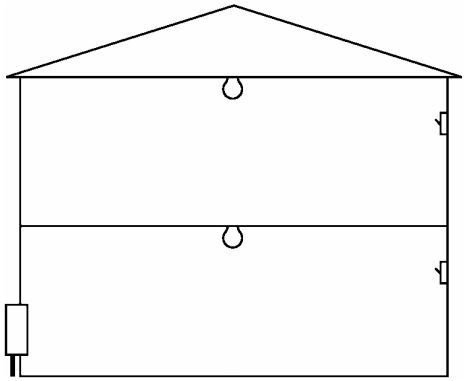
9I Task Sheet (L5-7)

Wiring a house

The electric circuits in a house involve energy transfers.
Use the diagram of a house to describe and explain your ideas about energy and electricty.
Use the level ladder below to help you achieve your target.

Task:
Use the diagram above to help you design a circuit so that the upstairs and downstairs lights can be turned off separately.
Use a model to explain the circuit. Describe the energy transfers in the circuit.
Identify the useful and non-useful (waste) energy transfers.



Key words: conductor, current, insulator, voltage
energy transfer by heating, by lighting, by electricity

Level ladder:
What is your target level? Use the level ladder to help you reach it:

To get level	You might have:
5	• Drawn a circuit diagram using standard circuit symbols. • Described the job of the house electricity supply, wires, bulb and switch. • Described materials in the circuit as conductors and insulators. • Drawn a simple model to explain some parts of the circuit.
6	• Drawn a circuit diagram using standard circuit symbols. • Explained the job of the house electricity supply, wires, bulb and switch. • Drawn a model of electricity to explain how the circuit works, using the terms current and voltage correctly. • Explained why the parts of your model are like the real circuit components. • Described the limitations of the model circuit compared to the actual circuit.
7	• Drawn a circuit diagram using standard circuit symbols. • Drawn a model of electricity to explain how the circuit works, using the terms current and voltage correctly. • Explained why the parts of your model are like the real circuit components. • Explained the limitations of the model circuit compared to the actual circuit. • Used a model of electricity to describe the energy transfers in a circuit.