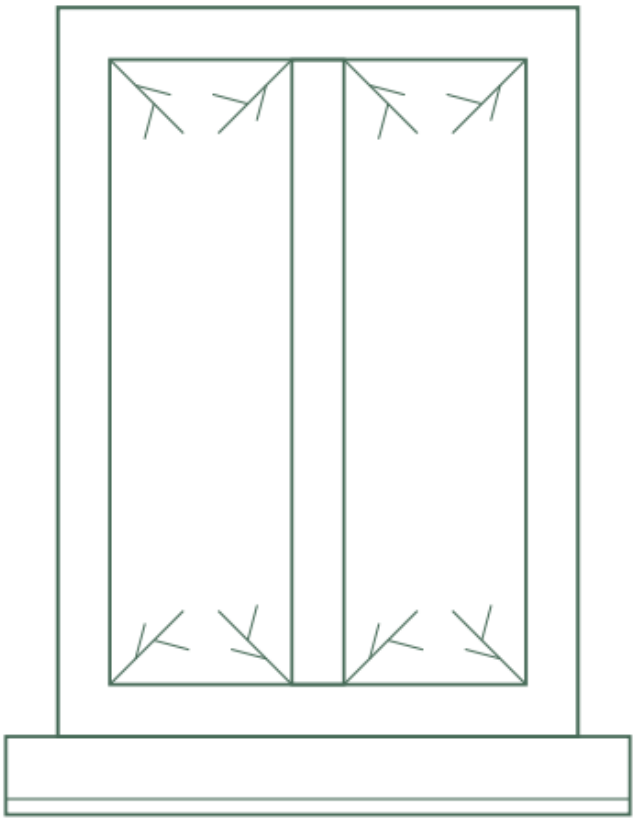
Draw a Winter Window: Frame, Frost, and Sill Construction

Ordinary topic reference / separately checked pixels



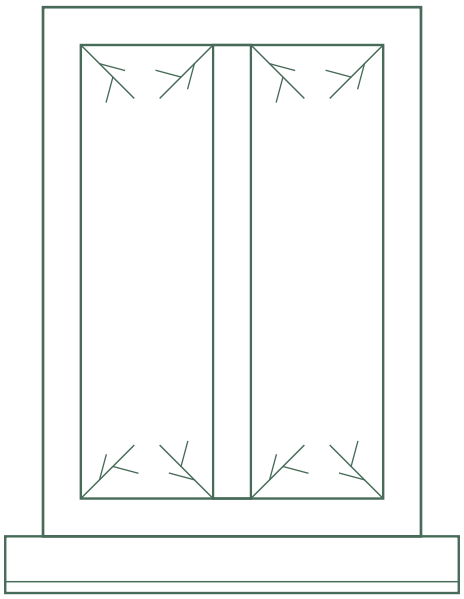
Draw a Winter Window: Frame, Frost, and Sill Construction

Original worked example / unchanged complete key

Prompt: A student draws an outer frame 10 cm wide by 14 cm tall with a 1 cm border on all sides. They add one vertical mullion 1 cm wide centered in the opening and a sill 1.5 cm tall that is 1 cm wider than the frame on each side. Check the opening width, pane widths, and sill width.

Answer: Opening width = 10 - 1 - 1 = 8 cm. Opening height = 14 - 1 - 1 = 12 cm. Centered vertical mullion 1 cm wide leaves two panes: (8 - 1) / 2 = 3.5 cm each, totaling 7 cm of glass plus the 1 cm mullion for the full 8 cm opening. Sill width = 10 + 1 + 1 = 12 cm. The construction is consistent if opposite sides measure equal within the ruler's smallest mark.

Window construction / printed diagram scale 1:2 of the labelled hypothetical lengths



Opening 8 x 12 cm / mullion 1 cm / two panes 3.5 cm each / sill 12 x 1.5 cm

Glass 3.5 + 3.5 = 7 cm; glass plus 1 cm mullion completes the 8 cm opening. Frost is a chosen corner pattern, not a physical ice-crystal standard.