiliated university. Include email and phone number for each contestant.
  - In case of team/class entry, designate **one** team member to be the primary point of contact. Note your team's designated contact on the cover page.
- **Resume/CV and Biography** Tell us about your team. Include a resume/CV and brief biography for each team member. May not exceed one page per team member.
- **Site Selection**
  - Provide a site description and answer the following: What site was selected and why? How does your design reflect the site you selected? Do not exceed one page.
- **Project drawings/renderings/Documentation**
  - At least three but no more than seven pages should be dedicated to drawings/renderings of the proposed design. You may include as many images as you would like, but this section of your proposal must not exceed seven pages of your proposal. At least one image MUST be an elevation view in the context of the selected site. Other drawings/renderings can include detail, cross section, site plan views and other renderings. *A weblink to digitally animated rendering(s) may also be included.
  - Documentation images of a physical scale model of the concept (Limit to no more than 5 images should be included as part of this up to seven page section).
- **Project narrative.** Explain your concept by answering the below questions **in numbered order.** Limited to 3,000 words total.
  1. How does your design relate to the theme of *Sacred Geometry: Platonic Solids*?
  2. Describe the proposed materials, including native materials, and methods used to build/install your structure/artwork/installation.
  3. Describe how your concept will be constructed? How long would construction take?
  4. How was collaboration utilized in realizing the design?
  5. How will your structure/installation be used by the public? How was safety addressed?
  6. What type of technology is implemented in your design, if any?
  7. What makes the design environmentally friendly / sustainable?
  8. Open question: Is there anything else you would like to tell us about your proposal?
  9. Provide an estimated budget. (3,000 word limit does not apply to this requirement but the budget should be limited to one page.)

VI. Submission Instructions

- Please submit your entry via the competition registration form available at: https://moaonline.org/design-and-build-2025-competition/.

Competition Instructions in Summary

- Read the Design Brief thoroughly and familiarize yourself with the proposal requirements.
- Form a team and **pre-register**.
  - Although, not a requirement to participate in the competition, pre-registration is a benefit, which allows us to reach out with helpful tips and resources along the way. You do not need to have your final team formed to pre-register. This simply lets us know that you are interested in participating in the competition. While team work is highly encouraged, individuals are also able to participate.
- Select a site and brainstorm your concept.
- Create your proposal, model and budget.
  - You will need to create a scale model of your concept and document this photographically to include within your proposal. Finalists may be asked to submit their physical model.
  - Adhere to the budget requirement, not to exceed $500,000 USD, and formulate budget.
  - Make sure you have followed directions and included all items from the “Items to include in your proposal” page within the design brief.
- Submit your proposal as one combined PDF file with all required elements via the submission portal by no later than April 19, 2025 (11:59PM MST).

Please see our contact details on the following page and reach out with any questions along the way. Our competition resource guide and FAQ is also a very helpful tool to explore and is updated frequently throughout the competition. The guide will be available at the opening of the competition.

MOA Contact

Please do not hesitate to reach out with any questions about the competition. We are here to help and want to make sure you are able to submit the best possible proposal. We offer conference/video calls and site visits, if desired.

Tim Vacca
Design and Build Program Director
MOA
303-353-1712
designandbuild@moaonline.org

Downloadable Reference Images, FAQs and additional supplemental information will be available on the Competition Website when Competition Opens.

Schedule & Important Dates

- October 31, 2024
Competition Announced

- November 22, 2024
Design Brief Published

- January 3, 2025
Competition Opens

- April 19, 2025 (11:59pm MST, GMT-7)
Competition Closes / Submission deadline

- May 2025
Finalist proposals selected

- May/June 2025
Finalist proposal presentations (via video conference)

- July 2025
Winning entries announced

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Appendix A

Site Reference Images

Contestants should select one of the five following national parks
in which to base their conceptual design:
Glacier National Park (Montana), Arches National Park (Utah), Denali National Park (Alaska), Grand Canyon National Park (Arizona), or Yosemite National Park (California)

Provided images are simply meant to inspire a sense of place in the consideration of your design.

The site should be assumed to be located in an open space and primarily an undisturbed, natural setting. Additional site reference images should be sourced by contestants.

Below site reference photos are available for download here.

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Site Option #1
Glacier National Park (Montana)

With pristine alpine landscapes, turquoise glacial lakes, and dramatic peaks, some of this national park's highlights include Going-to-the-Sun Road, Many Glacier, and Lake McDonald.

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Site Option #2
Arches National Park (Utah)

With over 2,000 natural sandstone arches and vibrant desert scenery, some of this national park's highlights include the Delicate Arch, Double Arch, and the Fiery Furnace.

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Site Option #3
Denali National Park (Alaska)

With North America's tallest peak, vast tundra, and untouched wilderness, this national park's highlights include Mount Denali, Wonder Lake, and wildlife like bears and moose.

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Site Option #4
Grand Canyon National Park (Arizona)

The sheer size and colors of the Grand Canyon are unmatched, with layers of rock that tell millions of years of Earth's history. This national park's highlights include Sunrise or sunset at Yaki Point or Hopi Point, the dramatic South Rim vistas.

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Site Option #5
Yosemite National Park (California)

Towering granite cliffs like El Capitan, cascading waterfalls, and serene meadows make Yosemite an iconic marvel. Some of this national park's highlights include Yosemite Valley, Glacier Point, and the giant sequoias at Mariposa Grove.

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Appendix B

Platonic Solids

The following are examples of Plato's five platonic solids.

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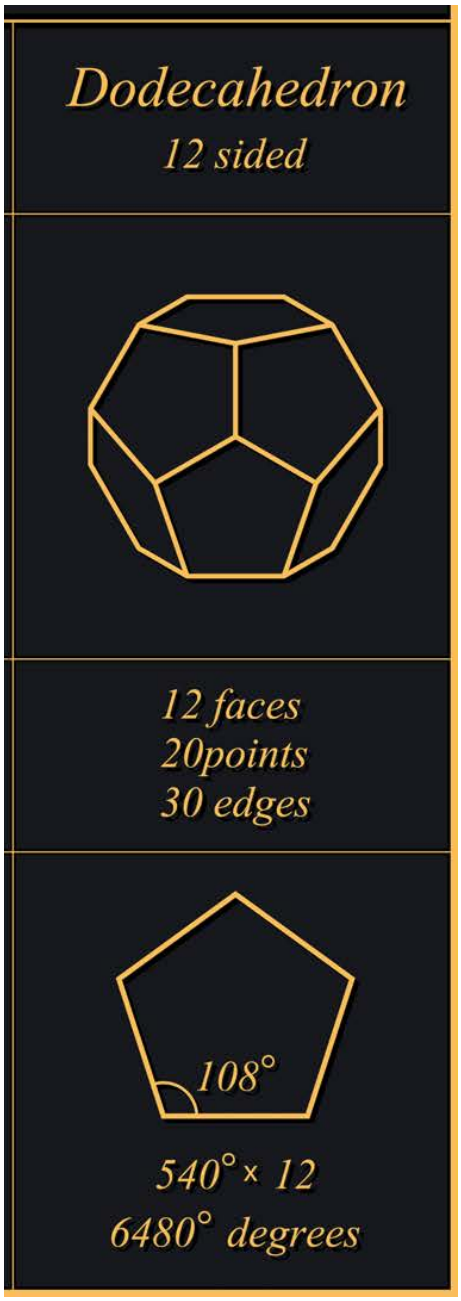
Example #1
Dodecahedron

A dodecahedron is a three-dimensional shape with 12 regular pentagonal faces, 30 edges, and 20 vertices. As one of the five Platonic solids, it is highly symmetrical, with each face and angle being identical. Often associated with harmony and the universe, it has inspired applications in art, design, and philosophy throughout history, and represents the Universe.



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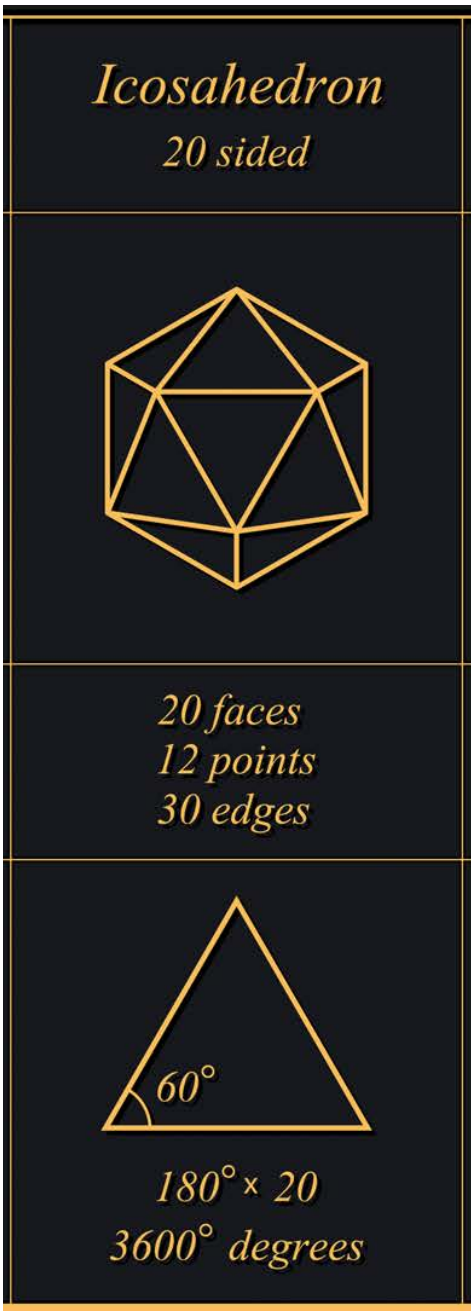
Example #2
Icosahedron

An icosahedron is a three-dimensional geometric shape with 20 equilateral triangular faces, 30 edges, and 12 vertices. It is one of the five Platonic solids, known for its high symmetry and aesthetic appeal. Frequently associated with water in Platonic philosophy, it has influenced art, design, and architecture as a symbol of balance and unity, and represents Water.



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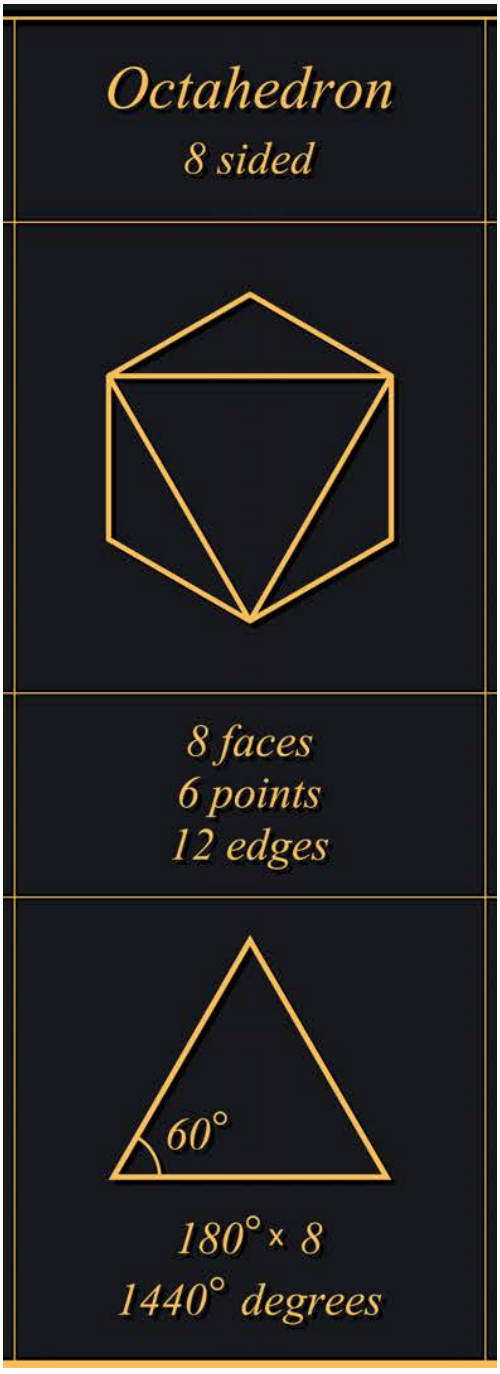
Example #3
Octahedron

An octahedron is a three-dimensional geometric shape with 8 equilateral triangular faces, 12 edges, and 6 vertices. As one of the five Platonic solids, it has high symmetry, with all faces and angles being identical. In Platonic philosophy, it is associated with the element air and has inspired uses in art, architecture, and design for its elegant, balanced form, and represents Air.



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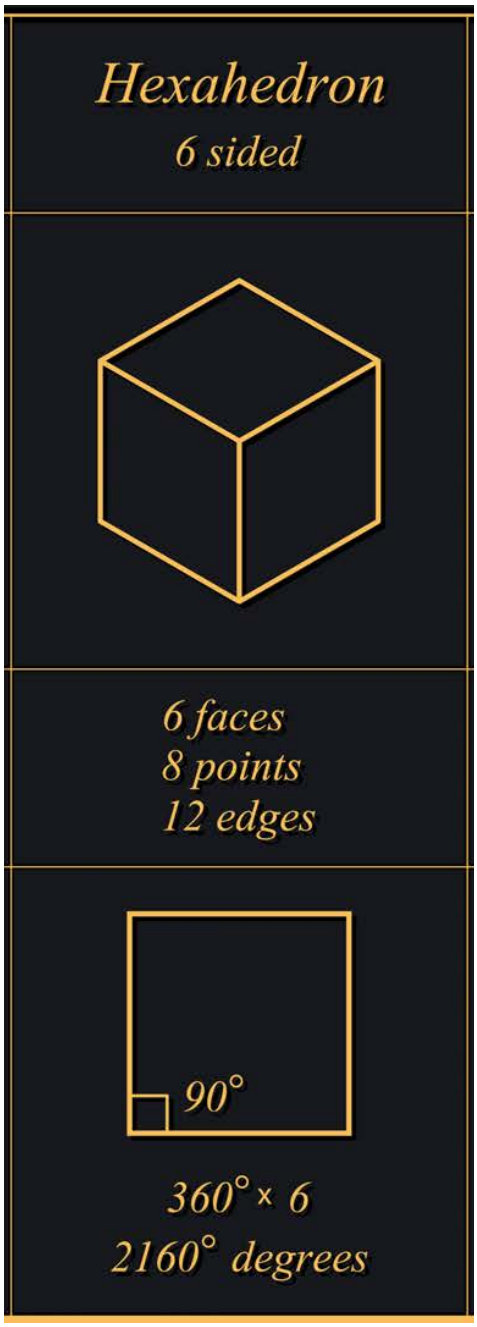
Example #4
Hexahedron

A hexahedron, commonly known as a cube, is a three-dimensional geometric shape with 6 square faces, 12 edges, and 8 vertices. It is one of the five Platonic solids, characterized by its symmetry and uniform angles of 90 degrees. Revered for its simplicity and stability, the hexahedron has been widely used in architecture, design, and symbolism across cultures, and represents Earth.



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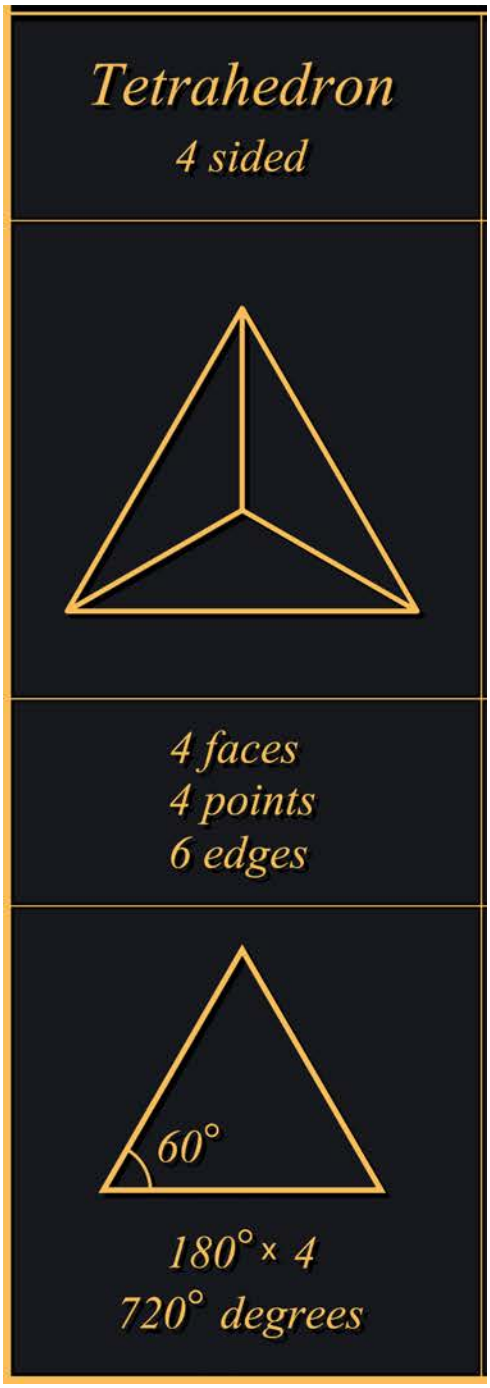
Example #5
Tetrahedron

A tetrahedron is a three-dimensional geometric shape with 4 equilateral triangular faces, 6 edges, and 4 vertices. As the simplest of the five Platonic solids, it is highly symmetrical, with all faces and angles being identical. Often associated with fire in Platonic philosophy, it has inspired art, design, and architecture as a symbol of simplicity and dynamic balance, and represents Fire.



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