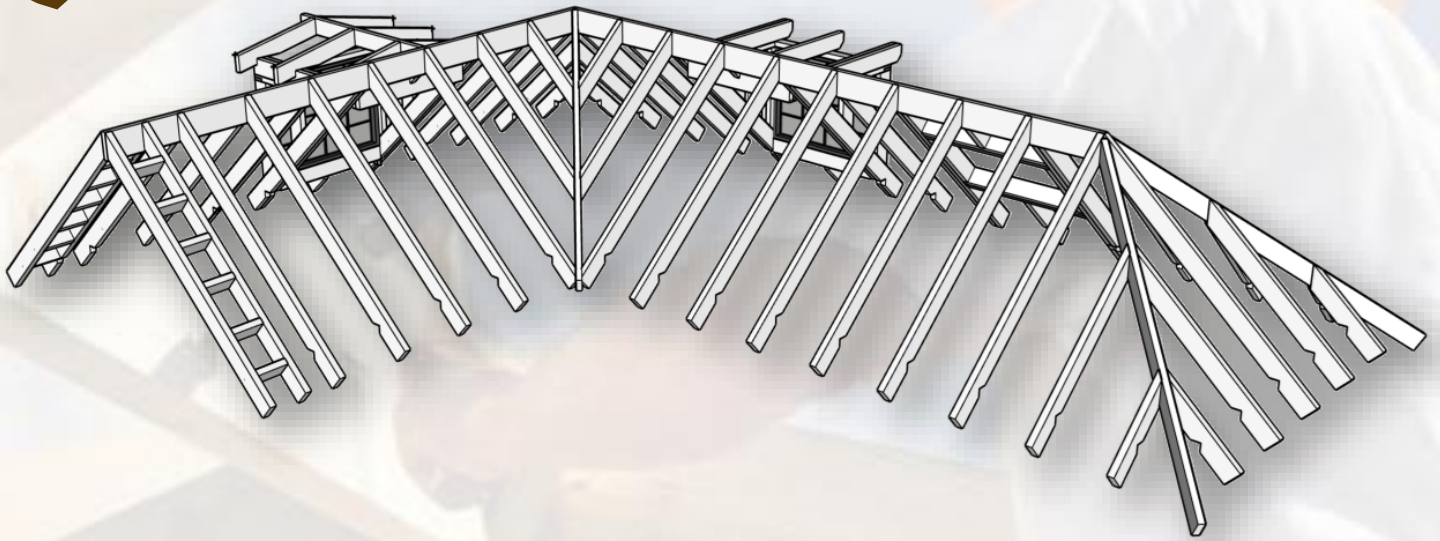
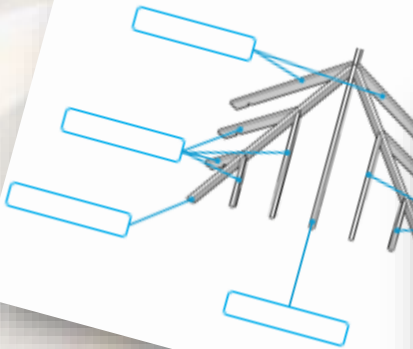


Roof Terminology.

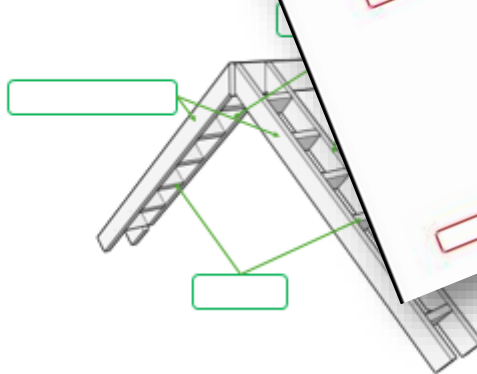
Unit 207.1.3



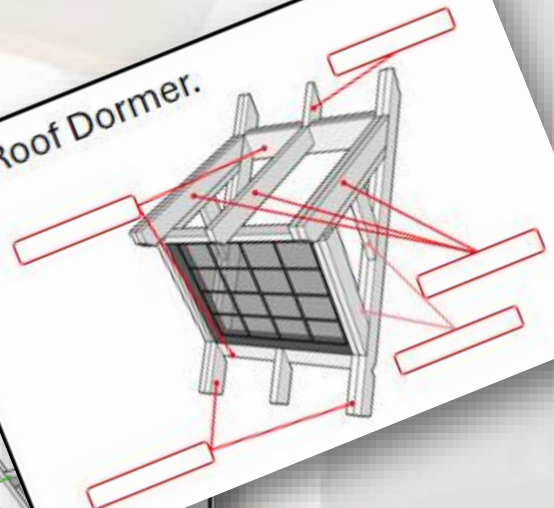
Hipped End.



Gable Ladder.



Flat Roof Dormer.



Lecturer: James Rix

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Thank You.....

Introduction:

This activity uses a detailed 3D model of a traditional roof structure to help learners explore, identify, and understand key roof components used in domestic construction. By interacting with the model and accompanying images, learners will develop the vocabulary, spatial awareness, and technical understanding required to interpret drawings, communicate effectively on site, and recognise how different roof elements work together to form a complete structure.

The activity is designed to be practical, visual, and interactive, allowing learners to rotate, zoom, and inspect the model while completing guided tasks that reinforce terminology and real-world application.

Aim:

The aim of this activity is to strengthen learners' understanding of roof terminology by enabling them to accurately identify, describe, and explain the function of key roof components—including common rafters, hip ends, gable ends with ladders, roof openings, flat roof dormers, and pitched roof dormers—using a 3D model as a visual reference.

Learning Objectives

By the end of this activity, learners will be able to:


- Identify key components of a traditional roof structure using correct terminology.
- Describe the purpose and function of each roof element.
- Compare different roof features (e.g., hip vs gable, flat vs pitched dormers).
- Interpret roof layouts and understand how components interact within the structure.
- Communicate roof-related information clearly using industry-standard language.

Activity Overview:

Learners will work individually or in small groups to explore the 3D roof model and complete a series of terminology-based tasks. These tasks may include:

- Labelling diagrams
- Matching terms to definitions
- Identifying components directly on the 3D model
- Completing short written explanations
- Comparing roof features
- Applying terminology to real-world scenarios

The activity can be delivered as a classroom worksheet, digital task, or blended learning session using the 3D model on screen.



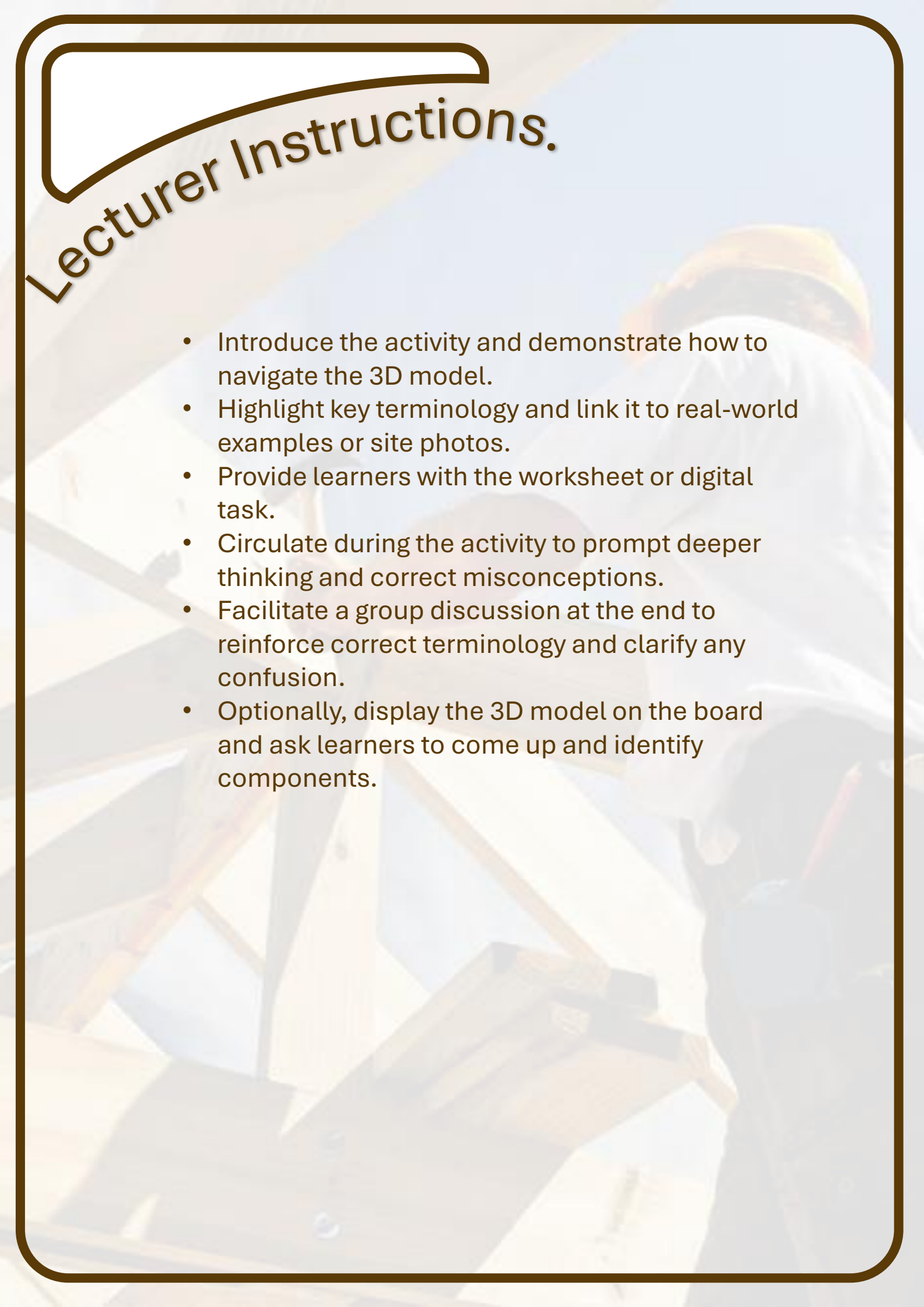
How this activity helps learning:

This activity supports learning by:

- **Building visual-spatial understanding** — learners see how roof components fit together rather than memorising terms in isolation.
- **Reinforcing technical vocabulary** — essential for communication on site, reading drawings, and passing assessments.
- **Supporting kinaesthetic and visual learners** — the 3D model encourages exploration and hands-on interaction.
- **Developing interpretation skills** — learners practise identifying components from different angles and contexts.
- **Bridging theory and practice** — terminology becomes meaningful when linked to real construction elements.
- **Encouraging teamwork and discussion** — learners articulate their understanding and challenge misconceptions.

Student Instructions:

1. Open the 3D roof model and spend a few minutes rotating and exploring it.
2. Locate the following components on the model:
 - Common rafters
 - Hipped end
 - Gable end with ladder
 - Hip & Valley
 - Roof openings
 - Flat roof dormer
 - Pitched roof dormer
3. Use the worksheet or digital activity to:
 1. Label each component
 2. Match terms to definitions
 3. Write a short explanation of the purpose of each element
 4. Compare the differences between the hip end and gable end
 5. Identify where dormers are positioned and why
4. Complete the challenge questions at the end (e.g., “Which roof feature provides the most usable internal space and why?”).
5. Submit your completed work to your lecturer or upload it to the platform used in your class.



Lecturer Instructions.

- Introduce the activity and demonstrate how to navigate the 3D model.
- Highlight key terminology and link it to real-world examples or site photos.
- Provide learners with the worksheet or digital task.
- Circulate during the activity to prompt deeper thinking and correct misconceptions.
- Facilitate a group discussion at the end to reinforce correct terminology and clarify any confusion.
- Optionally, display the 3D model on the board and ask learners to come up and identify components.

Scaffolding Options:

- Provide a **word bank** of roof terminology.
- Use **partially labelled diagrams** for learners who need more support.
- Offer **sentence starters** for written explanations (e.g., “A common rafter is used to…”).
- Allow learners to work in **pairs** to build confidence.
- Provide **colour-coded overlays** showing different roof components.
- Give **step-by-step prompts** such as “Find the ridge line first, then locate the rafters that meet it.”

Differentiation Strategies.

For learners needing support:

- Simplify tasks to identification only.
- Provide printed diagrams alongside the 3D model.
- Allow verbal responses instead of written ones.
- Use guided questions with multiple-choice options.

For learners needing stretch and challenge:

- Ask them to explain how loads travel through the roof structure.
- Include tasks comparing traditional roofs to trussed roofs.
- Ask them to sketch a simplified roof plan or section.
- Challenge them to identify potential issues (e.g., where water ingress might occur).



Assessment Opportunities

- **Formative assessment** through observation during the activity.
- **Completed worksheets** demonstrating correct identification and explanation.
- **Verbal questioning** to check understanding of terminology.
- **Peer assessment** where learners check each other's labelled diagrams.
- **Mini-quiz** at the end to reinforce key terms.
- **Application task:** learners describe roof components in a real-world scenario or drawing.

Word Bank.

Core Roof Components

- Common Rafter
- Hip Rafter
- Valley Rafter
- Ridge Board
- Ridge Line
- Purlin
- Wall Plate
- Ceiling Joist
- Jack Rafter
- Trimmer
- Trimming Joist
- Fascia
- Soffit
- Eaves
- Verge
- Bargeboard

Roof Types & Features

- Gable End
- Gable Ladder
- Hip End
- Valley
- Dormer
- Flat Roof Dormer
- Pitched Roof Dormer
- Roof Opening
- Roof Pitch
- Roof Span
- Overhang

Directional / Spatial Vocabulary

- Horizontal
- Vertical
- Sloping
- Parallel
- Perpendicular
- Intersection
- Edge
- Centre
- Support
- Connection
- Junction

Functional Vocabulary

- Supports
- Carries load
- Transfers weight
- Provides ventilation
- Creates opening
- Strengthens structure
- Forms the roof shape
- Protects from weather
- Allows access
- Provides headroom

Word Bank.

Colour Coded

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Functional Vocabulary

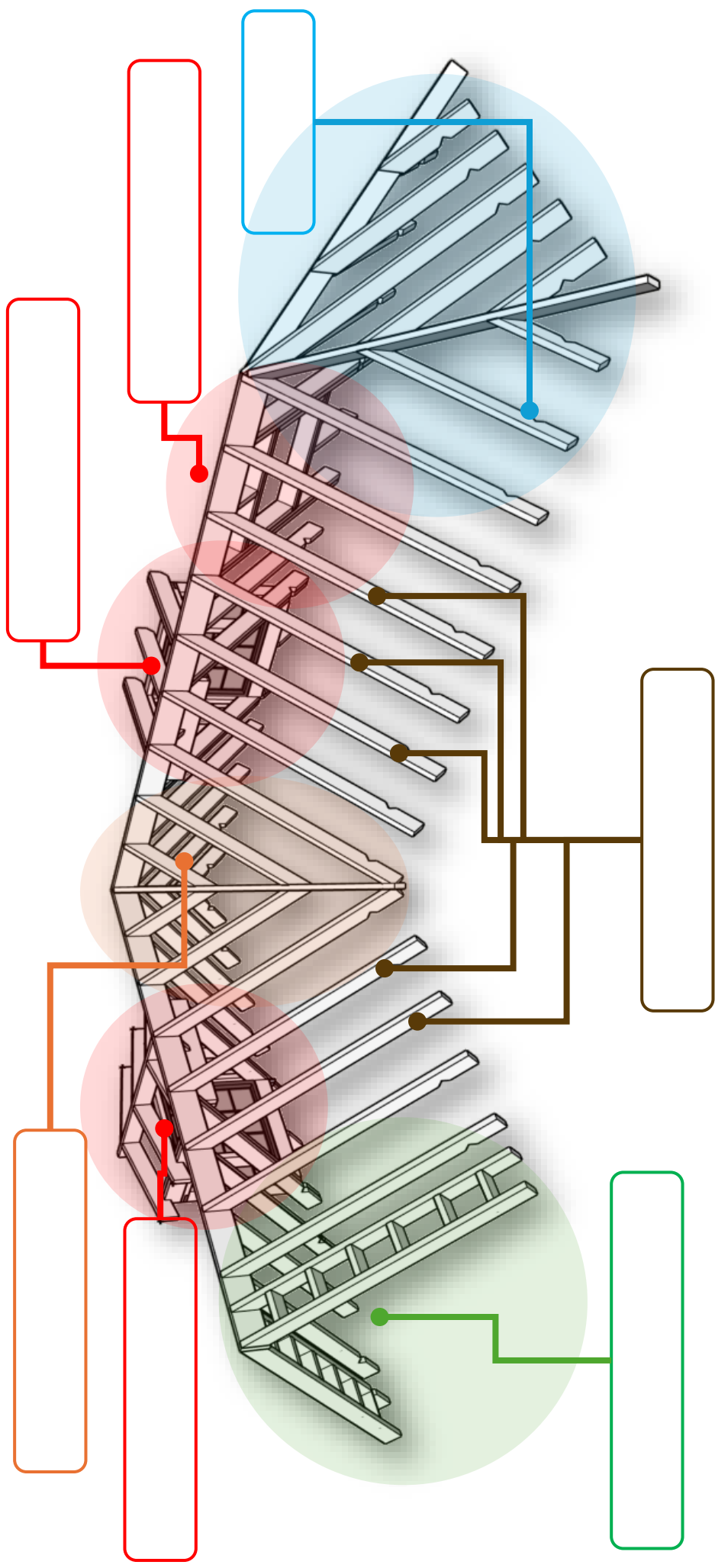
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Sentence Starters.

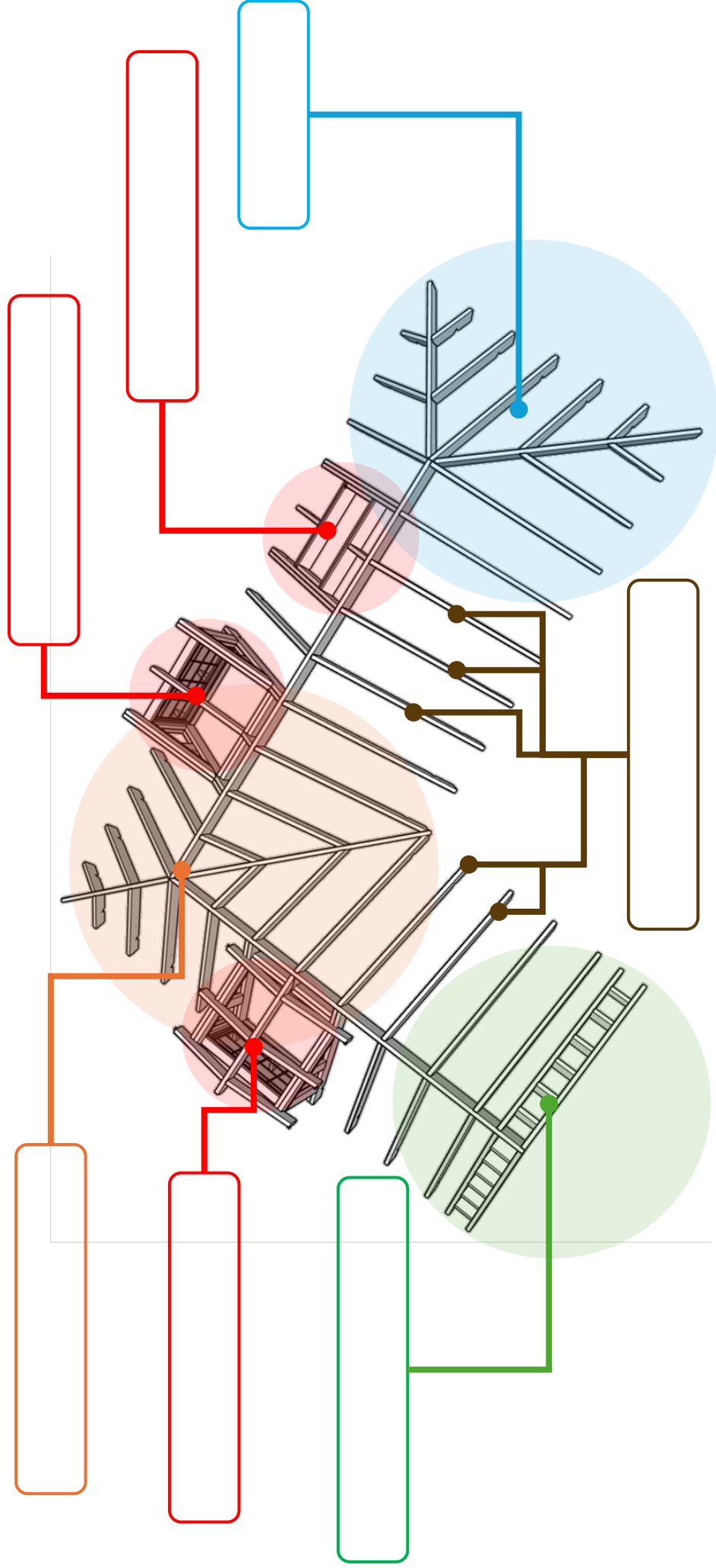
Sentence Starters for Learners

- “This component is used to...”
- “The purpose of the _____ is to...”
- “You can identify this part because...”
- “This connects to the _____ at the...”
- “This feature is different from a _____ because...”
- “This part helps support the roof by...”
- “The _____ is located where the roof...”

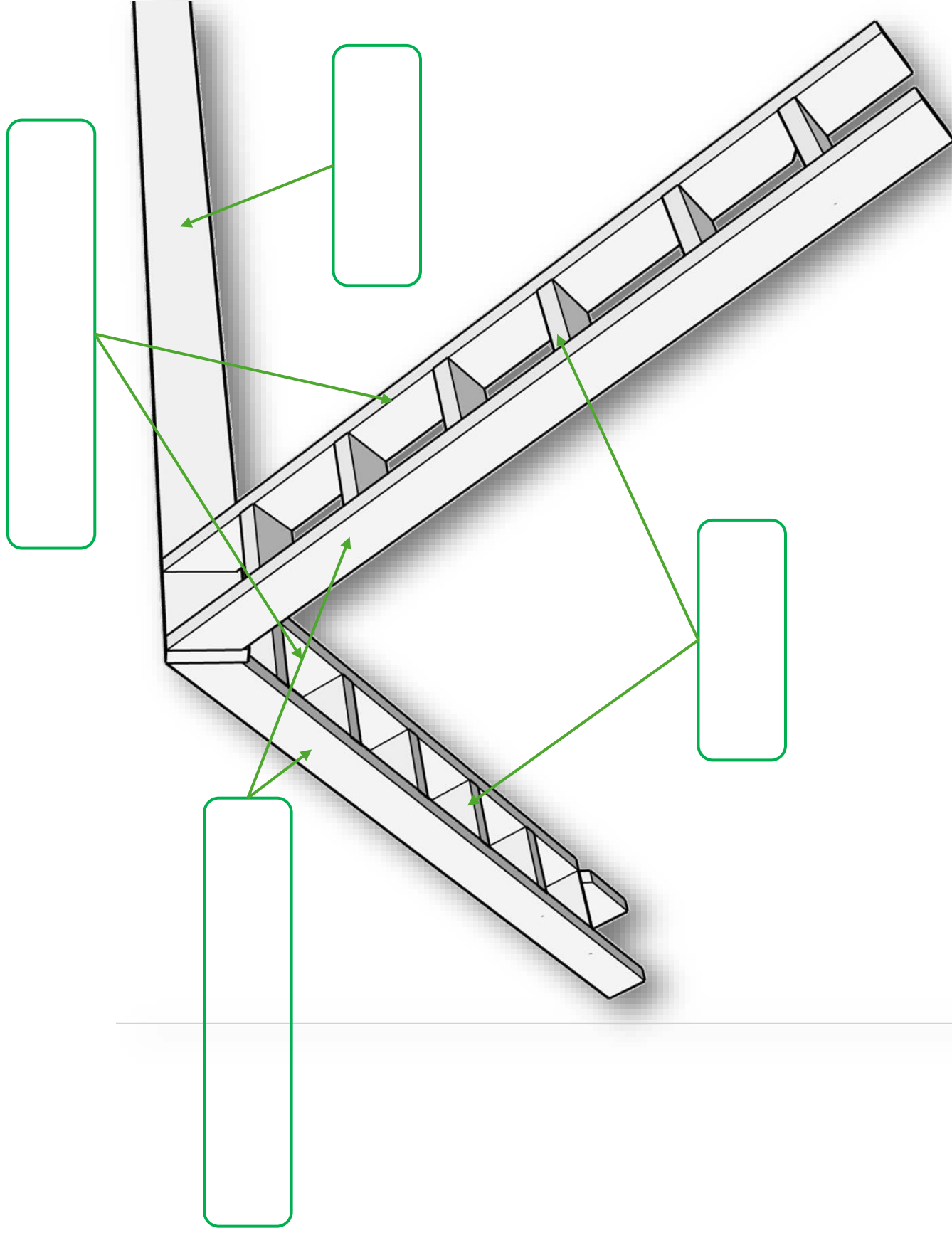
Areas of the roof.



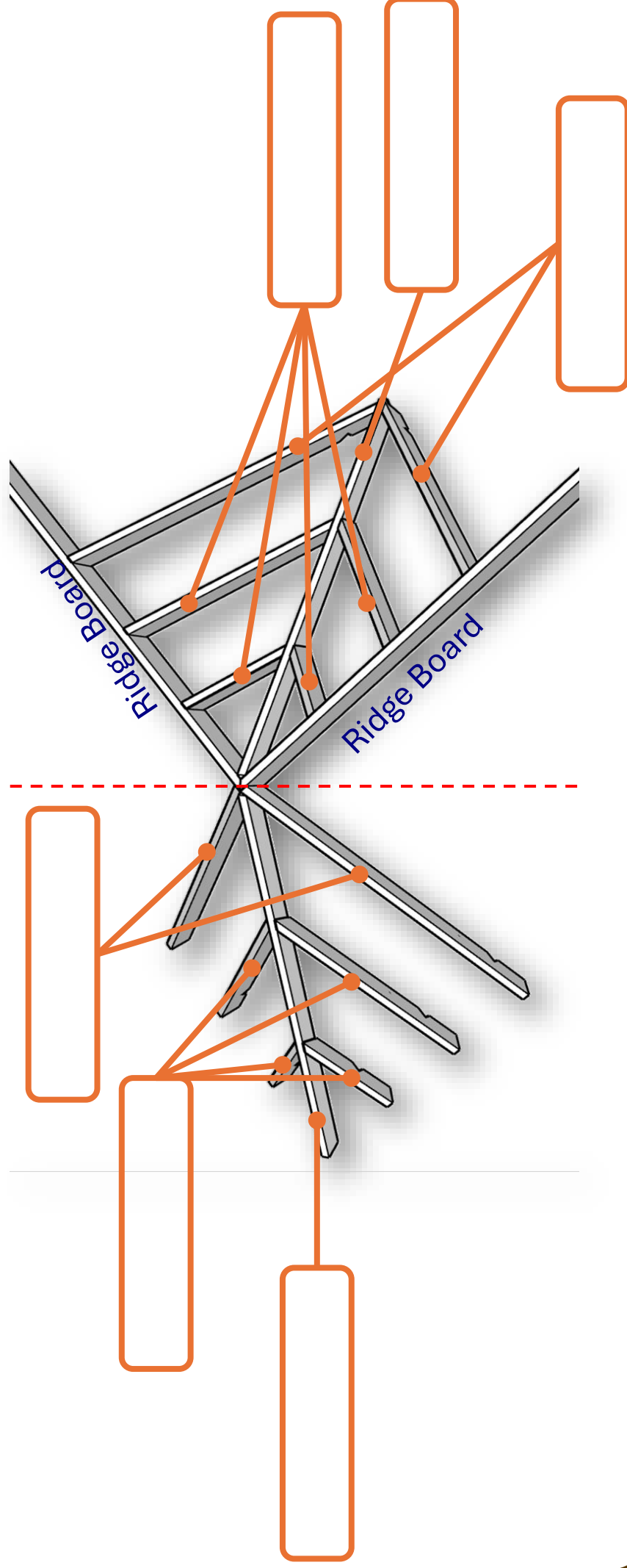
Areas of the roof.



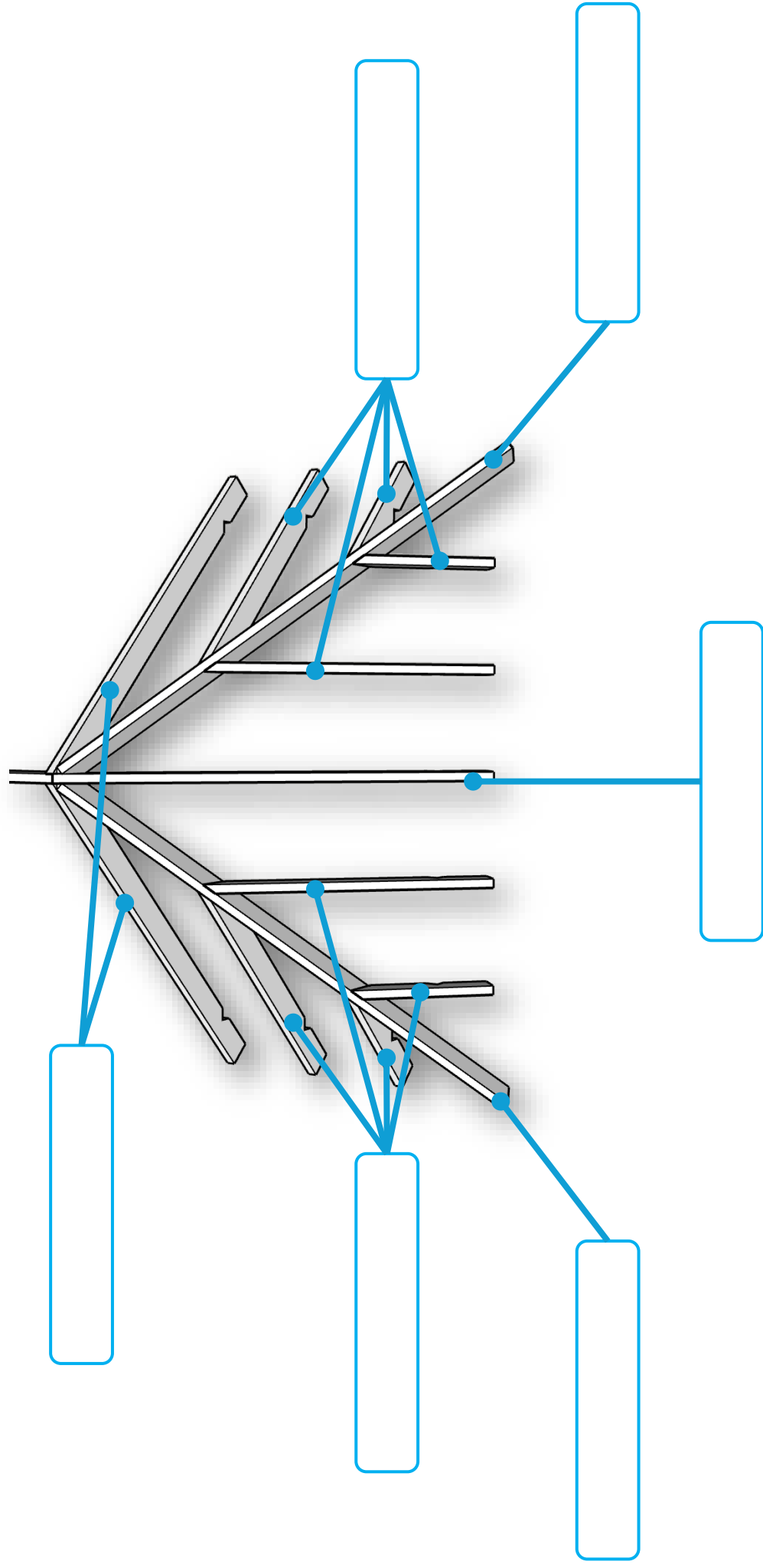
Gable Ladder.



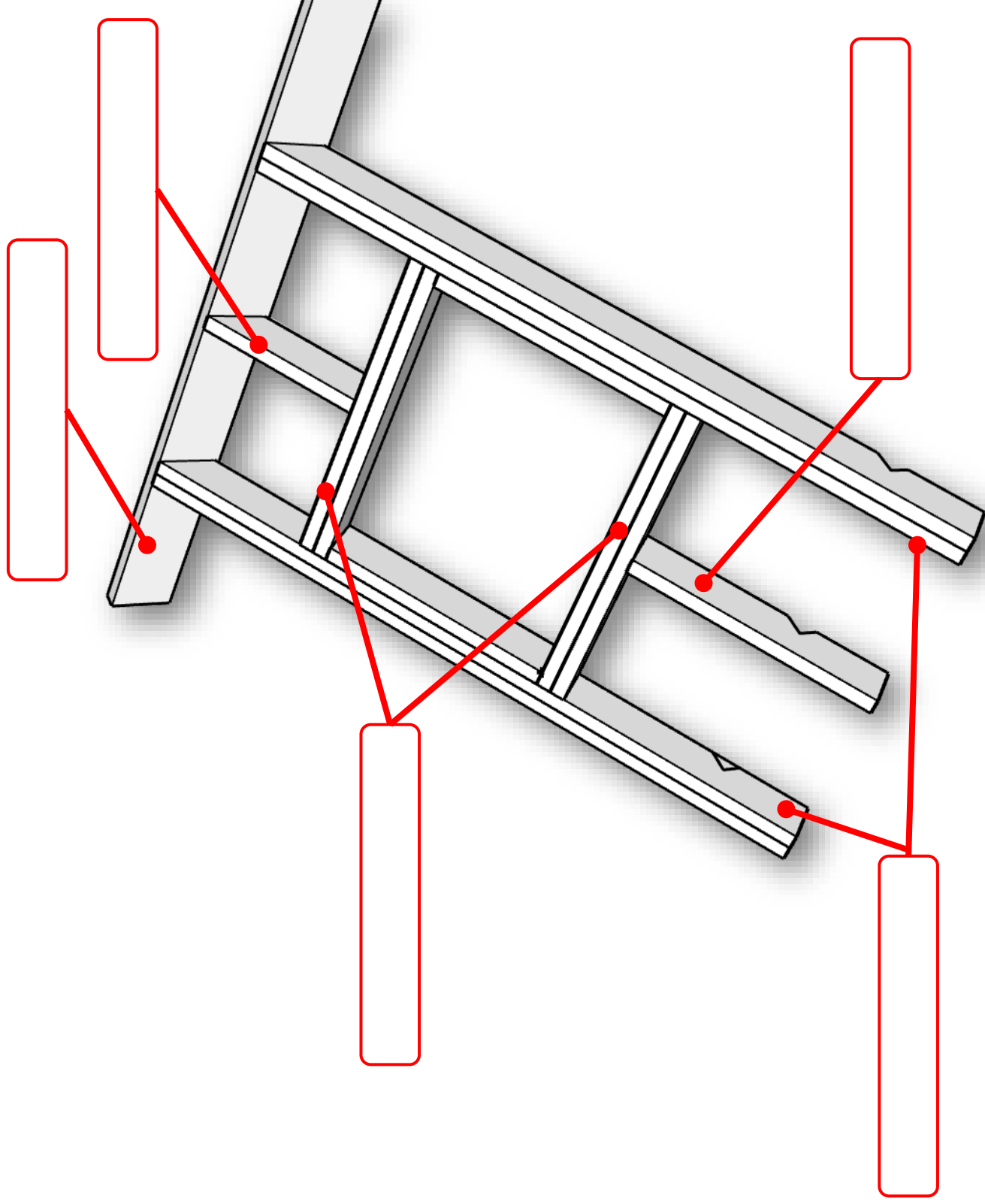
Hip & Valley.



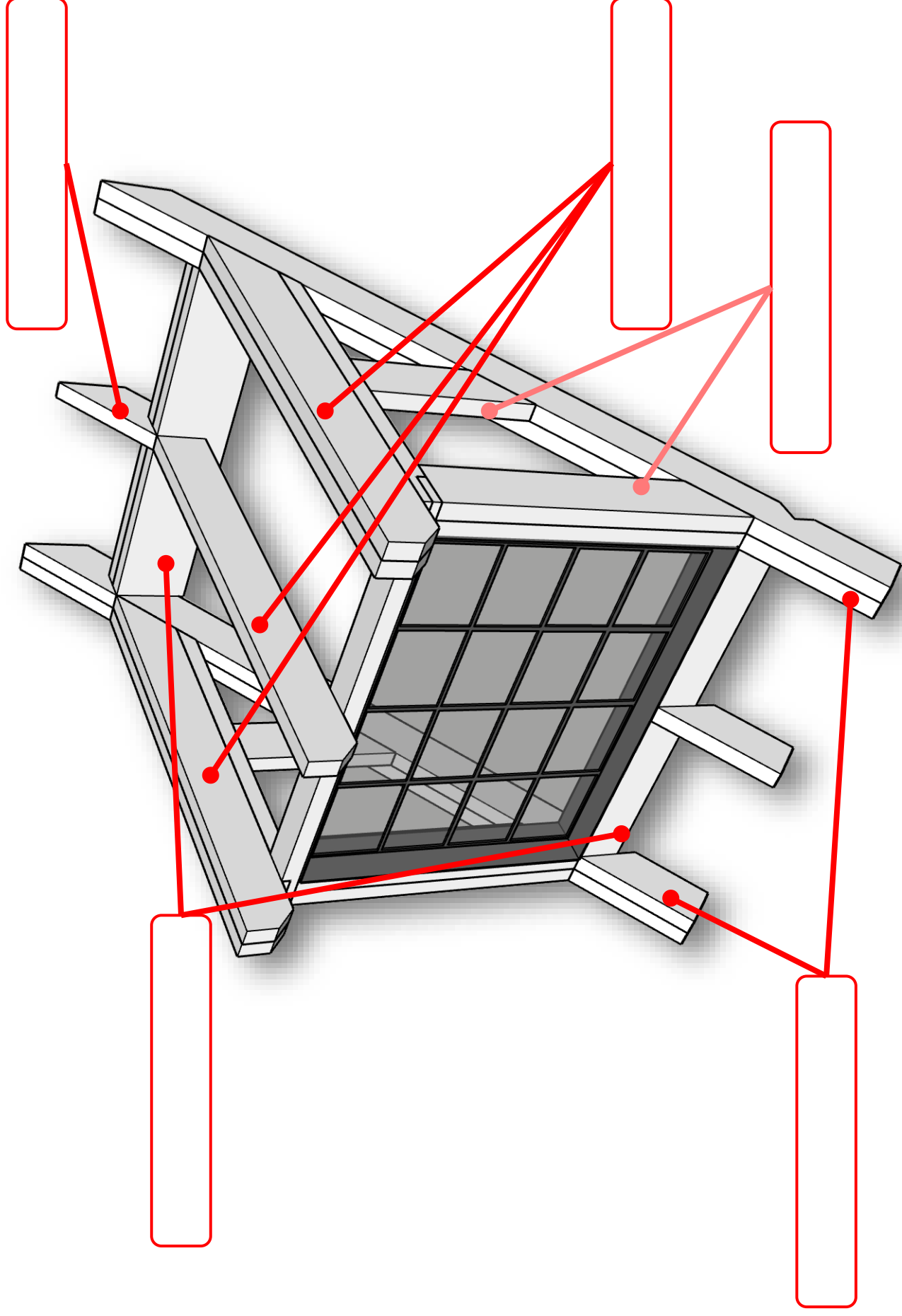
Hipped End.



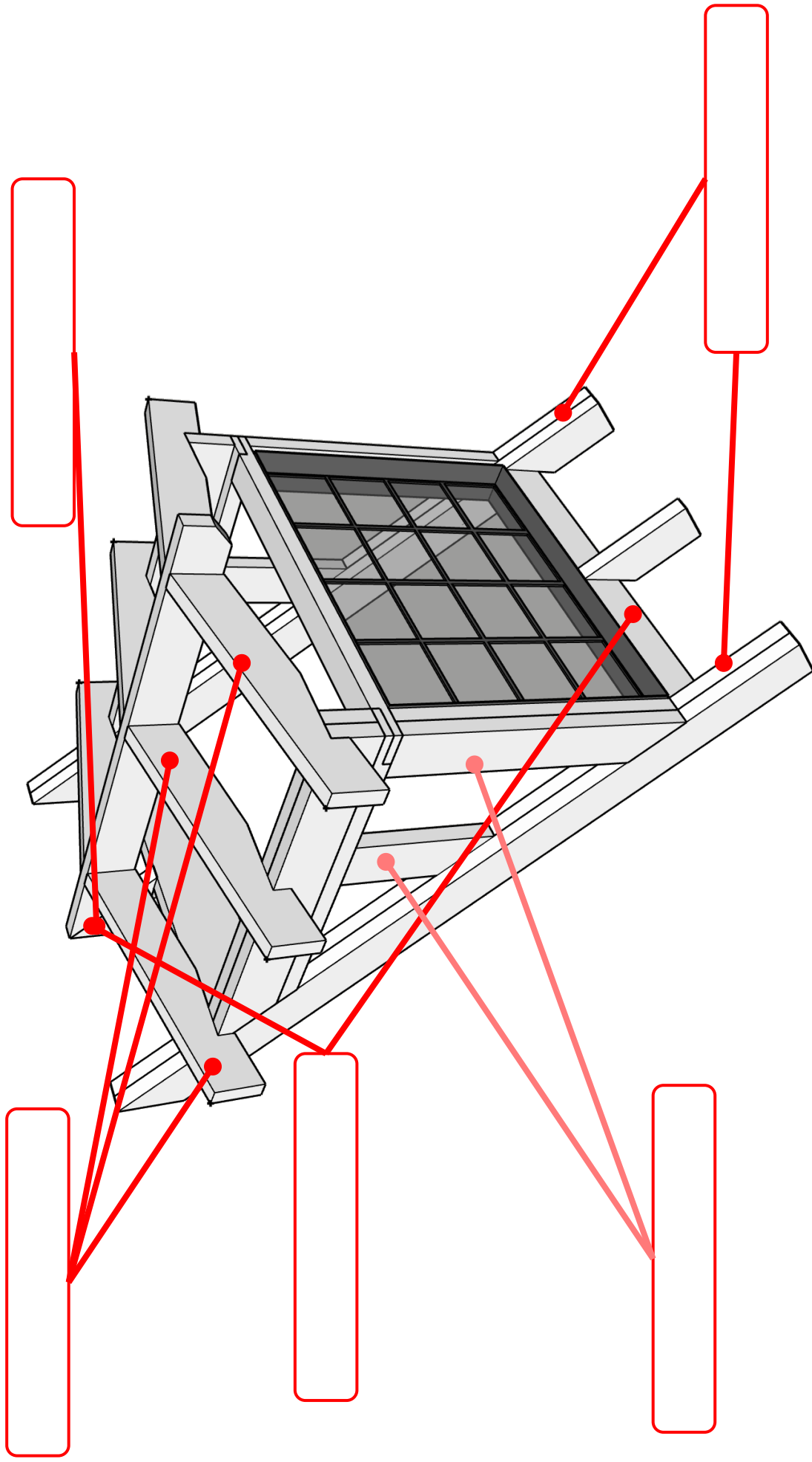
Roof Opening.



Flat Roof Dormer.



Pitched Roof Dormer.



Thank You.

We would like to say thank you for using this learning material, we hope you found it useful.



If you have any questions regarding this or any other learning material produced by James, or have any suggestions about improvements or ideas please email James Rix at:

jrix@lcb.ac.uk



LCB

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