Papal history began in 30 A.D. when Simon Bar-Jona was named Peter, “The Rock” upon which the Catholic Church would be built. Two hundred and sixty five popes followed Saint Peter, each contributing to a place known as the Vatican, which has become the greatest concentration of masterpieces in the world. Over the centuries, the Papacy served as preservationist by collecting, commissioning and excavating art, artifacts, relics, documents and treasures covering four thousand years of human civilization. Today, this center of science, religion, history and art is visited by more than ten million people every year.

*Vatican Splendors: A Journey through Faith and Art* is a fascinating story where walls, floors, ceilings, tombs and sacred objects trace the development of a 2,000-year-old institution and its dramatic effect on the world. The exhibition presents art and objects in recreated environments designed to promote interactive, immersive and multi-sensory approaches to examining and interpreting ancient sources.

This activity guide is designed for teachers and students to choose and arrange investigations in whatever order is suitable. It contains segments that will help in preparing for the exhibition, learning from the exhibition and reflecting on the visit through a series of classroom experiences that emphasize the analytical skills of interpretation, evaluation, comparison, and global perspectives.

Activities, concepts and vocabulary are coded to related National Science Standards and National Social Studies Standards. Both advocate inquiry into objects and the use of primary sources such as maps, diaries, letters, paintings, sculpture and clothing as a means toward understanding an institution like the Vatican and its influence on the scientific, political, social and cultural aspects of the Roman Empire and the world. Relevant background information is provided throughout, along with additional resources such as books, websites and videos.
Known officially as the Vatican City State (or Stato della Città del Vaticano), the Vatican is a country within a country with the Pope as its head of state. It is the world’s smallest principality, just 108 acres nestled within the city of Rome in Italy. Vatican City has its own diplomatic corps and security force, the Swiss Guard. The small state even operates its own radio station, has one newspaper and a post office with its own stamps. Despite its small size, Vatican City State has profoundly shaped world history for centuries. The Pope and the Vatican are at the very heart of the Roman Catholic faith.

The Holy See’s collection of antiquities and art is unparalleled. Ten separate museums within the grounds preserve everything from ancient Egyptian artifacts to classical sculpture, mosaics and paintings. The Vatican Pinocoteca highlights the Vatican’s collection of masterpieces of the some of the greatest artists of the history of Italian painting and the Ethnological Missionary Museum houses a wide array of clothing and artifacts from cultures around the world. In addition to the museums, priceless art work is also visible at the various chapels, including the famous Sistine Chapel, as well as apartments, galleries and even staircases.

This exhibit, Vatican Splendors, spotlights just a few of the remarkable pieces, placing them in historical and cultural context. Help your students prepare for their visit by discussing the role of the Pope in world history and current events. These activities will help your students in discovering their connection to some of the great leaders and artists of the past fifteen centuries.

Vatican Facts

Population: approximately 1100 people

Official Language: Latin

Size: 108.7 acres (That is equivalent to about a six by six city block area.)

Saint Peter’s Basilica covers nearly 430,000 square feet, enough for six football fields. Saint Peter’s has nearly 500 columns, over 430 large statues, 40 separate altars and 10 domes.

The Apostolic Palace, the Vatican City State’s main building and the one in which Benedict XVI lives, has more than 1400 rooms, nearly 1000 flights of stairs and 20 courtyards.

Though there are women living in the Vatican City State, no baby has ever been born within the city limits.

As a visitor to the city, you will not be disturbed by loud aircraft overhead. All airplanes are prohibited from flying over the Vatican.

The Vatican Library numbers over one million books, more than 100,000 maps and engravings, and nearly 100,000 manuscripts. The archives cover 16 miles of shelves.

Activity:

Place the Vatican in its proper geographical context by using maps and internet resources to explore modern Europe.

1. Divide the class into small groups of approximately 3 or 4 students each. Have your students create a research log to record the sources they consulted. You may want to provide each team with a folder to keep their research log and any pages they may print or copy. Encourage both library as well as on-line research.

2. Print the blackline map of Europe (from link at left). Have your students identify and label each country on the map and mark the location of the Vatican City State with a red star. What other places in Europe are significant to the growth of the Catholic Church?

Extensions:

3. Europe is a place of many languages. While Latin is the official language of the Vatican, the extent of the Catholic faith requires knowledge of a variety of languages. To extend the map exercise, research the primary language of each country and record their word for “hello.”

4. Religion has been a shaping force in European history. Research each country and identify its primary religion. Color countries that are primarily Catholic green and Protestant orange. Do these colors have any significance? Encourage your students to look for patterns in the distribution of religion in Europe and to research the reasons for those patterns.

5. How does the Greek (or Eastern) Orthodox Church differ from the Roman Catholic (or Western) Church? Indicate on your map which faiths dominate the Catholic populations in each country. What caused the split in the church?

Online Resources:
European Geography Tutor:  http://familygames.com/freelane.html
Guide to European countries: http://www.lonelyplanet.com/worldguide/europe/
Do you consider yourself a leader? Maybe you have been wondering what steps you should take to prepare for a service or leadership role in your school or in your community. Some people think leaders are born and others believe they are shaped by experiences in their childhood. Still others believe that leadership is within us all and can be developed at any age. What do you think?

Pope Francis is the elected leader of more than one billion people who are members of the Roman Catholic Church. As a religious leader, he is required to maintain the trust, cooperation and respect of people, governments and organizations all around the world. Sometimes he must take a course of action or announce a decision that he knows will not be popular with everyone involved. His position requires wisdom, confidence, strength and the ability to be a good communicator.

Activity:

1. Listed at left are several famous quotes about leadership. Some are straightforward but others will require interpretation. Read and discuss them. Use these sayings to write a letter of advice or encouragement to a leader of your choice.

2. Use your library and internet resources to research the life of Pope Francis. How did he become a leader? What characteristics does he demonstrate as a leader? Which of these attributes do you most admire and could use to improve your own leadership skills? How does leader like the Pope persuade people to follow him; what is the source of his authority?

Did You Know?
Pope Francis is the highest leader in the Roman Catholic Church.
Vatican City has operated its own post office since the fourteenth century when the Pope distributed his Papal Decrees throughout Italy by a Pony Express type of system. In 1852, the Vatican began printing and selling its own stamps to pay for transporting mail. Today, the Vatican post office receives some 800 pounds of mail every day and sends out nearly twice that amount in the form of post cards and letters sent home by tourists.

The first stamps were simple and often featured the picture of a monarch or even just the amount of money needed for postage. But this quickly changed to feature famous people, places and objects significant to the Vatican. They became tiny works of art in their own respect, each carrying a message about the place they represent.

**Activities: Design a Postage Stamp for the Vatican**

1. Choose one stamp from the examples at left and examine closely. What is the theme of the stamp? What message is the artist intending to communicate? Are there any symbols on this stamp and what do they mean?

2. Print this stamp outline (link following) and distribute to each student, instructing them to design their own stamp. Discuss what message they wish to convey and select an appropriate topic. Their stamp may highlight a famous person, place or event significant to the Vatican and Catholic history. Have them write why they selected that theme and explain the significance of their symbols.


3. You have just received a letter from a friend at the Vatican. The stamps on the letter suggest that it traveled to you after first stopping in Madrid, Spain before being flown over to New York City and finally to your home. How far did the letter travel?

**Extension:**

4. The Pope’s representative has contacted you with the news that they wish to use your design on their next postal stamp. As an artist, what will you charge for your work? How much will it cost to print your stamp? Based on the quantity of mail sent by the Vatican (see above), how many should you print? How much will you charge the Pope for your stamps? Prepare a marketing plan for your stamp.
The history of the Vatican is tied closely to the major world events of the past two thousand years. In this activity, your students will create a timeline for display in your classroom. As you undertake future lessons from this guide, you and your students will be able to refer back to this timeline to place the artifacts, people and events within their larger historical context.

Activity
Create a Timeline

1. Review the list of Vatican events at left. Using library and internet resources, identify ten important events in the history of western civilization during this same period. Assign dates to each event and research their significance. Also, identify the dates of important technological inventions such as the printing press.

2. Provide long butcher paper or computer banner paper to create the timeline. Or you can use cash register tape if you prefer students working on individual time lines. Discuss scale. How long will the timeline need to be to extend from 1 A.D. to the present and yet still fit onto the classroom wall? Create parallel timelines on the paper; one for world events at the top and one for Vatican events directly beneath. Choose your scale and mark off increments along the timeline.

3. Divide your class into teams to tackle different portions of the timeline. One team may focus on the first five centuries and the origin of the church while another group works on the most recent events. Or one group of students might focus on inventions while another researches art or world events. Help your students improve their sense of history by tracking parallel events not only in Europe but in the New World as well as Asia and Africa.

4. Students with artistic abilities can be responsible for illustrating the timeline while other students work together to write the brief descriptions for each event. Illustrations from magazines, printouts from the internet and other images may be pasted on the timeline.

5. Hang up the completed timeline in your classroom for reference as you continue to study the Vatican. You can use sticky notes to add additional items to your timeline, color-coded for different types of events or different continents.

Vatican History
- ca. 67 A.D. – Saint Peter executed in Rome by Nero.
- 313 – Emperor Constantine legalized Christianity.
- 324 – Constantine the Great completed the first basilica at Vatican over the grave of Saint Peter.
- 852 – Pope Leo IV completed the construction of a wall around the Vatican.
- 1054 – Split into the Eastern and Western Catholic Church.
- 1059 – Pope Nicholas II developed the framework for papal elections.
- 1309 – Pope Clement V moved his residence from the Vatican to Avignon in what is today France.
- 1377 – Pope Gregory XI returns the papacy to the Vatican where it has remained since.
- 1506 – Groundbreaking for the Saint Peter’s Basilica, Swiss Guards made official protector of the Pope, and founding of the Vatican Museums.
- 1512 – Michelangelo finished painting the ceiling of the Sistine Chapel.
- 1626 – Construction began on the new Saint Peter’s Basilica, while Constantine’s old basilica was demolished.
- 1929 – The Vatican signs a treaty with Italy to create a new country.
- 1978 – Karol Joseph Wojtyla elected to lead the Roman Catholic church as Pope John Paul II.
- 2013 – Jorge Mario Bergoglio elected to lead the Roman Catholic Church as Pope Francis.

Grade Level: Upper elementary, middle, high
Time: One class period
Objective: To understand the sequence of events in the creation of Vatican City and to place this story and exhibit artifacts within the context of world history.

Group Size: Entire class
Standards Addressed: Social Studies: World History
In 1939, an ancient Roman cemetery dating from the first century A.D. was discovered beneath the floor of Saint Peter’s Basilica. Tradition had long held that Emperor Constantine had constructed his original church over the tomb of Saint Peter. But for nearly fifteen centuries, no one had ever investigated this area archaeologically to confirm the tradition.

Digging initially in secret to avoid detection by the Nazis occupying Rome during World War II, Vatican workmen slowly excavated the Roman roads and buried tombs they found beneath Saint Peter’s. Thousands of early Christian burials were eventually uncovered during the twelve year excavation and archaeologists are still learning important information from the tombs, their epigraphy and artifacts.

In many parts of early Rome, Jews and Christians were buried in underground tunnels called catacombs. Roman law required all burials to be outside the city walls and to date, more than sixty underground systems have been discovered in the area. These structures were used as more than just cemeteries. The carvings and artifacts suggest that during periods of intense persecution, the passages also served as underground churches and areas of sanctuary. They also became the destination of many early Christian pilgrims, traveling to visit the graves of church martyrs.

The cemetery discovered beneath the Vatican was different from the Roman catacombs as the sandy soil prevented tunnels from being dug. Instead, the burials in this cemetery were placed near the surface, laid out along a Roman road. These tombs were later buried beneath tons of dirt by Emperor Constantine when began construction on his basilica dedicated to Saint Peter.

**Vocabulary Words**

**Archaeology** is the study of past human culture as revealed through the objects people created or by studying the actual human remains. Clues about how people lived, what they ate and how they perceived the world can be gleaned from these artifacts. Burials such as the cemetery beneath the Vatican are particularly important. Here both the physical life of the individual and the perception of an afterlife can be deciphered through careful scientific study.

**Catacombs** – ancient underground cemeteries used by Jewish and Christian people.

**Sarcophagus** – a stone or marble coffin often decorated with inscriptions and reliefs.

**Forma** – a tomb dug into a floor often near a martyr’s tomb.

**Locus** – a small chamber or recess in rock used for urns or corpses in an ancient catacomb or sepulcher.

**Sepulcher** – a small room or monument, cut in rock or built of stone, in which a corpse is laid or buried.

**Epigraphy** – the study, decipherment and interpretation of inscriptions.

**Web Resources:**


The International Catacomb Society: www.catacombsociety.org


**Further Reading:**

During the excavation of the Roman cemetery beneath Saint Peter’s, one tomb received special attention. Exactly below the center of the basilica forty feet underground, excavators found a simple tomb against a red wall, a reconstruction of which can be seen in the exhibit. Tremors were felt throughout the Christian community in 1968 when Blessed Paul VI announced that the bones of Saint Peter had been discovered. But the identification of the tomb and associated bones remains controversial. What can science say about this discovery? What can science not confirm with certainty?

Activity

1. Using your library and online resources, research the history of the discovery of Saint Peter’s Tomb. Where were the bones found? What were the circumstances of their discovery? What evidence is cited to support the hypothesis that the skeleton is actually that of Saint Peter?

2. Create a mock dig to demonstrate archaeological techniques. The digs can be built in small boxes, preferably plastic with lids. Use clean play sand or cat litter. Bury various artifacts such as broken pottery, pieces of old tools, metal trash as well as bones, seeds and shells. Have students wear plastic gloves as they carefully use small brushes and spoons to uncover each item. When an item is discovered, instruct them NOT to remove the artifact but to work the sand from around it. Once all the objects have been exposed in that layer, have your students sketch the position of the artifacts on graph paper. Rulers will be helpful here. Each team should then identify the items, and prepare a report. Have each team stand before the class to describe what they found and offer a hypothesis about what types of activities occurred at their site. Ensure that their hypothesis only includes conclusions that can be supported by the available evidence.

3. What kinds of information would you require as an archaeologist to identify the bones to a particular individual? Discuss with students that while much can be learned about the person’s life by studying their bones (sex, age, nationality, diet, health), it is impossible to link them to a specific historic person. Why? Explain to your students that this does not mean that the bones are not the remains of Saint Peter, only that the science of archaeology, within the confines of available data, can neither support nor refute that hypothesis.

Additional Resources


Archaeologists Dig For Clues. By Kate Duke (Harper Trophy Books).

Online Resources:
http://www.vatican.va/various/basiliche/necropoli/scavi_english.html
Cultures around the world honor sacred places. Some of the greatest monuments ever created by human hands were built for religious purposes, to honor and remember an important religious place or event.

**Activity:**

1. Divide the class into small groups of approximately 3 or 4 students each. Instruct each team to select a different sacred place from the list at left to study. Using library and online resources, have each team research their sacred place. To whom is the place sacred? Why is it sacred? How do people show that it is sacred to them (such as building a church, making pilgrimages, etc.)? Have your students record their findings in their research journal.

2. Have each team report to the class the results of their research. Discuss how the sacred places from these various cultures are similar and how they are different. What happens when two different cultures claim sacred places in the same place? Discuss current events in Israel as an example.

3. Ask students to reflect on a place that they consider sacred, such as their church. What makes this place sacred to them? Why? Do they behave differently at their sacred place? How? Record these observations in some form, either through writing or art.

4. How are these sacred places different from memorials (or are they?). Discuss places such as Arlington National Cemetery, the Vietnam Memorial and Ground Zero. What distinguishes them from Saint Peter’s Tomb, for example? Could these places become sacred some day?

5. Before your group visits the exhibition at the Museum, discuss how they should behave around artifacts that have sacred meaning for many people.
At the beginning of the fourth century, two men – Maxentius and Constantine – vied to become emperor of all Rome. Constantine defeated his rival in the year 312 A.D. at the Battle of the Milvian Bridge near Rome and was proclaimed emperor. The following year, he legalized Christianity and a decade later, began construction on a basilica or church directly over the Tomb of Saint Peter. For nearly twelve hundred years, Constantine’s basilica served as the central church for the Roman Catholic faith. By the 15th century, however, the ancient basilica was in danger of collapsing. Plans by Pope Nicholas V to renovate the basilica never came to fruition. Eventually, Pope Julius II concluded that the basilica simply could not be salvaged and must be replaced by a new church.

The first architect of the new Saint Peter’s Basilica was Donato d’Angelo Lazzari, better known as Bramante. Over the next 176 years, a series of talented architects and artists worked on the church. In 1547, 72-year-old Michelangelo Buonarroti was appointed to supervise the continued work on Saint Peter’s (he had completed the painting of the Sistine Chapel in 1512). Michelangelo drew up plans for a huge hemispherical dome, larger than had ever been attempted before. The famed architect died before the dome was completed. After Michelangelo’s death, his assistant lengthened the dome into the ellipsoid shape we see today. The new Saint Peter’s Basilica was completed and consecrated in 1626 and has served the Catholic Church for nearly four hundred years.

STATISTICS OF SAINT PETER’S BASILICA

Construction Time: 176 years
Cost: approximately $48 million
Annual maintenance budget: $39,500
Height of nave: 151.5 feet
Width of nave: 151.5 feet
Building length: 693.8 feet
Surface Area: 163,182.2 square feet

DID YOU KNOW?

To pay for building the new Saint Peter’s Basilica, Pope Julius II (also known as Julius the Terrible) resorted to a questionable practice: granting indulgences. An indulgence is a pardon of punishment for sins. Julius (and popes who followed) arranged for massive sales of indulgences – absolution for money. This marketing of spiritual goods so angered a young German priest named Martin Luther that he led a revolt against the Church. It was the beginning of the Protestant Reformation.
In the year 312 A.D., Emperor Constantine saw a vision as he marched his army towards Rome. The story is recorded by Bishop Eusebius (pronounced u-SEE-bee-us) who penned one of the first biographies of the famed emperor. Constantine described the vision as “a cross of light in the heavens, above the sun, and bearing the inscription, BY THIS SIGN, YOU SHALL CONQUER.” In a dream shortly afterward, he was instructed to paint the symbol of Christ on his soldiers’ shields before going into the battle. Constantine’s army did defeat his rival Maxentius at the Battle of Milvian Bridge on the Tiber River. The following year, the emperor wrote the Edict of Milan in which Christianity was given legal status and the persecution of Christians was officially banned. Ten years later, Constantine began the construction of a great basilica over the grave of the church’s patron Saint Peter.

Activity:

Eusebius was a bishop of Caesarea in Palestine during the fourth century A.D. An avid writer, he based his biography of Constantine on interviews with the emperor himself. While some historians have questioned the accuracy of Eusebius, his work remains the most important source of information on Constantine.

1. Divide the class into small groups of 3 to 4 students. Work in teams, research Eusebius using library and online resources. When did he live? What did he write about? How many of his books have survived? Record your findings in your research notebooks.

2. Read Eusebius’ full account of the conversion of Constantine, found online at: http://www.fordham.edu/halsall/source/conv-const.html Have your students retell the story in their own words. They may also add a drawing of the event in their notebook. How does Eusebius convince his readers that the vision of Constantine actually happened? What evidence does he give? How would you have felt had you been there that day? What was the purpose of Eusebius’ book? Was it a realistic biography or a promotional essay of the emperor?

Extension:

3. Did Constantine ever commemorate his victory in architecture or coinage? What do you think this means?
Construction of the new Saint Peter’s Basilica began with the important foundation work. To hold the tons of marble and masonry, the foundation beneath the church had to be designed correctly. Deep trenches were first dug. In April 1506, the aged Pope Julius V descended a wobbly rope ladder into one of the foundation ditches to lay the first cornerstone. Seven years later, the famed Italian architect Fra Giovanni Giocondo was called to Vatican City to assist Bramante. As the weight of the structure grew, the foundation piers began to shift and some even cracked. Giocondo helped to stabilize the foundation so that work on Saint Peter’s Basilica could continue. A testament to his engineering is that the original foundation continues to support this massive building.

Activity:

1. Divide your class into teams of 3 to 4 students each. Explain to them that their challenge is to construct the tallest tower of books possible, built upon a foundation. Their design constraints are that the foundation can only be constructed of 3x5 index cards and tape and that this foundation must hold the books off of the floor a minimum of 1½ inches (meaning that the students cannot just simply lay the cards face down and stack the books on top). Pass out twelve index cards to each team and a tape dispenser, encouraging them to not use too much tape.

2. Have students design their foundation first on paper. Then allow them to begin their experimentation with different techniques, beginning with their initial design. Encourage them to redesign to create a foundation that will hold the maximum weight possible. Discuss the architectural principles of a foundation and load bearing.

3. The key to this activity is to spread the weight of the books out across the cards. Students will probably experiment first with building squares from the cards, but will find that the foundation will not hold much weight. They may then try triangles. The best results will be accomplished if the cards are made into cylinders (with a piece of tape). Some students may even cut the cards in half to create a larger number of cylinders. In this form, the cards may hold as much as 200 pounds! Discuss why.

DID YOU KNOW?
One of the towers flanking Saint Peter’s Basilica collapsed as it was being built. The cause was determined to be a flawed design for the foundation.

OTHER HISTORIC STRUCTURES
Can you name another famous landmark that has had problems with its foundation? Research the Leaning Tower of Pisa. Why is it leaning? What will eventually happen if the tower is not stabilized? What has been accomplished so far?

ONLINE RESOURCES:
Background on the Tower of Pisa: Where It Stands Today (http://www.pbs.org/wgbh/nova/pisa/today.html)
Preservation efforts at other famous buildings: Rescuing World Monuments (http://www.pbs.org/wgbh/nova/pisa/monuments.html)
In 1546, the talented artist Michelangelo Buonarroti took over as chief architect for the continued construction of the Saint Peter’s Basilica. The crown of this new church was planned as a huge ribbed dome rising 452 feet above the street. To support the massive structure, Michelangelo designed three iron rings within the heavy masonry. Later architects had to add additional tension rings when cracks began to appear in the dome.

Activity

A dome is a three-dimensional arch, a curved roof enclosing a circular space.

1. You can demonstrate one of the fundamentals of a dome by having five of your students form a circle, all facing inward holding a soccer ball. Have them place their hands flat on the ball and lift it up about head level. As they lean in, they should slowly shift their feet backward leaning their weight inward on the ball. Make certain they keep their arms stiff. They have now formed a dome!

2. Your class can construct their own domes out of toothpicks and gumdrops. As you build your dome, consider the problems you have supporting the structure while you add the ribs. Image what it would be like in life size. How did the builders solve this problem? Are there other challenges you can see from your model that the designers had to be aware of?

Extension:

3. Have your students research Saint Peter’s Basilica. Who built it? How many people did it take? How many years did it take for the workmen to complete it? How long was a normal work day? Based on today’s minimum wage, how much would the labor cost you today to build the Saint Peter’s Basilica? Were there any labor laws at the time that would have impacted its construction? Have your students write a letter home describing their life as an assistant to Michelangelo.
Another of the great treasures of Vatican City State is the Sistine Chapel. Construction began in 1475 during the reign of Pope Sixtus IV, for whom the chapel was named. The architecture is simple in comparison to Saint Peter’s Basilica. The chapel is rectangular in shape, constructed to the exact dimensions of the original Temple of Solomon as given in the Bible. It is topped with a rounded half-barrel roof.

A number of talented contemporary artists of the period were commissioned to decorate the interior of the chapel with frescos. In 1508, Pope Julius II (nicknamed Julius the Terrible) commissioned Michelangelo to repaint the ceiling of the Sistine Chapel. Their fiery relationship sparked one of the supreme masterpieces of all art.

After nearly five hundred years of soot and grime, Michelangelo’s original frescos were restored beginning in 1981, sparking debate about how the process should best be accomplished. After nearly twenty years of painfully detailed work, the Sistine Chapel was rededicated by Pope John Paul II in 1999. A special air filtering system was installed in the chapel to help protect these great works of art for future generations.

In addition to serving as the Pope’s private place of worship, the Sistine Chapel is also the location for the election of new popes. This is a carefully controlled and secret process, almost certainly the oldest continuous electoral tradition in the world.
Michelangelo never considered himself to be a painter. A talented sculptor, an ingenious architect and a tolerable poet, he would say, but never a good painter. So when Pope Julius II insisted that Michelangelo paint the ceiling of the Sistine Chapel, he resisted. But the Pope would not budge – he was to undertake this massive project.

Creating frescos is a difficult and physically exhausting process (see next activity). With his characteristic energy, Michelangelo threw himself into the project. For four years, he perched on scaffolding fifty feet in the air, creating a series of beautiful images that retell the key stories of the Bible. He struggled to paint this nearly ten thousand square foot ceiling which was irregularly rounded and sometimes even leaking. But out of this great challenge emerged one of the world’s greatest pieces of artwork. Contrary to his own opinion of himself, Michelangelo was as gifted a painter as he was a sculptor.

Activity:
1. Research the life of Michelangelo. Do you think that his artistic genius was the result of his upbringing and the people he trained with or could it be a talent with which he was simply born?

2. Have your students create their own drawing in difficult conditions, as Michelangelo did. Have your students lie on their backs beneath their desks. Tape a sheet of paper to the bottom of their desk and have them create their own art work. How difficult is it to paint with your arms extended above your head? How do you think Michelangelo felt?

Extensions:
3. Frescos were created in small pieces each day (see next activity). Enlarge one of the paints from the Sistine Chapel, divide into squares and cut. Distribute one square to each of your students and ask them to redraw their square on to paper. Cut out and attempt to reassemble. Any problems encountered? How could Michelangelo do this?

4. Divide your students into teams of four and have each team choose one of the frescos on the ceiling of the Sistine Chapel. Copies of the paintings can be printed out from within the website at left. Have each team study their painting and write about what they think the story is trying to communicate. Why is the story told in pictures, not words?
In sixteenth century Italy, frescos were considered to be one of the highest art forms, in large part because it was so difficult to master. The word fresco is derived from the Italian word for “fresh” as the work is created by painting on wet or fresh plaster.

To begin the process, the artist sketches out a full-scale preliminary drawing of the design, referred to as a cartoon. A needle is then used to poke small holes along each line on the paper. Holding the perforated drawing up to the freshly plastered wall, the artist could dust it with charcoal dust to leave a light impression to follow with paints. This is crucial because only a small portion of the fresco could be created at one time. The plaster, made from a mixture of fine sand, lime and marble dust, would be applied to a small area daily and would be painted while still wet. The following day, with the previous section now dry, the next area would be added, carefully joining them together so as to make the seams inconspicuous. In frescos, the paints soaked into the wet plaster and therefore required no glues to hold them to the surface. The drying plaster binds the colors into the work to form a smooth and permanent illustration.

Activity: Create Your Own Fresco

Day One
1. Pretend that the mayor of your local community has asked your class to create a series of frescos representing where you live. What would you include? What would you not include? What would be your primary message? As a class, discuss and design possible topics for your frescos. Students with good research skills can identify possible subjects while others may sketch out the preliminary designs. Select a design for each group, remembering that the whole series should tell the story of your community.

2. With your class divided into small groups (3-4 students each), assign each team one of the panels in the story. Ask them to refine their drawing, adding details such as shading. Then take a needle to poke holes every ½” along each line.

Day Two
3. Cut burlap to lay flat in the meat tray. Mix plaster according to directions on package and pour into meat tray over the burlap. Allow to set, but not to dry completely.
4. With the plaster still wet, align your perforated drawing over the meat tray, being careful not to touch the plaster with your fingers. Using a sock filled with charcoal powder, gently shake to put powder through all the holes. Quickly using a brush with paint, connect the dots to form an outline of the design.

5. Using the mixed powdered tempera paints, apply thinly with brush strokes in the same direction. You will probably need to paint several layers of the same color to get the desire effect as each color reacts differently to the plaster.

**Day Three**

6. Allow to dry after which murals can be removed from meat trays. Exhibit in the classroom and share the story they tell of your community. Another class or parents can be invited to visit your classroom to tour your fresco, with your students serving as guide and interpreter.
Popes are elected. Within twenty days following the death of a pope, the electoral meeting (or conclave) begins. It is a carefully-controlled and secret process, almost certainly the oldest continuous electoral tradition in the world.

Every cardinal younger than the age of 80 gathers at the Sistine Chapel. They remain there daily, behind locked doors until they choose a new pope. The voting proceeds without speech or debate. Each cardinal receives a ballot and writes a name. He approaches the altar individually, placing his ballot on the plate and then overturning it to drop the paper into the chalice. When the votes are counted, if no one emerges with a two-thirds majority, the balloting continues, twice in the morning, twice in the afternoon, day after day – until a candidate emerges.

At the end of each balloting, in the morning and in the afternoon, the used ballots are burned in a small stove near the entrance of the Sistine Chapel. The color of the smoke informs the crowds in Saint Peter’s Square about the outcome of the balloting. Dark smoke indicates no pope has yet been elected; white smoke signals a new pope. Dry or wet straw was added originally to the burning ballots to produce the smoke, but the results were sometimes confusing. Today, special chemical cylinders color the smoke black or white, leaving no doubt as to the outcome.

The instant a pope is chosen, the presiding cardinal approaches the candidate and asks if he will accept the election and, if so, what name he wishes to be called. In 2013, Jorge Bergoglio of Argentina took the name Francis, in honor of Saint Francis of Assisi. After being elected, the new pope sits before the altar of the Sistine chapel in a throne. One by one the cardinals kneel in front of him to make confessions of homage, obedience and faith. The Senior Cardinal Deacon then appears on the balcony of the central window of Saint Peter’s Basilica and declares to the world, “Habemus papam!” (“I announce to you a great joy! We have a pope!”). He then introduces the newly elected pope, who steps up to the balcony to give his first blessing.

Review Questions:

1. Ask your students to identify different ways that a leader might be selected. After reading the above to the class, ask for their thoughts regarding the process? Why is it done in this manner? Is this a good way to elect a leader?

2. Think of at least three other types of elections. What are their advantages and disadvantages in comparison to the secret ballot method at the Vatican?
According to the Greek philosopher Aristotle, the Earth was the center of the universe, surrounded by perfect crystalline spheres holding the moon, Mercury, Venus, the Sun, Mars, Jupiter and Saturn. The outermost sphere was reserved for the stars and constellations. The Roman Catholic Church embraced Aristotle’s ordered view of the universe and placed Heaven in its outermost sphere. This Earth-centered model dominated thinking in Europe until the seventeenth century.

In 1543, the Polish astronomer, Nicholas Copernicus, proposed a new model of the solar system with the Sun at its center. In this model, the Earth and the other planets orbit the sun and only the moon continues to circle the Earth. This sun-centered theory remained a topic for scholarly discussions between philosophers and mathematicians until the arrival of Galileo Galilei, an observational scientist armed with a telescope and an eye for recording details. Through the newly-invented telescope, Galileo saw and recorded images that no astronomer had ever seen, images that contradicted Aristotle’s idea of perfect crystalline spheres. His discoveries put him in conflict with the Church.

The Catholic Church eventually became an important patron of the sciences, supporting work in astronomy and anatomy as well as many other disciplines. Pope Leo XIII explained in 1891: The Church and her Pastors are not opposed to true and solid science, whether human or divine, but that they embrace it, encourage it, and promote it with the fullest possible dedication.

CHALLENGE QUESTIONS

Aristotle envisioned the heavenly bodies within perfect crystalline spheres revolving around Earth. How could the following observations made by Galileo challenge that original hypothesis?

1. The sun has dark spots (called sunspots).
2. The moon has valleys and mountains.
3. Galileo discovered four moons orbiting the planet Jupiter.
4. Challenge Observation: Galileo noted Venus had phases that required the planet to be farther from Earth than the sun.

Above: Jupiter as photographed by Voyager 1
In 1632 at age 70, Galileo was summoned to the Vatican and forced to recant his support of the idea that the Sun, not the Earth, was at the center of our solar system. Although he lost his personal freedom, his courage helped set astronomy free. The science of astronomy would never again be bound by Church doctrine.

By the late 18th century, the Church supported the same astronomy that it had once banned. Pope Leo XII removed Galileo’s book from the Index of forbidden books. In 1891, the subsequent Pope Leo XIII formally re-founded the Vatican Observatory and located it on a hillside behind Saint Peter’s Basilica. For a little over four decades, astronomers conducted research, including a prominent international program to map the entire sky in the shadow of Saint Peter’s Basilica. In the 1930’s, the Vatican Observatory was moved from the bright skies of Rome to the Pope’s summer residence thirty-five miles from Rome. Bright city lights have now forced the Vatican Observatory to have a second site in Tucson, Arizona, called the Vatican Observatory Research Group.

Activity:

1. Using the web links left and below and other library resources, research the trial of Galileo. What was his evidence that the Earth—not the Sun—was at the center of the solar system? How long did it take for Galileo’s observations to become recognized by the Church?

2. Why do many modern historians question the traditional interpretation of Galileo’s trial as simply a conflict between science and religion?

3. Describe in your own words the current relationship between astronomy and the Catholic Church and indicate how it has changed since the time of Galileo. How has the Church responded to the newest discoveries in astronomy?

Extension

4. Conduct a mock trial of Galileo. Appoint prosecutor and defense teams and examine the evidence for both perspectives. What would your strategy be for prosecuting Galileo? How could you defend him? If you had been the Pope, how would you have decided the outcome of the trial?

Additional Resources

The Trial of Galileo (1.) By Doug Linder (2002)
Update: Trial of Galileo (2.) From SHiPS Resource Center, for science teachers using sociology, history and philosophy of science.
The Galileo Project (3.) Rice University, Houston, Texas.

For the translated text of original documents, consult the following weblinks:
Dialogue Concerning the Two Chief World Systems (4.) (1632)
Galileo's Defense and Depositions (5.) (1633)
Papal Condemnation (Sentence) of Galileo (6.) (1633)
In 44 BC, Emperor Julius Caesar instituted a calendar derived from ancient Egypt with three hundred and sixty five and one quarter days. Every fourth year became a leap year with an extra day added as February 29. The Julian Calendar as it was known was the standard for Europe until the sixteenth century.

The Roman Catholic Church was very interested in a proper calendar. Easter must fall on the first Sunday after the full moon that follows the vernal equinox (the day of equal periods of day and night or the first day of spring). For this to happen, the date of the vernal equinox (on March 20 or 21) must occur on the same date on the calendar every year. By the time of Pope Gregory XIII, astronomers realized that the year in the Julian Calendar was slightly too long; the vernal equinox was occurring about ten days before March 21.

Pope Gregory XIII called a committee to consider reform and the new Gregorian Calendar was introduced in 1582. To make the year slightly shorter than 365.25 days, the leap years were removed from all centuries that are not divisible by 400. So 1600 and 2000 had leap days, but 1700, 1800, and 1900 did not. Today the calendar of Pope Gregory XIII is used throughout the world. (http://www.newadvent.org/cathen/07001b.htm)

Activity:
How accurate is the Gregorian Calendar? From precise astronomical observations, we know that the actual year of the seasons is 365.242199 days long (365 days 5 hours 48 minutes and 46 seconds). This is the exact time between one vernal equinox and the next.

1. The Julian Calendar of 365.25 years is slightly longer. How long is the Julian year in days and hours? (365 days, 6 hours)

2. Around 250 AD, the Julian Calendar was in agreement with the seasons. By 1550 AD, how many days had the Julian Calendar gained over the calendar of the seasons? 9.75 days ((1550-250) * (365.25 - 365.242199))

3. How long is an average year in the Gregorian Calendar? Remember that this calendar removes three days out of every 400 years. (365.2425 days)

4. Now how much too long is the Gregorian calendar? (365.2425-365.242199 = .000301 days too long)

5. How long before the Gregorian calendar will need to lose a day? (1 day divided by 0.000301 days per year = 3,322 years)
Many of the artifacts on view in this exhibit are part of rituals of the Catholic Church. A ritual is defined as “the established form for a ceremony.” In this activity, your students will explore the rituals found in their own lives and consider what purpose they serve.

Activities:

1. Divide your class into teams of four students each. Ask them to discuss within their team and record answers for the following questions: What are your family traditions and celebrations? Why do you celebrate these? Do your grandparents or other relatives also recognize these same occasions? Have each team record their answers in their research notebook.

2. You can discuss their answers with the entire class. Examples might include: birthday, holiday, wedding, funeral, bar mitzvah, christening, etc. Is there unique clothing or music for their event? What is the theme? Who is allowed to participate in the ceremony? Does the ceremony vary from place to place or person to person?

3. Ask your students to interview an older member of their family or an individual in their community about an important ceremony in their life. Tape record the interview if possible and have your students transcribe. Many ceremonies or rituals are never written down, but are passed down through the generations by oral tradition.

4. Have your students select one of the items at left from the Museum exhibition. Each one of these objects is part of a ritual or ceremony at the Vatican. Have students research their object’s function and meaning and record their findings in their research journal. During your visit to the Museum exhibition, a member of each team can serve as the tour guide for his or her object when it is located on the tour.

Additional Resources


The museum exhibit *Vatican Splendors: A Journey through Faith and Art* is a collection of objects used to tell a story, in this case, the two thousand year history of the Vatican. That is the purpose of museums – to use objects ranging from dinosaurs to artifacts to tell interesting stories. You can do this as well.

**Activity:**

1. After your return from the Museum exhibit, discuss what your students learned from the exhibition. Why were certain items chosen to tell the story? What other objects could have been added?

2. Explain to your students that they are going to create their own museum display, telling the story of their own family. Their first step will be to research and write the story. Have your students interview their parents, siblings or other relatives to better understand their own family heritage. What did they find most interesting about what they learned?

3. The next step in creating their own museum display will be to select objects that will communicate the story. Ask them to select five items from home that say something important about their family (ensure they understand that they must ask their parents first). Have your students write a label for each object, describing its function and importance. An exhibit case may be created from a small cardboard box. Do not glue objects inside box to avoid damaging them, but they can be placed inside. Attach labels near each object.

4. Arrange the boxes throughout the classroom and take your students on a tour. At each exhibit, allow the creator to explain what it says and why they chose the objects they did. Neighboring classrooms can be invited to tour your “museum” as well.
Every year on May 6th, this scene plays out in a Vatican courtyard as a chaplain reads a solemn oath:

"I swear I will faithfully, loyally and honorably serve the Supreme Pontiff and his legitimate successors, and also dedicate myself to them with all my strength, sacrificing if necessary also my life to defend them. I assume this same commitment with regard to the Sacred College of Cardinals whenever the See is vacant."

Then a robust, colorfully dressed young man is called by name. He advances alone, and with his left hand he grasps the standard (flag) of the Swiss Guard, holding up his right hand with three fingers open, as a symbol of the Trinity (Father, Son and Holy Spirit) and he confirms the oath:

"I swear I will observe faithfully, loyally and honorably all that has now been read out to me. May God and his saints assist me."

Upon taking this oath, a newly induced member of the Vatican Swiss Guard has joined the elite few who serve in the world’s smallest army, for the world’s smallest country, the sovereign state of the Vatican. And by taking this oath, he pledges to defend the Vatican and the Pope, if necessary, with his life.

**History of The Swiss Guard**

Pope Julius II formally requested the service of Swiss mercenaries -- famed for their courage and loyalty -- in June 1505. Just three months later, a regiment left Switzerland and marched to Rome. One hundred and fifty Swiss soldiers arrived at the Vatican January 22, 1506, the day that marks the official founding of the corps.

During the Sack of Rome, May 6, 1527, when Charles V of Spain devastated the city with his army, it was only the quick reaction of the Swiss Guards that enabled Pope Clement VII to safely take refuge in Castel Sant'Angelo. 147 Swiss soldiers died in the fighting. The Spanish invaders occupied the Vatican buildings, causing untold damage: they used ancient manuscripts as bedding for their horses, lit fires on the marble floors and scratched graffiti on the frescoes. Only 42 guards survived. It is on the May 6th anniversary of this event, that the Vatican conducts the swearing-in ceremony of all new guards, to help remind them of the life-and-death seriousness of their commitment.
The sack of Rome marked the bloodiest day in Swiss Guard history. After that, no other combat deaths have been recorded. Armed with nothing but Renaissance weaponry, this tiny army kept Nazi soldiers out of Vatican City as Germany occupied Rome during World War II. The last time the Swiss Guard ever lost to an invader was in 1798 when Napoleon took Rome, disarmed and disbanded the Guards and abducted two popes in two years. After that, the guard's record is impeccable, keeping popes, cardinals and papal territory safe and well protected. It was an undercover Swiss Guard who helped shield Pope John Paul II during the 1981 assassination attempt in Saint Peter's Square.

**Becoming a Swiss Guard**

The Swiss Guard currently numbers around 130, including, the commander, five officers (including a chaplain) and soldiers (halberdiers). The criteria to join the Swiss Guards are stringent. A candidate must be between 19 and 30 years old, stand at least 5 feet 8 inches tall, be devoted Catholic of irreproachable character and unmarried. He must be a Swiss citizen, and having completed rigorous entrance requirements and Swiss army training, he is eligible to become a member of this elite guard, ready at any moment to sacrifice his life for the Pope. Building on their training for their traditional service in the Swiss military, members engage in yearly rifle competition and receive self-defense instruction, as well as basic instruction on defensive bodyguard tactics similar to those used in the protection of many heads of state. Since the attempted assassination of Pope John Paul II, a much stronger emphasis has been made on the Swiss Guards' functional, non-ceremonial roles. This has included enhanced training in unarmed combat and extended training in the use of firearms.

**The Swiss Guard Uniform**

Swiss Guards on ceremonial duty at the Vatican are instantly recognizable by their distinctive uniforms. The official dress uniform is blue, red, and yellow in a Renaissance style that includes with boot covers, white gloves, a high or ruff collar, and either a black beret or a morion (helmet). Although some believe that the uniform was designed by Michelangelo, in fact, it was a 20th century Swiss Guard Commandant who created the current uniforms. Sergeants wear a black top with crimson leggings, while other officers wear an all-crimson uniform. The regular duty uniform is more functional, consisting of a simpler solid blue version of the more colorful tri-color grand gala uniform, worn with a simple brown belt, a flat white collar and a black beret. The original colors (blue and yellow) were issued by Pope Julius II based on his family (Della Rovere) colors. Pope Leo X, added the red to reflect his family's (Medici) colors.

Guard members wear a long sword (officers a rapier or straight sabre) and receive instruction in the ceremonial use of their halberd (a spear-like weapon) during marches, drill, and regular formations that are a part of their official duties around the Vatican. The halberd includes a loose metal ring just below the blade which sounds a loud clink when an individual or formation comes to
attention. Other weapons and regalia carried by higher ranking non-
halberdiers include: a command baton, a flamberge (a wavy two-
handed sword), and breastplate with shoulder guards.

The Swiss Guards celebrated their 500th anniversary in 2006 and, in
all likelihood, "the world's smallest army" will continue to defend
the sovereign Vatican City and the Pope against all threats for the
next 500 years.

Activities:

1. Members swear an oath of loyalty when they are induced into
the Swiss Guard. a. List five situations in which a person
might be required to take an oath. b. Think of a person, an
institution, a cause or something else about which you have
strong beliefs. Write your own oath, pledging commitment
those beliefs. c. Memorize the oath and recite it to your class.
d. Is requiring someone to take an oath always a good thing?
On note cards, write down your thoughts to these two
questions. In what kind of a situation is taking an oath a
positive thing? Are there situations where requiring someone
to take an oath can be a negative thing? Divide into groups of
eight, with four students assigned to "positive" and four to
"negative" and debate the two sides of this issue. Each group
should appoint one spokesperson to present the conclusions of
the debate to the class.

2. One of the early Popes protected by the Swiss Guard was Pope
Leo X, who was a member of the Medici family. Who were
the Medicis? a. Using the library and the Internet, research the
Medici family and make a list of the ways that the family
influenced life, religion, politics and commerce during the
Renaissance period. b. For class discussion, can you think of
any families in today’s world who remind you of the Medici
family? Who and how?

3. When a new recruit takes his loyalty oath, he does so while
grasping the flag of the Swiss Guards. Like most flags, the
design of the flag features images and symbols that may
represent the history, geography, leadership and other
important aspects of the country, state or organization. a.
Examine the design of the Swiss Guards’ flag and make a list
of the symbols and what they mean. b. Pick a country or state
and find a picture or illustration of its flag. Examine the flag
and look up information about the country or state and make a
list of its images and symbols and what you think they
represent. c. Think back on the topic for which you wrote an
oath. Create your own flag with call-outs that identify the
significance of the symbols that you selected to be a part of
your flag

Additional Resources

www.vatican.va
www.catholic.org
www.crwflags.com

The Pope's Army: 500 Years of
the Papal Swiss Guard. Royal,
Robert. Crossroads Publishing

The Guardian Angels of the Pope,
Morelli, Giovanni, 2006

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