

## Chapter 17: Windows

1. What are the primary functions of the windows of a dwelling?

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2. What are the primary functions of the main entrance door of a dwelling?

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3. What does the term 'fenestration' mean?

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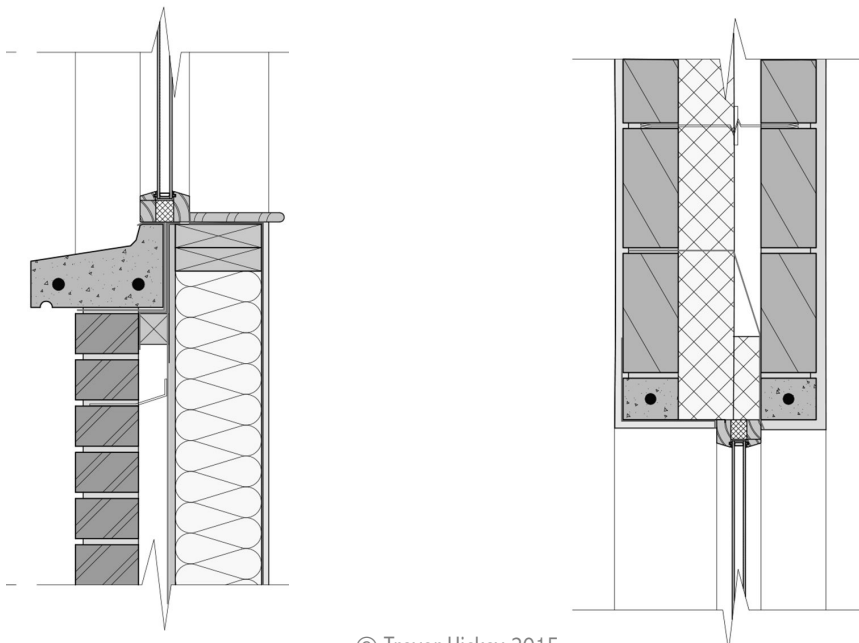
4. What is the typical U-value of a 'sealed double glazing unit'?

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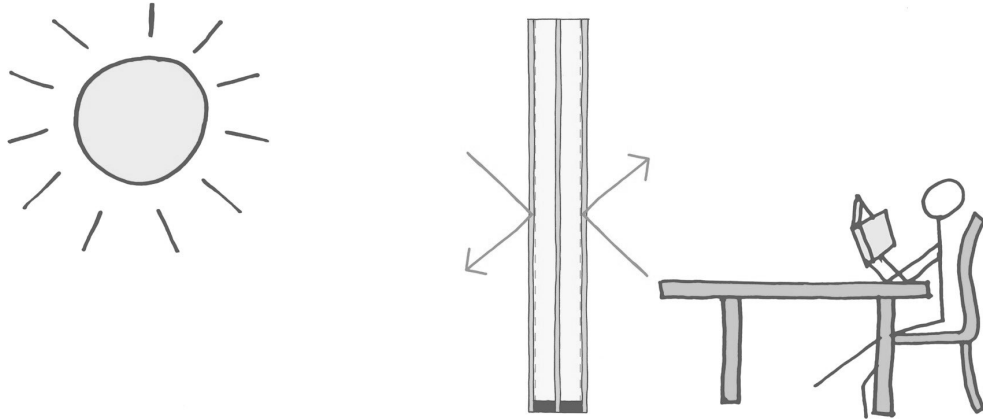
5. How many times more insulation does a triple glazed unit offer compared to a single glazed unit?

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6. Indicate the heat flow paths through the window-wall junctions shown:



7. Describe the concept being conveyed in this image:



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8. Explain, using a neat annotated sketch, the term 'solar energy transmittance value (g value).'

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9. Explain the function of spacers in window design.

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10. Why is it essential that window frames are thermally broken?

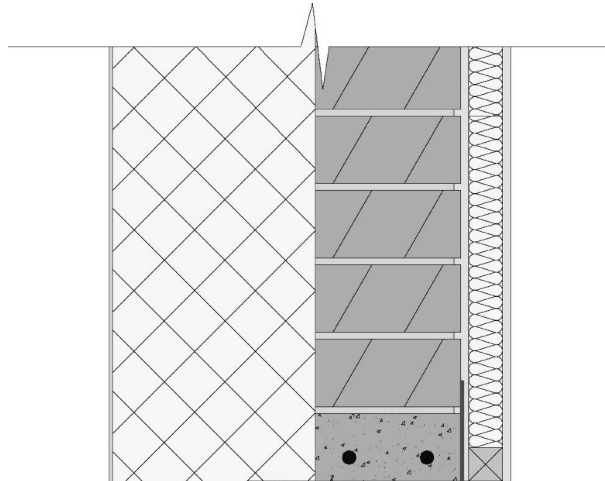
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11. Complete the sketch below, and use notes, to explain the optimal position for the installation of a window in the wall shown:



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12. Summarise the building regulations U-value requirements for windows:

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13. What does a WEP rating tell the consumer about the energy performance of a window?

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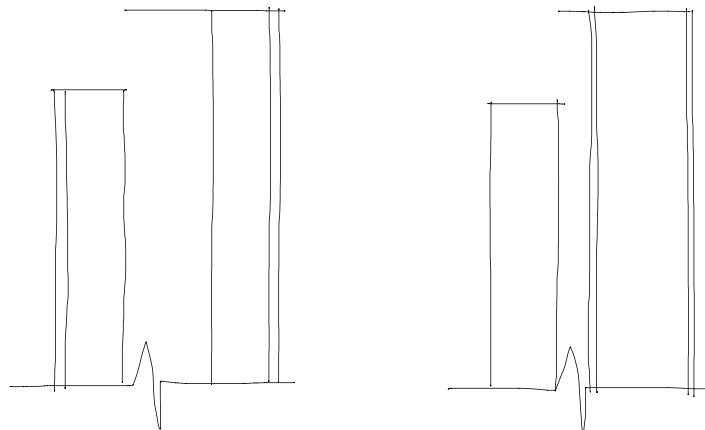
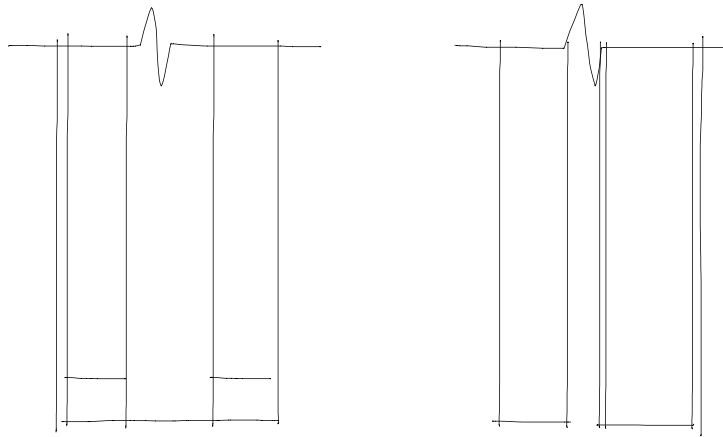
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14. Complete these window-wall section drawings. Add material symbols and use colour to highlight the insulation, airtightness and damp-proofing details. Neatly label each component. *(hint: see 17.18)*



15. Generate a neat cross sectional sketch of a (fixed) window-wall section designed to Passivhaus standard.

16. Generate a neat, labelled cross sectional sketch of a door threshold designed to meet the building regulations. (*hint: see 17.24*)