Distance Learning at the Cleveland Museum of Art

**Form, Function, and Faith**  
*Grades 8-12*

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How to Prepare Your Class for the Distance Learning Presentation

Teacher Information will be sent or made available to you prior to the program.

Please familiarize yourself with the materials and discuss them with your class.

Have the Teacher Information Packet (T.I.P.) materials on hand in the classroom, ready for the program. These materials may be used during the videoconference.

Be prepared to facilitate by calling on students yourself during the lesson. Students are sometimes initially shy about responding to questions during a distance learning lesson.

Explain to students that this is an interactive medium and encourage them to ask questions.

Reinforce topics discussed in the program by asking students to complete some of the suggested pre- and post-conference activities in the Teacher Information Packet.

We ask teachers, after the program, to please fill out the Evaluation Form and return it to:

Dale Hilton/Distance Learning
The Cleveland Museum of Art
11150 East Boulevard
Cleveland, OH 44106

Thank You!
Teacher Information Guide

Distance Learning at the Cleveland Museum of Art

Form, Function and Faith
*Grades 8-12*

**Program Objectives:**
1. Students will explore the relationship between building form and function and be introduced to the concept of functional morphology—that the building takes shape based on its intended use.
2. Students will discover and compare three historic sacred landmarks, which focuses the lesson on diversity of design and diversity of worship traditions.
3. Students will be introduced to reading architectural plans and will participate in interactivity during the videoconference in which they follow a floor plan while viewing the building it represents.
4. Students will be introduced to the concept of sacred geometry.

**Common Core Standards:**
*English Language Art & Literacy in History/Social Studies, Science, and Technical Subjects-

8th Grade
**CCSS.ELA-Literacy.SL.8.1**
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on *grade 8 topics, texts, and issues*, building on others’ ideas and expressing their own clearly.

**CCSS.ELA-Literacy.W.8.6**

**CCSS.ELA-Literacy.WHST.8.6**
Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

**CCSS.ELA-Literacy.W.8.7**

**CCSS.ELA-Literacy.WHST.8.7**
Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

Grades 9-10
**CCSS.ELA-Literacy.SL.9-10.1**
Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.W.9-10.6
CCSS.ELA-Literacy.WHST.9-10.6

Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

CCSS.ELA-Literacy.W.9-10.7
CCSS.ELA-Literacy.WHST.9-10.7

Conduct short as well as more sustained research projects to answer a question (including a self generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Grades 11-12

CCSS.ELA-Literacy.SL.11-12.1
Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.W.11-12.6
CCSS.ELA-Literacy.WHST.11-12.6

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

CCSS.ELA-Literacy.W.11-12.7
CCSS.ELA-Literacy.WHST.11-12.7

Conduct short as well as more sustained research projects to answer a question (including a self generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Math-

High School
CCSS.Math.HS.G.12
Make formal geometric constructions with a variety of tools and methods

National Education Standards:
For Fine Arts - Visual Arts (grades 5-8, 9-12):

- Understanding and Applying Media, Techniques, and Processes
- Understanding the Visual Arts in Relation to History and Cultures
- Making Connections Between Visual Arts and Other Disciplines
For Language Arts - English (grades K-12):

- Reading for Perspective
- Reading for Understanding
- Evaluation Strategies
- Communication Skills
- Communication Strategies
- Applying Knowledge
- Developing Research Skills
- Multicultural Understanding

For Mathematics – Geometry (grades 6-8, 9-12):

- Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.
- Use visualization, spatial reasoning, and geometric modeling to solve problems.

For Mathematics – Measurement (grades 6-8, 9-12):

- Understand measurable attributes of objects and the units, systems, and processes of measurement.
- Apply appropriate techniques, tools, and formulas to determine measurements Apply transformations and use symmetry to analyze mathematical situations.

For Social Sciences – Geography (grades K-12):

- Places and Regions
- Human Systems
- Environment and Society

This program lets students explore the relationship between building form and function by focusing on three Cleveland area historic houses of worship: St. Theodosius, an Orthodox Church, Temple Tifereth Israel, a synagogue and the Kirtland Temple—a 19th c. Community of Christ (Latter Day Saints) Church. Through extensive interactivity students will be introduced to architectural history and to the use of geometry and mathematics in order to understand how these buildings compare in their design. This teacher information packet concentrates on architectural functional morphology, diversity, neighborhood characteristics, and data sources.
Selected Vocabulary:

**Barrel Vault** - Roof type which is based on the arch, as if the arch was elongated to cover the space below.

**Byzantine** - Related to architectural features developed in the eastern Mediterranean between the 4th – 15th c. Prominent buildings in this style display massive domes rising from square bases, plain exteriors, mosaics, and decorative marble inlays enriching the interior.

**Cross Arms** - End sections of a church containing chapels, narthex, and choir.

**Federal** - Architectural style popular in the U.S. circa 1776-1830, featuring classical details based on ancient Greek architecture such as columns, pediments. Additional features include fanlights—semicircular windows above the main door, urn shaped decorations, and festoons.

**Georgian** - Architectural style popular in the U.S. during the 18th c. Elements include steep gabled roofs, symmetrical facades, pediments, and columns flanking the front door.


**Gothic** - Style of architecture widespread in Europe from the 12th to the 15th c. Features of churches built in this style include rose windows, buttresses, and pointed arches.

**Gothic Revival** - Architectural style around the middle of the 19th c. borrowing elements from Gothic architecture such as flying buttresses, crenellation (alternating open and solid spaces, as seen on the tops of castles) and tracery—intricate doily-like cut out patterns.

**Greek Revival** - Architectural style popular in the U.S. from c. 1830-1875. Columns and pediments borrowed from Greek architecture characterize this style.

**Icon** - In the Orthodox Church a sacred representation of Jesus, Mary, and the saints.

**Iconostasis** - The screen separating the sanctuary of an Orthodox Church from the area where the congregation worships. It is usually ornately decorated with icons.

**Narthex** - Entry area (usually) at the western end of the church, rectangular vestibule.

**Nave** - Central section of the church interior, running from the narthex to the area in which the transverse arms cross.

**Sanctuary** - A holy building, the area within the building where the congregation worships.
Prior to the Program:

For the Teacher: Read the article included in this packet: A Guide to Good Design: Pleasing proportions borrowed from Nature. Discuss with the class concepts covered in the article such as The Golden Ratio in nature and art and the Fibonacci series.

For the Students: (Copy the enclosed set of images for each student or pass around a few sets for small group work.)

Prerequisites:

1. Recognize basic geometry in design. Artists, architects, and designers use basic shapes as part of their visual vocabulary. In this Teacher Information Packet there are images of art work from The Cleveland Museum of Art which can be used to heighten students’ awareness of geometry as a design component. These works of art and many of the buildings covered in the videoconference derive from the concept of the Golden Ratio which is also known as Sacred Geometry. In a two-dimensional work of art, one can see these basic proportions in lines and shapes on the page or on the canvas. In many buildings, proportions derived from the Golden Ratio are used to shape the interior space. When one walks inside, the space has a pleasing, satisfactory feel.

   Using the **RECOGNIZE BASIC GEOMETRY** artwork sheets included in this packet, have students try to discern how the various elements of these designs relate to the whole proportionately and whether Sacred Geometry is involved. Discuss basic shapes students perceive in these paintings and sculptures and where else they may be found in their environment.

2. Draw a floorplan of the classroom. Each student should draw a basic floor plan of the classroom in order to understand how to read plans. They will also gain a sense of the relationship between plans and actual size of building and rooms, etc. Students will see a floor plan of one of the buildings in the videoconference and should be able to follow along. **Note:** If desired this can be a good team teaching exercise as you may wish to engage other colleagues such as Art, Shop, Math and/or Drafting teachers to assist with this part of the pre-requisite.

   **Materials:** For each student - plain unruled paper, tracing paper, pencil, eraser, architect’s scale or the copy of the architect’s scale included in this packet, ruler or other straight edge to draw along. Tracing paper can be used to easily copy and transfer drawing to a clean piece of paper if changes in the drawing are necessary. Copy for each student of **DRAW A FLOORPLAN** and drawing conventions (symbols) included in this packet. Copy of architect’s **SCALE** included in this packet.

   **Procedure:** Make a copy for each student of **DRAW A FLOORPLAN**, the drawing conventions and the architect’s **SCALE** included in this packet. Have students measure
the classroom being sure to note the following dimensions: height, width, length of the room and number, placement, and size of windows and doors, for example. Students should then choose a scale in which to draw the plan of the classroom, for example ¼” = 1’ or 1/8” = 1’. A floor plan of the classroom should be drawn by each student with room dimensions noted on plan.

3. Analyze the plans of Kirtland Temple. This exercise increases student’s spatial awareness and their ability to recognize the applied geometry of architecture.

**Materials:** For each student: copy of plans of the Kirtland Temple plus one extra copy of Side North Elevation sheet (thus each student’s set will contain 2 North Side elevations in addition to the other plans), copy of architect’s scale or ruler, and pencil. **Note: Please bring these plans to the videoconference room as students will be asked to use them as part of the distance learning lesson.**

**Procedure:** Using the architect’s scale and your imagination answer the following questions about Kirtland Temple, one of the buildings featured in the videoconference.

How high is the façade from the top of the pediment to the bottom of the front steps? How wide is the façade? What are some of the basic shapes you see in the façade? What materials do you imagine were used in this building? What do you imagine the space is like on the inside? (Try to take a cue from what you know about the outside of the building.)

**Optional project:** (scissors and tape needed)
After the videoconference have students cut out each elevation and tape it to the proper side of the floor plans, so that there will be one wall attached to each side of the floor plan. The result is a model of the Kirtland Temple.

**Teaching Extensions:**

**Visual Arts**

1. **Additional Work with Geometric Forms:** Visit the Cleveland Museum of Art website using the following directions to view art and artifacts from the collection. Identify basic geometric shapes found in each item. Optional: If the art object is two-dimensional, also list what form it would be if it were a three-dimensional solid. For example:

<table>
<thead>
<tr>
<th>Title</th>
<th>Identification No.</th>
<th>2 Dimensional shape</th>
<th>3 Dimensional solid (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Francis Kneeling before Christ on the Cross</td>
<td>1962.36</td>
<td>Triangle</td>
<td>Pyramid</td>
</tr>
</tbody>
</table>

**Procedure:**
1. Go to The Cleveland Museum of Art’s collection online at [http://www.clevelandart.org/art/collections](http://www.clevelandart.org/art/collections)
2. Click on the card that says “Collections Online.”
3. In the search box on the left side of the page, type the identification number (accession number) for the object which is found in the list below these directions. Press the blue “Search” button.
4. Click on the thumbnail image of the artwork.
5. When the object is visible, determine the overall geometric shape (or smaller patterns or parts of the object) and what it would be if it were a three dimensional solid. This information can be entered into a table such as the one in the example above.

<table>
<thead>
<tr>
<th>CMA Object</th>
<th>Identification No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virgin and Child Enthroned</td>
<td>1968.206</td>
</tr>
<tr>
<td>Virgin and Child with the Young St. John the Baptist</td>
<td>1970.160</td>
</tr>
<tr>
<td>Angel</td>
<td>1962.257</td>
</tr>
<tr>
<td>Plaque from a Reliquary Shrine</td>
<td>1953.275</td>
</tr>
<tr>
<td>Ornamental Brooch</td>
<td>1930.231</td>
</tr>
<tr>
<td>Disc Reliquary</td>
<td>1926.428</td>
</tr>
<tr>
<td>Crucifix with Scenes of the Passion</td>
<td>1995.5</td>
</tr>
<tr>
<td>The City (by Agnes Martin)</td>
<td>1991.30</td>
</tr>
<tr>
<td>First Theme (by Burgoyne Diller)</td>
<td>1973.211</td>
</tr>
<tr>
<td>Homage to the Square (by Joseph Albers)</td>
<td>1965.1</td>
</tr>
</tbody>
</table>

**Social Studies**

2. The following set of exercises aids students in understanding houses of worship and other historic buildings in the context of their communities. Sacred landmarks represent focal points of social and cultural activities, in their neighborhoods and are often a node for social service delivery. Not only do these buildings and their congregations serve to anchor neighborhoods but can give poignant form to the history and often changing demographics of the area. Selected websites feature information about houses of worship and historic buildings. Used in conjunction with census records these sites give a contextual setting to the buildings and familiarize students with data sources.

**Web exercise for Ohio/Cuyahoga County students:**

**Project 1**
Have students look at their neighborhood to answer to the following questions-

1. Are there any sacred landmarks?
2. Are there lots of city streets or just a few?
3. Is the population sparse?
4. Are there any bodies of water?
5. Are there any commercial, industrial buildings?
6. Are there apartment/condominium complexes or single family homes?
7. What do the maps and statistics reveal that a person would not see by walking or driving around the neighborhood?
8. What does a person know from being in the neighborhood that the maps, charts, and statistics do not tell one?

Projects for students who are beyond Ohio/Cuyahoga County (Ohio/Cuyahoga County students can do these as well):

Project 1
In this videoconference, we focus upon three historic houses of worship from Cleveland, Ohio. Most communities contain significant historic buildings and houses of worship as well. This exercise promotes students’ exploration and research of their own community’s historic resources.

Using the following website: [http://www.loc.gov/pictures/collection/hh/](http://www.loc.gov/pictures/collection/hh/) and answer the questions below. You may also reach the site by typing into your search engine: Built in America. To navigate the site, go to Geographic under “Browse by” on the left hand column. Select your state and county. Choose three (3) buildings that are located in your area. Respond to the following questions:

a. For what were the buildings used? (i.e.: a home, church, meeting place, etc.)
b. Do you see any similarities between the 3 buildings?
c. Is the building still standing? Is it still in use? For what purpose? (extra research may be needed to answer these questions)
d. What geometric shapes or solids can you find in these buildings?
e. Is there something that stands out to you about the building? Why? Is there a purpose for that design element?

Project 2
During the videoconference we discussed sacred landmarks and sacred geometry. The following website contains accessible information about both topics. This exercise adds to the students’ familiarity with these concepts.

Website scavenger hunt:

[http://witcombe.sbc.edu/sacredplaces/sacredness.html](http://witcombe.sbc.edu/sacredplaces/sacredness.html)

1. Why would a person, place, or object be considered sacred?
2. Must all sacred objects be man-made?
3. Name 3 sacred objects that are man-made (found on the website)
4. Mount Fuji in Japan is named after whom? It is believed to be what?
5. In many cultures water is seen as a primordial giver of life. What does the Koran and the holy books of the Hindus say that corroborate this belief?

Project 3
Design a sacred place of your own. Describe what it looks like, how it is built and of what material it is constructed. Tell how the building is used, by whom, and why the place is to be considered sacred. Create illustrations and plans to accompany the written description.
Project 4
Use the Exploration Worksheet below to carefully study the sacred places presented and record basic information about these landmarks. Notice and write down the basic geometric shapes you see on each building. Then compare and contrast the three. You may consider basic designs, geometric shapes and forms, decoration or artwork inside or outside, materials, and or how these buildings function for their respective congregations.
## Form, Function, and Faith Exploration Worksheet

<table>
<thead>
<tr>
<th>Name of Building:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td></td>
</tr>
<tr>
<td>Year Built:</td>
<td></td>
</tr>
<tr>
<td><strong>Basic Geometric Shapes Present:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Compare:</strong> Similarities between the three</td>
<td></td>
</tr>
<tr>
<td><strong>Contrast:</strong> Differences between the three</td>
<td></td>
</tr>
</tbody>
</table>
Resources for Further Study:

About architecture

About Sacred Geometry

About the Community of Christ
Anderson, Karl Ricks, Joseph Smith’s KIRTLAND Eyewitness Accounts


Hawkins, Chad S. *The First 100 Temples.* Salt Lake City, Utah: Eagle Gate, 2001.

Launius, Roger D. *The Kirtland Temple: A Historical Narrative*

Lauper, Claudia Bushman and Richard Lyman Bushman. *Mormons in America*
New York: Oxford University Press, 1999


Video: *Journey of the Saints*
2002 Community of Christ Communications
1001 West Walnut, Independence, Missouri 64050
* The first 11 minutes of this deal largely with the Kirtland Temple and serves as an introduction for visitors.

About Orthodox Christianity
Carlton, Clark. *Understanding Orthodox Christianity: An Orthodox Catechism*
Salisbury, MA: Regina Orthodox Press, 197

[http://oca.org/MVhistoryintroOCA.asp?SID=1](http://oca.org/MVhistoryintroOCA.asp?SID=1)
About Judaism

http://www.jewfaq.org/


Additional support provided by the Ohio Urban University Program, The Northeast Ohio Research Consortium and the Sacred Landmarks Partnership of Northeast Ohio. Special thanks to Dr. Michael J. Tevesz of Cleveland State University, Director, Center for Sacred Landmarks.
KIRTLAND TEMPLE
A National Historic Landmark

This sturdy structure in a quaint, quiet village in the northeastern Ohio hills stands as a vivid reminder that Kirtland was once the home of a 19th century communitarian group. The temple stood at the center of community life for the 2,000 seekers who called Kirtland home by 1838. Within a year, all but 100 left the village of Kirtland.

Located just east of Cleveland, the Kirtland Temple was the first temple for the followers of Joseph Smith, Jr., founder of the Latter Day Saint movement in western New York in 1830. Dedicated in 1836, the Kirtland Temple was one of the largest buildings in Northern Ohio. It is a combination of Greek, Georgian, Gothic, and Federalist architectural styles. The building is designated a National Historical Landmark and is recognized by The Architects Society of Ohio and The Ohio Historical Society.

The Latter Day Saints began construction of the building in the summer of 1833. They quarried sandstone from south of the Temple and cut native timbers from the surrounding forests. The exterior walls were coated with blue-gray stucco with pieces of pottery and glass embedded in it to create a sparkling effect. The roof shingles were most likely dipped in red lead paint, and the front doors were painted olive green. As a result of preservation concerns and aesthetic traditions, the exterior colors of the Temple have evolved over the years.

The pulpits and the pews are among the distinctive features of the interior. Two sets of pulpits grace the main floor with another two sets on the second floor. The seats in the pew boxes are benches that can be shifted from the back to the front, thus making it possible for the congregation to face either the front or the rear pulpits. The main floor of the Kirtland Temple was used for various services of worship, and the second floor was a school for the ministry. The third floor contained rooms for the “Kirtland High School,” (nearly 135 to 140 students attended) and the “Kirtland, Ohio Theological Institution,” (among the first five seminaries in the state of Ohio). Church leadership meetings were held in the rooms in the evening. The west room on the third floor was Joseph Smith, Jr.’s office.

Considered an exciting piece of Western Reserve history, the Kirtland Temple is open for tours throughout the year. The building is also used at various times for special services and classes. The Lower Court of the Kirtland Temple hosts a community Thanksgiving, Christmas, and Easter service each year.

Directions to Kirtland:
Kirtland is located in Northeast Ohio, twenty-two miles east of Cleveland. Suggested routes for reaching Kirtland: From the west, take I-90 east to exit #193 (Mentor and Kirtland) and follow Route 306 south for 1.1 miles.

From Cleveland Hopkins Airport, follow 480 east to I-271 north to I-90 west to exit #193 (Mentor and Kirtland). Follow Route 306 south for 1.1 miles.
Architectural Styles of the Kirtland Temple

The design of the Kirtland Temple is an eclectic mix of architectural styles. Below is a list of architectural elements that may fall under each various styles.

- Federal: The entrance doorways with elliptical fanlight windows above. The rectangular shape of the Temple. The east and west windows with incorporated fan and oval forms. Narrow columns and moldings around the windows and doors. Tooth-like dentils along the exterior cornice and interior vaulted ceiling of the first floor. Protruding dormer and pediment design.
- Georgian: quoins framing the four exterior corners of the Temple.
- Greek Revival: Doric columns throughout the upper and lower courts. Grecian fretwork, egg-and-dart designs over the pulpits, three part windows on the east and west walls. Cornice: wide trim gable and band (divided into two parts) along the east and west exterior walls.
- Gothic Revival: pointed arch windows on all four exterior walls.

Community of Christ

The Community of Christ traces its heritage to the Latter Day Saint movement. The movement originated in the early nineteenth century in New York state, an area experiencing a great deal of religious and social revival, commonly known as the “burned over district.”

In the years that followed, Joseph Smith Jr. had what he later described as significant religious experiences. In response to these experiences he was instrumental in translating and publishing the Book of Mormon, and as a result, a church was organized on April 6, 1830. For the next fourteen years the followers of Joseph Smith, Jr., commonly known as “Latter Day Saints,” created and abandoned communities in Kirtland, Ohio; Independence, Missouri; Far West, Missouri; and Nauvoo, Illinois.

Following Joseph's death, the church was in a state of confusion and disorganization and divided into numerous factions. The largest group moved westward to the Great Salt Lake Valley under the direction of an influential church leader, Brigham Young. Smaller factions scattered in all directions spreading into Texas, Wisconsin, Minnesota, Pennsylvania, and several small groups returned to Kirtland for short periods of time.

Members of these smaller groups began to join together again and in the 1850s they formed what would become Community of Christ. They believed that Joseph Smith Jr. had designated his eldest son, Joseph III, to be his successor as president of the church. Calling their religious community, the Reorganized Church of Jesus Christ of Latter Day Saints (RLDS), the church was officially organized under the leadership of Joseph Smith III on April 6, 1860. This small group differed from the Latter Day Saints in Salt Lake City by speaking out against polygamy and various other theological practices.

On the 171st anniversary of the church’s founding in 2001, the name of the RLDS Church was officially changed to the Community of Christ, a name that more adequately represents the church’s theology and mission.
NOTES ON THE ORTHODOX CHURCH

The Orthodox Church is also termed the Eastern, Greek, or Greco-Russian Church. It constitutes a family of Churches, situated mainly in Eastern Europe: each member church is independent in its internal administration, but all share the same faith and are in communion with one another, acknowledging the honorary primacy of the Patriarch of Constantinople (or Oecumenical Patriarch).

At present the Orthodox communion consists of the following self-governing or autocephalous Churches:

1. The four ancient Patriarchs of Constantinople, Alexandria, Antioch, and Jerusalem;
2. five Patriarchates of more recent origin: Russia, Serbia, Romania, Bulgaria, and Georgia;
3. The Orthodox Churches of Cyprus, Greece, the Czech Republic and Slovakia, Poland, and Albania.

To these must be added certain ‘autonomous’ Churches, which are self-governing in most respects but do not enjoy full independence: Finland, China, Japan, and the monastery of Sinai. An autocephalous Orthodox Church of America is in process, but is not yet generally recognized as such.

Historically, what is today known as ‘the Orthodox Church’ developed from the Church of the Eastern Roman or Byzantine Empire; the predominant cultural influence has thus been that of Greece. The Orthodox world first became limited on its Eastern side in consequence of the Monophysite and Nestorian schisms during the 5th-6th centuries; as a result, the Patriarchates of Alexandria and Antioch were greatly reduced in numbers and importance. Then from the 9th century onwards there came an increasing estrangement between the two great sees of Rome and Constantinople, and this led eventually to an open and lasting schism. The final breach between Greek and Latin Christendom is usually assigned to the year 1054, but in fact the schism was a gradual and complicated process, and its beginning cannot be exactly dated.

The chief doctrinal points at issue between the two sides were the Papal claims and the *Filioque* (a statement in the Creed); on the level of liturgical usage great tension was caused by the question of ‘azymes’ (leavened and unleavened bread).

Attempts at reconciliation were made by the Councils of Lyons (1274) and Florence (1438-9), but the Unions proclaimed at these two councils were never accepted by the Orthodox East at large and remained ineffective.

ORTHODOXY, as a religious system, means right belief, doctrine, and worship, as contrasted with heresy. The word is used especially of those Churches in Eastern Christendom which are in communion with Constantinople, collectively described in ancient times as ‘the holy, orthodox, catholic, apostolic Eastern Church’ and today as the ‘Eastern Orthodox’ to distinguish them from the separated bodies known collectively as the “Oriental Orthodox Churches”.


THE CHURCH EDIFICE… is considered to represent the universe.
The ceiling represents heaven. The opening in the ceiling (dome) on which is usually painted the Christ Pantokrator, i.e., the all-sovereign Lord, represents Christ glorified in heaven looking down upon the assembled congregation, hearing their prayers, reminding them of His all-pervading lordship in the universe. The floor of the Church represents this world. The altar, uplifted from the floor by a series of steps and suspended, as it were, between heaven and earth gives the expression to the fact that its purpose is to lift us up to heaven through the teachings of the Gospel and the grace of the Sacraments, both of which emanate from the altar.

THE CHURCH IS A PALACE… for the King of Kings.
This explains the extensive use of royal colors: gold, blue, white, red, etc.
The fact that the Church is the palace of God’s presence gives expression to the faith that even now earth is changed into heaven whenever the Eucharistic celebration (called the Divine Liturgy) is offered and divine grace is given to the faithful.

THE INTERIOR OF AN ORTHODOX CHURCH… is designed to speak to the worshipper, to establish the mood for worship, to preach the Gospel through architecture and icons [or ikons], to elevate the mind and heart to God in praise, thanksgiving and petition.

ARCHITECTURALLY…Orthodox Churches vary. Many are built in the form of a cross. Above the middle of the cross there is often a dome.
Others are shaped in the form of a long rectangle, or round.
The division of each Church building is in three parts: the Narthex or outer vestibule, the Nave where the congregation assembles, and the Altar or Sanctuary where the clergy offer worship and perform rites.
THE NARTHEX… represents this world in which man is called to repentance. The Nave represents the Kingdom of heaven. Passing from the Narthex into the Nave symbolizes the entrance of a Christian into the Kingdom of God. The ICONS at the entrance to the Nave serve as a reminder to Orthodox Christians that Christ and the Saints are the unseen host when entering the Church.

THERE IS AN HIERARCHICAL PLAN… in the way the icons are arranged in the Church. The highest point, the ceiling, is reserved for the Lord. Then on the front wall there is often the depiction of the Mother of God (Theotokos – God Bearer), the link between the Creator and His creation.
Next, there are the icons of the angels, apostles and saints on the ikonostasis or icon screen. These constitute the Church Triumphant in heaven.
The floor level of the Church is reserved for the members of the Church Militant. Thus, around the figures of Christ is gathered His entire company of friends and faithful, both in heaven and on earth.

THE ICONOSTASIS / Icon Screen… separates the Nave from the Sanctuary.
It is symbolical of the Temple veil in Hebrew Temple worship which separated the Holy of Holies from the remainder of the Temple. On the screen are placed the icons of Christ, the Virgin Mary, John the Apostle, and various other Saints.

THE ROYAL DOORS… of the Icon Screen are called “Royal” in view of the fact that Christ the King is carried through them in celebration of the Eucharist or Holy Communion, as the priest brings the precious gifts of the Body and Blood to the assembly of the faithful. They remind all that Christ alone is the door leading to communion with the Father. (John 14, 6)
The two large candelabras in from of the Iconostasis represent the column of light by which God guided the Jews at night to the Promised Land. They remind Orthodox Christians that they too have a promised land, the Kingdom of God.

HOLY ICONS… are more than visual aids in the Eastern Orthodox Church.
They are sermons in form and color. They are prayers enshrined in painted wood, sanctified by Church blessing to assist worshippers in their heavenly ascent by making real the presence of God. They are used for inspiration and instruction. It has been said that the Eastern Church has two Gospels: one written and the other visual, consisting of the icon. Icons are not considered to belong to the realm of art but to that of theology. They are visual sermons. They make real the persons they depict. For this reason, Eastern Orthodox Worshippers do not hesitate to kiss the icon. This reverence is not intended for the painted wood but for the person depicted thereon, whose presence the icon actualizes. Icons are considered to be windows through which worshippers gaze into the world beyond time and space and are reassured that this earthly pilgrimage is only the beginning of another fuller life. Just as Christ used His physical body to communicate with mankind, so the Church today continues to use the material world (wood, glass, paint, etc.) to make God known to man.
NOTES ON JUDAISM

Judaism has been inaccurately called a religion, a race, and a nationality. While these definitions are each partially correct, the Hebrew noun “Am”, “a people”, best describes Judaism.

Judaism originated about 4,000 years ago in Mesopotamia. The first Jew was Abraham, and the bible describes his journey with flocks and household from Chaldea to Canaan (the site of modern-day Israel). He was thus known as Abraham Ha-Ivri, “the transient”, and from this is derived the term “Hebrew.”

The ancient tribal and pastoral origins of the first Hebrews are clearly evident in contemporary Jewish ritual and symbology. Many things that can be seen in a modern synagogue—such as the atavistic sounding of the ram’s horn, the symbols of the six-pointed star and the seven branched candelabra, and the Hebrew language itself - would be immediately recognizable to an ancient of the 20th century BC.

The historical evolution of Judaism and its essential influence on human history is broad in scope and complexity, yet the core philosophical principals remain unchanged. Chief among these is an opposition to iconography and the idea that humankind fulfills its cosmic purpose through ethical behavior. Also, Judaism states that God has a unique requirement of the Jews and that they have been chosen from among the world’s peoples for the fulfillment of a divine purpose.

The Jew’s central religious scripture is the Torah, which is considered to have been revealed by God to Moses. (This fundamental revelatory scripture is also known as the first five books of the Old Testament.) The focus of the Torah is a series of laws including the Ten Commandments which provide a code of ethical behavior. Subsequent generations of Rabbis in their commentaries on the Torah have written the Mishnah (2nd century) and the Talmud (4th to 6th century), and continue their in-depth analyses today. How the ancient precepts are applied in the present day and how they may be reconciled with new knowledge is of particular importance to the Rabbis.

While these bodies of writings have been the focus of the most intense study by Jewish scholars throughout the centuries, Jewish thinking recognizes their limitations. The sacred texts are viewed as a source of truth, but Judaism is not a fundamentalist religion and the importance and validity of intellectual inquiry beyond the scriptures is never in question.

Judaism does not see itself in conflict with empiricism and science indeed in Judaism an adherence to a rigid belief system is discouraged. The debate between the Maskilim (secularized Jews of late 18th century Europe) and the Masoretim (traditionalists) was amicably resolved within a few generations, facilitating Jewish participation in the burgeoning developments of Western thought.

Also unlike most other religious traditions, salvation and the promise of an afterlife are not the focus of Judaism nor are they the goal of the Jew. Instead, incumbent on the Jew is “Tikkun Ha-Olam”, literally “Repair of the World.” Judaism views speculation on an afterlife as secondary to the need to address the immediate and tangible evidence of human suffering. Rabbis have noted that six of the Ten Commandments address one’s actions towards other people, while only four refer to religious practices.

These traditions and beliefs have allowed Jews to make innumerable and essential contributions to human cultural evolution and the development of the modern world. Judaism can be best understood by complimenting a study of its religious and philosophical concepts with an appreciation of the influence of Jews individually and collectively on 4,000 years of human history.
Therefore, it is emphasized that while the synagogue is an important part of Jewish community life, it is the Jew’s actions in his personal and public life outside of the synagogue which constitute the real practice of Judaism.

**Inside the Synagogue**

The central focus of the synagogue is the ark, the special cabinet in which the Torah scroll is kept. The Torah is treated with the greatest reverence, and while the Jew never kneels or bows, all stand in respect when the ark is opened and the Torah is revealed to view. Each week, as part of an annual cycle, a particular section of the Torah is the object of intense study. During the religious service, the Rabbi or a member of the congregation singled out for special honor reads the week’s Torah portion aloud in the ancient Hebrew language.

Because Judaism is opposed to iconography, there is no figurative art in the synagogue: a depiction of God would be in direct violation of the second Commandment. Developed from this basic principle, traditionalists maintain houses of worship which are devoid of all adornment and decorative art. As these prohibitions have been somewhat relaxed in modern times, the modern synagogue might employ Hebrew verses or stylized depictions of the tablets of the Ten Commandments or the Torah scrolls as subdued decorative themes. In no case are these artistic elements in the synagogue objects of worship or veneration.

Many synagogues have a special light next to the ark. Though now it is often a light bulb in a special hanging fixture, originally the lamp was oil–burning. This is the Ner Tamid, or eternal light, which is kept illuminated at all times. The Ner Tamid symbolizes the eternal and unchanging quality of truth and the timelessness of the Torah.

The Torah scrolls themselves stand in the ark held upright and wrapped in a richly embroidered cover. Around the scroll and held by a fine chain is the Yod, a special pointer used by the reader, often in the shape of a finger (!) and made of silver and gold.
VIEWING GUIDE

Architectural Features of the buildings discussed in the videoconference

**Quoins**—Large and small masonry units that reinforce the corners of a building.

**Dentil**—Rectangular blocks alternating with spaces and attached to the underside of a cornice—the molding directly under a roof

**Pediment**—A triangular gable used on the front of buildings and also as a decorative element on furniture.

**Dormer**—A window projecting from a sloping roof.

**Gothic**—Style of architecture widespread in Europe from the 12th to the 15th c. Features of churches built in this style include rose windows, flying buttresses and pointed arches. Prominent examples include Chartres Cathedral, the Cathedral of Notre Dame at Reims, (France) and Salisbury Cathedral (England).
Keystone—Central wedge shaped stone at the top of the arch

Voussoir—Wedges on either side of the keystone of the arch, used to form the arch

Greek Cross—Church plan in which the arms are of relatively equal length.

Dome—Roof vault shaped as a half sphere

1. Names of the sections of St. Theodosius
   A.________________, B.________________, C.________________

2. Sketch the shape of Tifereth Israel here:______________________________

3. Identify the shape of these art objects from The Cleveland Museum of Art.
   a. _______________
   b. _______________
   c. _______________
   d. _______________
The Cleveland Museum of Art Distance Learning Evaluation Form

Your Name______________________________________________________________
Your School_____________________________________________________________
School Address (with zip code) _____________________________________________
E-mail Address __________________________________________________________
Grade/Class of students (e.g. 10th grade French) ______________________________
Program Title ____________________________________________________________
Program Date ____________________________________________________________

Thank you so much for your participation in our distance learning program. We would appreciate your response to these questions by circling the appropriate answer and returning the survey. Please Mail or Fax to Dale Hilton at 216-707-6679

5= Strongly Agree   4= Agree     3= Neither Agree nor Disagree
2= Disagree        1= Strongly Disagree

1. The teacher information packet was helpful for preparing my class and me for the distance learning lesson.
   5        4        3        2        1

2. The teaching style of the on-camera instructor was interesting, engaging and fostered interaction.
   5        4        3        2        1

3. The Teacher Information Packet was helpful in providing interdisciplinary extension activities that I did use or plan to use.
   5        4        3        2        1

4. The distance learning lesson successfully taught its objectives.
   5        4        3        2        1

5. The distance learning lesson was not interrupted by technical difficulties.
   5        4        3        2        1

6. The pre-requisites the distance learning lesson and extensions are aligned with The National Education standards.
   5        4        3        2        1

7. I plan to register for another distance learning lesson.
   (circle one) Yes No
   If no, why? ____________________________________________________________

8. I would like more information about The Cleveland Museum of Art’s Teacher Resource Center.
   (circle one) Yes No

9. Why did you choose The Cleveland Museum of Art Distance Learning?
(circle one)

a.) Price Point  
b.) Quality of lessons  
c.) Selection of lessons  
d.) Ease of working with CMA  
e.) Other

10. How did you hear about The Cleveland Museum of Art Distance Learning program?  
(circle all that apply)

a.) CMA inservice  
b.) CILC  
c.) TWICE  
d.) Conference  
e.) Brochure  
f.) The Cleveland Museum of Art website  
g.) The Teacher Resource Center  
h.) Other

11. Do you have any additional comments about the distance learning lesson?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Please return the completed teacher evaluation form to:

Dale Hilton/Distance Learning  
The Cleveland Museum of Art  
11150 East Boulevard  
Cleveland, OH 44106

Or fax to Dale Hilton at 216-707-6679
Prerequisite Material

RECOGNIZE BASIC GEOMETRY IN DESIGN - #1


Çatal Hüyük derives its title from the religious shrines uncovered at the excavation site of the Neolithic town of Çatal Hüyük (around 6000 BC) in modern-day Turkey. The paintings on plaster discovered in these shrines are considered to be the earliest on man-made surfaces. Indeed, Stella's abstract sculpture evokes the animal and hunting scenes found there. Constructed of cast, welded, and bolted aluminum, it also evokes modern industrial imagery.

Although it explodes with energy, Çatal Hüyük contains that power within a unified composition. The swirling aluminum pipe at its core recalls the Golden Spiral, a unit of measure in nature and mathematics that visually resembles the cross section of a snail's shell.

Martin Puryear's early interests in biology and nature are often evident in his work. In Alien Huddle the spherical shape, from which two smaller globes emerge, suggests the growth and expansion of a dividing cell. The piece also shows the artist's devotion to craftsmanship. The meticulous handling of wood reflects Puryear's 1960s Peace Corps experience working with carpenters in Africa and his subsequent study of furniture design and construction in Sweden. Puryear is sensitive to the character of wood, which he characterizes as "something that has recently been alive." To create Alien Huddle, tapering bands of cedar were affixed to a pine core. The tiny punctures and scars from the brads and staples that held them in place while the glue dried are still visible.
RECOGNIZE BASIC GEOMETRY IN DESIGN - #3


Piet Mondrian developed a form of geometric abstraction that he called "Neo-Plasticism." In Composition with Red, Yellow, and Blue, a classic painting in this style, Mondrian reduced the composition to basic, universal elements: vertical and horizontal lines, primary colors, and flat shapes arranged in a balanced composition that denies any illusion of spatial depth. Mondrian believed that only totally abstract art could convey a cosmic order that transcends natural appearances. Likewise, he saw in his intersecting lines a unity of conflicting forces. For Mondrian, the distinction between the vertical and the horizontal was equivalent to the opposition of male/female and positive/negative. Mondrian's paintings and artistic philosophy were the single most important influence on the American Abstract Artist.
DRAW A FLOORPLAN

1. Measure length and width of room, doors, and windows.
2. Choose a scale. \( \frac{1}{4} \) “ = 1’ is typical.
3. Using drawing conventions below draw walls, doors, windows, and door swings.
4. Add furniture. Imagine it from a bird’s eye view.
5. Dimension room by adding measurements.

Wall

Window

Door

Dimension

My Room:

11'-0"

16'-0"

10'-5"
Architectural Drawing Conventions

**DRAWING CONVENTIONS**

- **PLANTING BED**
- **SMALL BUSH**
- **TREE (PINE)**
- **SHRUB A**
- **SPIRAL STAIR**
- **DOOR WITH SWING**
- **WATER CLOSET (TOILET)**
- **CIRCULAR LAV**
- **KING SIZE BED**
- **CHAIR**
- **BATHTUB**
- **COUNTER**
- **FIREPLACE**
- **BI-FOLD DOORS**
- **SINK**
- **RANGE**
- **REFRIGERATOR**
- **DISHWASHER**
- **OVEN**
- **WINDOW**
- **GLASS BLOCK (PLAN)**

**FLOOR PLAN**

1/4" = 1' - 0"

**RESIDENCE ANYWAY - RD.**

**DATE**
Architectural Scale Ruler
A Guide to Good Design

A Guide to Good Design

Pleaseing proportions borrowed from nature

By Graham Blackburn

The golden ratio

The golden ratio, represented with the Greek letter phi (ϕ), is based on an equation \((1 + \sqrt{5})/2 - \phi\) that produces a decimal that proceeds infinitely without repetition. For practical purposes, it is rounded off to 1.618.

\[
\frac{A}{\phi} = 1.618 (\phi)
\]

The golden ratio in its simplest form

If you bisect any given line using phi, the longer portion is 1.618 times greater than the shorter portion. Interestingly, the whole line is also 1.618 times greater than its longest bisector.

The golden rectangle

The long dimension of a golden rectangle is 1.618 times greater than the shorter dimension.

The golden solid

A golden solid incorporates multiple golden rectangles that are proportionate to one another.

The golden ratio in nature and in art

The golden ratio relates to furniture design most commonly by way of a rectangle that is constructed.
SIZING DOORS AND DRAWERS

GRADUATED DRAWERS
This Shaker-style chest of drawers uses phi increments, which can be determined with a Fibonacci series (see p. 50), to establish the height of the graduated drawers as well as the positions of the drawer pulls.

DOOR ELEMENTS
In a door, the golden ratio can be used to size the panels (left) as well as the widths of the muntin, stiles, and rails (right), which increase in size by multiples of phi.

PANEL PROPORTIONS
The overall dimensions of this panel form a golden rectangle. Squaring the rectangle to produce smaller, proportionate golden rectangles helps determine how much of the panel should be raised.

using phi for its two dimensions. Known as the golden rectangle, it is sized so that the length is 1.618 times larger than the width (or vice versa). These proportions can be used to determine the overall dimensions of furniture as well as interior parts, such as doors and drawers.

The golden solid—Furniture is three dimensional, and the golden ratio can be applied to all three dimensions by turning a golden rectangle into a golden solid. Take, for instance, a simple case. When viewing its profile, the height may be the long dimension of a golden rectangle. However, when viewed from the front, the height may be the short dimension of a proportionate golden rectangle.

Applying the golden ratio to furniture proportions
A word of caution before applying the golden ratio as a design paradigm: Remember that form must follow function. Even the most sublime proportioned piece of furniture can be a failure if it does not function because it is too small or too large or other-

PHI IN THE PYRAMIDS
The Great Pyramid of Giza is constructed with the golden ratio at its core. The height of its side is equal to 1.618 times the length of half its base.

PHI IN THE PARTHENON
The Parthenon uses the golden ratio for its overall dimensions. When squared, it leaves a second, smaller golden rectangle, which when squared determines the height of the columns. Many other elements and details were determined with this method.

PHI IN THE HIGHBOY
The high chest of drawers, known as the Rumpfau, made in Philadelphia between 1762 and 1790, uses the golden ratio to determine many of its measurements. The carcass is a golden rectangle. The position of the waist is determined by dividing the overall height by phi. And the two lower drawers also are golden rectangles.
Four ways to construct a golden rectangle

Use the triangle method

Construct a right-angle triangle with a base that is twice the length of the height. Then use a compass to draw an arc with a radius equal to the height of the triangle. The center point of this arc is located on the triangle where the vertical line and the hypotenuse meet. Next, using the location on the triangle where the base and the hypotenuse meet as a center point, draw an arc with a radius equal to the first bisector of the hypotenuse. The point at which this second arc bisects the base of the triangle divides the line into two portions that are related by the golden ratio. The two sections can be used to form the width and height of a golden rectangle.

1. Construct a right-angle triangle with a base twice the size of the height.

2. Draw an arc with a radius equal to the triangle height.

3. Draw a second arc with a radius equal to the bisector of the hypotenuse.

4. Rotate the shorter section 90° to complete the golden rectangle.

Divide and extend a square

Divide a square in half with a vertical line, then draw a line continuing the baseline beyond the square. Draw an arc with a compass using the diagonal of one half of the square as a radius, with the center point on the baseline at the point of bisection. The point where the arc meets the continued baseline determines the extended line. The original baseline is now \( 1.618 \) times the length of the extension. These two lengths can be used to form the width and height of a golden rectangle.

1. Construct a square and divide it in half vertically.

2. Draw an arc with a radius equal to the diagonal of one half of the square.

3. Rotate the shorter section 90° to complete the golden rectangle.

Scale a golden rectangle

Using a golden rectangle of any size, you can create another golden rectangle with different dimensions. Simply draw a golden rectangle and bisect it with a diagonal line that stretches from one corner to another. Then extend the diagonal line. Any rectangle that shares this diagonal, whether it is smaller or larger, will be golden.

Apply the Fibonacci series

Yet another way to derive measurements that reflect the golden ratio is to use a method known as the Fibonacci series, which is a sequence of numbers, with each number equal to the sum of the two preceding numbers. A simple series starting with 2 produces the following: 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, and so on.

A Fibonacci series is useful because any number divided by the previous number—with the exception of the first few values—is roughly equal to phi. This explains why dimensions such as 3 by 5 and 5 by 8 are so uncommon. They are based on phi.

Perhaps more useful to the furniture designer is that a Fibonacci series can be generated using any two numbers. Starting with two given dimensions for a furniture piece, add them together to produce the third value, and continue this pattern to create a series of potential dimensions related by phi. For example, a case piece with a 15-in.-deep by 22-in.-wide top would produce the following Fibonacci series: 15, 22, 37, 59, 96, 155, 251, 406, and so on. Once again, discarding the first few values, you now have a series of pairs of numbers with a phi ratio, which might be used as a basis for other dimensions.

One thing to note is that while the first two values are expressed in inches, the successive numbers in a Fibonacci series could be expressed in any unit of measure, such as fractions of an inch. Therefore, a door panel on the case piece used as an example here could measure \( \frac{39}{4} \) in. by \( \frac{49}{4} \) in. and still be proportionate to the 15-in. by 22-in. case top.
wise unable to be used comfortably. Practical considerations, therefore, must come first.

In fact, most furniture designs require that you start with some given dimensions. A table must be a certain height; a cabinet may have to fit a particular space, or a bookcase may require a fixed number of shelves. But almost certainly you will be left with many other decisions regarding dimensions to which you can apply this proportion. It will be worth the effort to see whether the golden ratio might work for these other elements. Deciding on dimensions by eye alone—or worse, on the basis of the lumber that is conveniently at hand—is a less certain way of achieving a well-balanced, nicely proportioned piece.

**Individual elements**—Whether or not the overall dimensions of a piece are proportioned using the golden ratio, individual parts, such as table legs or even the relative sizes of framing members such as stifles, rails, and mortises, can be determined with the golden ratio. The golden ratio also offers one way to solve the problem of designing graduated drawers. Each successive drawer can increase in size by multiplying the depth of one drawer by phi to get the depth of the next-largest drawer. The method can be applied just as effectively to other elements such as shelving or partitions.

Any measurement on a piece of furniture originally may have been determined by functional and structural requirements, but many adjustments can be made that add inner harmony. Using the golden ratio when designing furniture will enable you not only to produce a pleasing whole but also to ensure that all of the constituent parts, such as door panels and drawers, are fundamentally related.

**Practical adjustments**

Designing something with perfect proportions is rarely possible in the real world. Almost every piece of furniture or woodwork will need to accommodate constraints imposed by details of function, joinery, or economics. But even the attempt to approach perfection (which may be defined as measurements that correspond precisely to a system like the golden ratio) is virtually guaranteed to produce a better result than designing with no regard for any such paradigm. Even if you are close to perfect proportions, the eye is inclined to accommodate slight imperfections and fill in the gaps. Don’t think that everything has to fit the formula exactly.

Last, remember that we often adjust things by eye to make a piece look lighter or better balanced, and we do so by using techniques that are part of the everyday woodworking vocabulary. They include the calculated use of grain direction to imply movement; highly figured grain to help the eye see curves where none exist; finished edges and corners that give the impression of thickness or thinness; the use of molding to adjust an apparent golden rectangle or solid; the use of tapered legs to give the appearance of more closely approximating an ideal proportion; and the mixing and matching of many other design paradigms.

**TABLETOP PROPORTIONS**

One simple application for a golden rectangle is a tabletop. To further make use of the proportions, the outer perimeter of the table legs also forms a golden rectangle.

**SCALING A CREDENZA**

The dimensions on several elements of this credenza were determined by scaling a golden rectangle. The horizontal golden rectangle of the credenza’s legs is formed by squaring the larger vertical golden rectangle of the credenza’s overall profile.

**TABLE DIMENSIONS**

The tabletop, legs, and apron can be determined using the golden ratio. In this example, the fillet to roundover, the tabletop to leg, and the leg to apron are related by phi.

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Blueprints of Kirtland Temple
LONGITUDINAL SECTION 1-1

TRANSVERSE SECTION 1-2

KIRTLAND TEMPLE (1805-1832) AT KIRTLAND OHIO

SCALING 1 IN 25

DRAFTSMAN: E. STONE

ARCHITECTS: J. H. BARR AND J. H. FRANKLIN

WATERCOLOR AND INK DRAWING

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