

Building an efficient home – homework task

Each week you need to carry out some research on the questions listed below. You need to include detail in your answers – no answers with just one sentence.

All work should be completed on OneNote.

Deadline!

- Week beginning 30th January: Anyone who has not completed the research tasks will be logged as homework not completed.
- Week beginning 6th February: Final projects due.

Week 1:

This week's research is about **conducting heat**. Use this website to find answers to the questions below <https://www.bbc.co.uk/bitesize/articles/zh63ydm>

Questions	Your answers
What is conduction?	
What is an insulator?	
How does conduction happen in a solid?	
Why are metals much better conductors than other solids?	

Week 2:

This week's research is about the different ways that heat energy can be transferred, and how the insulation in our homes can help prevent heat loss.

You may find these links helpful to research your answers:

<https://www.eco-home-essentials.co.uk/how-insulation-works.html>

<https://www.bbc.co.uk/bitesize/guides/zr7j382/revision/5>

	Conduction	Convection	Radiation
In what states of matter can these process occur?			

Describe these processes.			
How does the insulation in buildings prevent heat loss from these 3 processes.			

Week 3:

This week's research is about the best materials for insulation.

[Why are less dense materials better insulators? - Estadisticasgratis.com](http://Estadisticasgratis.com)

[Insulation Materials | Department of Energy](#)

Questions	Your answers
How does density affect how good is at being an insulator?	
Why does the thickness of a material affect insulation?	
Why is fiberglass a good insulator?	
What is the best material for insulation? Explain why you chose this material.	

Week 4 & Week 5: Pull all your research together and present it as one of the following:

- A student newspaper article
- A student newspaper report (video!)
- A presentation suitable for an assembly
- A poster
- An informative leaflet
- A 3D model
- A radio broadcast / podcast

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