**Consolidation 1: Comparing insulation materials**

For this activity, you will research three different insulation materials commonly used in buildings, such as fibreglass, spray foam, mineral wool, polystyrene, cellulose or natural wool. Your goal is to compare these materials based on their:

* U-value: shows how well the material prevents heat loss (lower U-values mean better insulation);
* cost per unit area (such as per square metre): to determine how affordable each material is;
* environmental impact: whether the material is sustainable, recyclable and its overall carbon footprint.

You can find information on insulation materials from manufacturer websites, which often provide technical data on U-values and costs. You can also check government or industry websites for articles on sustainable building practices and details on environmental impact. Online hardware stores will give you an insight into pricing for different materials. For example, the Designing Buildings website provides detailed insights into U-values, including how they are calculated and their significance in construction, energy efficiency and building regulations: [www.designingbuildings.co.uk/U-values](https://www.designingbuildings.co.uk/U-values)

Once you have gathered this information, summarise your findings in the table. Write a short explanation of no more than 10 sentences about which material you would choose for a particular project, taking into account its cost, U-value and environmental impact. Give reasons for your choice.

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| **Material** | **U-value W/m2K)** | **Cost (per m2)** | **Environmental impact** |
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