

**Rosslyn Chapel Education Program
Teacher's Guide**

Talking Gothic: Style and Structure at Rosslyn Chapel

Grade level: Lower Secondary (can be altered for younger and older students)

Subject Area: Architecture, History, Art/Art History, Design

Content Standard:

Scottish Curriculum for Excellence: Experiences and Outcomes which are relevant to these activities, as defined by Education Scotland. Please refer to:

<http://www.educationscotland.gov.uk/learningteachingandassessment/curriculumareas/technologies/eand/index.asp>

SOC 2-01a	I can use my knowledge of a historical period to interpret and present an informed view
SOC 2-02a	I can interpret historical evidence from a range of periods to help build a picture of Scotland's heritage and my sense of chronology
TCH2-12a/3-12a	By applying my knowledge and skills of science and mathematics I can engineer 3D objects which demonstrate strengthening, energy transfer and movement
TCH2-13a	During practical activities and design challenges I can estimate and measure using appropriate instruments and units
TCH2-14a	Through discovery and imagination I can develop and use problem solving strategies to construct models
TCH2-15a	I can use drawing techniques, manually or electronically, to represent objects or ideas, enhancing them using effects such as light, shadow and textures
TCH 3-15a	Having explored graphical techniques and their application, I can select, organise and represent information and ideas graphically
TCH 3-15b	I gain inspiration from natural forms, the built environment or imagination to develop a creative idea which could be realised using computer aided manufacture
EXA 2-07a-3-07a	I can respond to the work of artists and designers by discussing my thoughts and feelings. I can give and accept constructive comment on my own and others' work.
EXA 4-07a	I can analyse art and design techniques, processes and concepts, make informed judgements and express considered opinions on my own and others' work

Relevant Subject Areas for Independent Schools

GCE AS and A Level Specification (AQA Examination Board)

- Develop understanding of the history, heritage and culture of Scotland, and an appreciation of their local and national heritage within the world.
- Explore and evaluate different types of sources and evidence
- Locate, explore and link periods, people and events in time and place

Skills developed:

- Observing, describing and recording
- Comparing and contrasting to draw valid conclusions
- Interpreting and displaying graphical representation of information
- Awareness of sequence and chronology

GCSE specification Ed Excel Examination Board

Architecture, Environmental and Interior Design:

Students will develop knowledge and understanding of:

- Appropriate drawing skills, in particular the relation of plan to elevation and, where appropriate, the preparation of perspectives, visualisations, models, fly-throughs and axonometric drawings
- Factors that determine the realisation of design solutions within the built environment, including colour, texture, fabrics, construction, orientation and the organisation and use of light and space, which may include computer-generated ideas and developments
- The particular context determined by the requirements of the design - identification of design problems, knowledge of the work of others when confronting spatial design requirements.

Performance Objectives:

- Build upon students' recognition skills in identifying stylistic patterns, specifically of the Gothic style and symbology exhibited at Rosslyn Chapel
- Provide a rubric for future recognition of architectural styles and congruency

Specific Objectives:

At the end of this lesson, students will be able to:

- Understand how to differentiate architectural styles and provide examples of defining characteristics of a few styles
- Conduct research about and discuss meaning of the symbology featured at Rosslyn Chapel
- Successfully navigate CyArk's digital archive

Materials and Resources:

- Field trip to Rosslyn Chapel and/or Virtual Tour on CyArk's website (<http://archive.cyark.org/>)
- Access to CyArk's digital archive (3-D viewer, close-up photographs and perspective drawings of isolated features) (<http://archive.cyark.org/>)
- Access to Rosslyn Chapel's website (<http://www.rosslynchapel.org.uk/>)
- Access to a 3D graphics software program (optional extension for more advanced students)
- Provided image sets

Lesson Summary:

In this lesson, students will be guided through the recognition and categorization of Gothic architecture. Using examples of iconic and recognizable Gothic sites in Scotland, students will ultimately be able to identify Gothic elements at Rosslyn Chapel and explain what categorizes those elements as such. Students will also place Gothic architecture in the context of other architectural forms stylistically and historically, and have the opportunity to develop their own style of design.

Activity 1: What is Gothic?

Outcome:

Students will be able to recognise a Gothic building by appearance, identifying stylistic traits that categorize it as Gothic. This includes vocabulary, such as flying buttresses, pointed arches, vaulted ceilings, and gargoyles. At the end of this activity, students will possess the language required to describe and talk about Gothic buildings, and understand the basic history of the style.

Method:

The teacher will guide students through this lesson utilizing the visuals included in this lesson packet. The students will guess what features make a building Gothic, and compare with a variety of different kinds of buildings. After learning about 6 Gothic characteristics, students will photograph any Gothic buildings in their town or nearby towns to share with the class on a social network forum. Through this process, students will actively learn about what makes a building Gothic, and be able to identify buildings in their community accordingly.

Resources:

-Visual packets 1-3. Images are provided by CyArk, but teachers are encouraged to find more examples as they see fit. Examples included are isolated to Scotland, but teachers are equally encouraged to use examples of international Gothic sites.

Lesson:

The purpose of Activity 1 is to provide context for a lesson on Gothic architecture and style. Begin the class by showing your students the static images found in **Visual Packet 1**. These photographs are of Dunkeld Cathedral, Glasgow Cathedral, St. Andrews Cathedral, and University of Glasgow. This visual packet includes 3 photographs of each site.

Pin these photographs to the board, keeping the 3 photographs of the same site together. Consider writing the name of the site above the photographs. Ask the students to guess aloud: What do these 4 buildings have in common? What is different?

Architecturally speaking, these 4 buildings are all considered Gothic. So all the features that these buildings have in common make them Gothic.

Gothic architecture comes from the late medieval period, and was popular all over Europe. As a style, it developed from the Romanesque period, and was followed by the Renaissance. When Gothic architecture was in fashion, it was called the "Modern Style," and was considered daring and fantastical. Only after the style lost its popularity was it coined Gothic. The majority of Gothic buildings that exist today are churches or other ecclesiastic structures.

In the 19th-century, Europe saw a revival of the Gothic style. Referred to as the Gothic Revival, or High Victorian Gothic in Britain, this period promoted the Gothic style as the preferred style for religious, civic, and other institutional buildings and structures. With this more universal appeal to the decorative Gothic style, the Gothic Revival period is visible today in churches, parliament buildings, and residential housing.

The Gothic Revival continued into the 20th-century, when many universities were built in the Gothic style.

Review the 3 time periods with the class: late medieval period (12th-15th centuries), 19th-century, 20th-century.

There are several defining characteristics of Gothic architecture of all periods. Once you know these characteristics, you will be able to identify a Gothic building immediately, just by looking at it. So what are they?

In explaining the following characteristics, show the class the example images found in **Visual Packet 2**. Find more examples as you see fit. The students will be defining these terms in their student packet, so allow time to repeat any definitions if necessary.

1. **Height** – Prior to the Gothic style, architects struggled with the sheer weight of bulky stone walls. What revolutionized the Gothic style was the ability to build these heavy structures higher, using new techniques to support the building properly and distribute the weight.
2. **Flying Buttresses** – flying buttresses are the defining element of the Gothic style. Because buildings were getting bulkier, these buttresses provided extra support by taking the weight off the walls and transferring it to the ground. This allowed for taller, more elaborate buildings.
3. **Pointed Arches** – in order to better support heavy ceilings and walls, architects employed the pointed arch. This kind of arch is much stronger and provides more support than a circular arch, and gives a structure more vertical height.
4. **Vaulted Ceilings** – these unique ceilings were made possible because of the pointed arch. This style distributes force and weight from upper floors, and makes a room feel taller and more magnificent.
5. **Gargoyles** – these figures are perhaps the most identifiable characteristic of a Gothic building. Gargoyles are quite practical—they are spouts which direct rainwater off the roof. They are also fearsome to behold—they were used to instill fear in the common people, encouraging them to seek solace within the walls of the church.
6. **Decorative and Ornate** – in addition to being functional buildings, Gothic structures began to incorporate beauty into its design. You will notice intricate carvings marking arches, doorways, ceilings, etc.

With these terms in hand, students are prepared to describe the characteristics that make a building Gothic. Show students the second set of architectural images from **Visual Packet 3**, and pin them on the board over the first set of images. These buildings are from all over the world. Some are Gothic, but not all are! As a class, go through each building and circle in highlighter the characteristics that make the building Gothic. If you don't see these characteristics, it is probably not Gothic!

Visual Packet 3 includes photographs of 4 sites, with 3 images of each site. These are very grand sites, so feel free to supplement with more modest and local sites depending on your classroom and location.

- Cologne Cathedral in Cologne, Germany
 - Gothic architecture
- Yale University in New Haven, Connecticut, USA
 - Gothic architecture, "collegiate" style
- Geisel Library in San Diego, California, USA
 - Brutalist architecture
- Queen's House in Greenwich, England
 - Palladian architecture

Thinking Beyond (Take-Home Assignment):

As a take-home assignment, ask students to find any Gothic buildings in their town or nearby towns. These buildings should incorporate any of the 6 characteristics discussed during Activity 1. Set up a

social networking forum for students to post their photographs to with a relevant caption. This could be a Pinterest page, Facebook page/album, Dropbox, Google Drive, etc.

Our next activity will bring our new understanding of the Gothic style to Rosslyn Chapel, a 15th-century Gothic chapel in Roslin, Scotland.

Activity 2: Bringing Gothic to Us

Outcome:

Students will be able to identify Gothic features at Rosslyn Chapel, using correct terminology. Students will also understand how to properly document their observations in a log, making note of location, feature description, and a sketch.

Method:

The teacher will facilitate a class tour of Rosslyn Chapel, or show students CyArk's website for the virtual tour. As the students experience the site, they will be expected to complete a **Documentation Worksheet**.

Resources:

- A site visit and/or a virtual tour of Rosslyn Chapel, depending upon proximity and resources.
- Documentation Worksheet, included in this lesson packet.
- Access to CyArk's website (www.cyark.org)

Lesson:

Plan a field trip to Rosslyn Chapel. It may be helpful to participate in a class tour of the site. Prior to your visit, consider looking at the downloadable self-guided tours of the chapel, which are available on the Rosslyn Chapel website: <http://www.rosslynchapel.org.uk/>

Give each student a **Documentation Worksheet** to complete as they explore the chapel. This worksheet will ask them to identify 4 of the 6 characteristics reviewed in Activity 1 (see page 4). For each characteristic that they choose, they must locate an example within the grounds of Rosslyn Chapel, describe the feature, and draw a quick sketch.

In addition to identifying 4 Gothic characteristics at Rosslyn, the Documentation Worksheet asks students to find 4 symbols displayed at Rosslyn Chapel. They can select any four that they like—if they need help, remind them to look up at the ceilings, at the arches, doorways, and any other surface. These symbols can be icons of nature, mythology, or any pattern the student finds interesting. The tour guide or booklet will be helpful in explaining meaning behind some of the symbols.

If more time is needed after a site visit, allow students to explore the Virtual Tour on CyArk's website. This resource allows students to move between different panorama images taken all around the chapel. From these panoramas, students can look at exterior style and structure, as well as interior decorations.

Thinking Beyond (Take-Home Writing Assignment):

In the Gothic style, much emphasis was placed on ornate decorations and carvings. This practice can be very expensive, so we do not see this as often today. How do people decorate their homes and churches today? What materials are used to do so? Who pays to build a church? In answering these questions, think about patronage, gifted features (like stained glass windows, carved seats, etc), and other signage within a church that indicates that someone has contributed money and resources to the establishment.

Activity 3: Important Characteristics

Outcome:

Students will be able to navigate CyArk's archive and identify Rosslyn Chapel's unique characteristics, utilizing their Documentation Worksheets from Activity 2. Students will understand the difference between photographs, panoramas, perspective drawings, and 3D reconstructions, and will be prepared to develop and support an argument regarding one aspect of Rosslyn Chapel's design and history.

Method:

Students will explore CyArk's website online either in small groups or in pairs. The teacher will explain the difference between the different kinds of multimedia on CyArk's website, and assist students in the development of their arguments.

Resources:

CyArk's website and the Internet for individual/group research.

Lesson:

Divide the class into small groups or pairs, and direct students to CyArk's multimedia page for Rosslyn Chapel. There are many different kinds of images here.

1. **Photographs** – these photographs were taken during field capture or a later site visit. They capture unique aspects of the chapel. Do you recognise precisely where some of these photographs were taken?
2. **Panoramas** – panoramas are unbroken views of the region surrounding the observer, or the person taking the picture. This means that photographs from all directions are stitched together to create one continuous view.
3. **Perspectives** – perspectives are images derived from laser scan data. They represent three-dimensional images on a two-dimensional plane.
4. **3D Point Clouds** – these models are the product of highly accurate scan data and innovative technology. The 3D viewer allows us to view and navigate the site or aspect of the site in 3D, so we can understand first-hand the appearance of real objects. What you see in the 3D viewer is a collection of points – all collected from a laser scanner.
5. **Videos** – videos, or animations, allow the viewer to fly through and visualize an entire site or a portion of a site digitally. They are created from the laser scan data, and allow for unique vantage points optimized observation.
6. **Models** – 3D Models are three-dimensional representations of a site, building, or part of building composed of polygons, texture, and shading. The 3D viewer allows us to view and navigate the site or aspect of the site in 3D.

Take a few minutes to explore CyArk's archive. You should be able to recognise many of characteristics from your visit to Rosslyn Chapel. In this activity, you will choose one characteristic which, in your opinion, clearly captures Rosslyn Chapel's style and character. This should be something that is unique to the chapel, or to the Gothic style, and something that you really like. Think about the 6 characteristics we identified in Activity 1 (see page 4). Your feature can be one of these characteristics, or something

entirely new. The teacher should remind the students to ask for assistance if they need help deciding. Assign a time limit for this activity, and make sure to approve each group's selection.

Once each group has made their choice, they must come up with an argument about why (in their opinion) that characteristic best characterises the style of Rosslyn Chapel. In this argument, tell us:

1. What is the feature?
2. Why did you select it?
3. Why is it important to Rosslyn Chapel?
4. In your opinion, why is this feature the most important feature of Rosslyn Chapel?

The groups will present this to the class, so they must prepare their arguments well.

As the groups present their arguments, write down all the bullet points of their arguments on the board. When all groups have presented, summarize each feature with the class and reiterate its relevance to Rosslyn Chapel and Gothic architecture.

Activity 4: Today's Symbols

Outcome:

Students will be able to relate what they saw at Rosslyn Chapel to their communities, understanding how Gothic architecture is still present today if we look closely. Students will also expand their creativity by creating their own style and providing a list of defining characteristics of their style.

Method:

Students will explore the CyArk archive for specific symbols. They will also use their notebooks as they explore their own communities for real-life examples of these symbols. After the students understand the prominence of symbols at Rosslyn Chapel and in their own communities, they will propose their own architectural style, listing any defining characteristics and symbols.

Resources:

- CyArk's digital archive
- Drawing notebook.

Lesson:

Review the **Documentation Worksheet Part 2** from earlier with the class. Each student wrote down 4 symbols that they liked at Rosslyn Chapel. Explore CyArk's digital archive once more – can you find the symbols you wrote down on your worksheet on CyArk's multimedia page? How would you define "symbol"? (Hint: Direct students to Documentation Worksheet Part 2)

Part 1: Pick one symbol that you really liked. Why do you like this symbol? Does it remind you of anything? Have you seen a symbol like this before? Does it have any religious or other significance? Take a close look around your home and your neighborhood. Do you see this symbol represented anywhere? If so, draw those symbols and take a photograph to share with the class.

Part 2: Imagine that there is an architectural style named after you. We learned 6 characteristics of the Gothic style...what would be 6 defining characteristics of your style? Would you have iconic symbols? How would the building engage with the environment? With the community? What materials

would be used? How would the building be decorated? As students write down these answers in their student packet, ask them to draw a quick example of a building or other structure “in your style.”

Optional Extension (for more advanced students): as students develop their ideas of a personal architectural style, encourage them to try to draw some of their ideas using a Computer-Aided Design program, like Google SketchUp or AutoCAD.

Activity 5: Five Styles of Architectural Design

Outcome:

Students will be able to conduct research, independently or as part of a team, about architectural history, identifying 5 styles and differentiating them.

Method:

The teacher will provide students with a starting point for their research (a few helpful websites). Students will then continue to research five styles of their choice (including Gothic architecture), completing the Research Worksheet along the way.

Resources:

Access to computers and the Internet.

Lesson:

In pairs or individually, students will complete the **Research Worksheet**, where they will be asked to research, list, and describe 5 different architectural styles. Their research should include the history, characteristics, and relevant examples of each given style. Gothic Architecture must be 1 of their 5 selected styles. Provide students with **the following links** to begin their research:

http://en.wikipedia.org/wiki/Timeline_of_architectural_styles

http://en.wikipedia.org/wiki/Architectural_style

<http://architecturestyles.org/>

<http://www.preservationdirectory.com/historicphotogallery/architecturalstylesgalleries.aspx>

Summary and Conclusion:

After completing the above 5 activities, students will have a command of architectural styles and ways of talking about them. They will be able to distinguish a few different styles by appearance, and recognise common characteristics. They will also learn about symbology at Rosslyn Chapel, and how they see symbols everywhere in their daily lives.