



PROVA DE PROFICIÊNCIA EM LÍNGUA INGLESA

Living without Energy

Everyone says that we must use less energy! But how?

That is the big question.

In this article, you can read about the house of the future, which uses hardly any energy at all...



Most houses use energy - lots of it. We use energy for heating, lighting, for running our household appliances - TV's, washing machines, fridges, and so on. In wintertime, most houses use dozens of kilowatts of electricity every day, or the equivalent in gas.

The house in the photo, on the other hand, uses virtually nothing: most of the energy that it uses comes straight from the sun, the wind, or the ground. This is an experimental house at the University of Nottingham, and it could be the kind of house that most people are living in fifty years from now.

During the daytime, it is rarely necessary to turn on an electric light, even in rooms without windows. Sunlight, or daylight, is "piped" through the house, into each room, through special high-reflection aluminum tubes. You can see how well they reflect light, by looking at the reflections of the faces in the picture!

At night, of course, energy is necessary - but most of this comes from the sun or the wind. The house is fitted with photovoltaic solar panels that generate electricity during the daytime, and a wind turbine power generator too; electricity from these can be used directly, or else stored in batteries, and used when it is needed.

For heating, the house uses direct solar energy (sunshine heating water that circulates through a radiator system), or geothermal energy. This takes low-level heat out of the ground and uses a heat-pump to convert it into high-level heat for use in radiators - the same principle as a refrigerator, but in reverse.

As for water, most daily needs are provided for by the house's own supply; rainwater is collected on the roof, filtered, and used for all toilets, baths, and showers. If, one day, most people in developed countries live in houses like this one, most of today's pollution will have disappeared, and global warming may be a problem of the past.

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After reading the text above, please answer the following questions:

01. Which of the following alternative does not include the uses of energy cited in the text?
- Source of heat in the houses.
 - Lighting for lamps and bulbs.
 - Cooling of rooms in Summer.
 - Turning the TVs on.
 - Using the washing machines.
02. About the house in the photo, what is correct to say?
- It uses a lot of energy.
 - It is a perfect house for people today.
 - The house uses energy only from the sun.
 - It is part of an experiment held in the University of Nottingham.
 - The energy used does not come from the ground.
03. How the people living in the house will get sunlight?
- The sun enters the house by the windows.
 - There is no way to get sunlight in this house.
 - The rooms have no windows which reflect the sunlight.
 - The aluminum tubes is the way to get the sunlight in the rooms.
 - None of the above.
04. What is the alternative way to have energy when there is no sunlight, but the energy is also necessary?
- The energy comes from the water plant.
 - The energy from the sun is stored in the solar panels.
 - Photovoltaic panels and a power generator.
 - Energy directly from the wind in turbines.
 - The energy comes from batteries.
05. What is the relationship between the refrigerator and the geothermal energy?
- Sunshine heating water circulates through the house.
 - The system uses direct solar energy.
 - The geothermal energy is indicated for the circulating water.
 - The refrigerator functions in a reverse way compared to the geothermal energy.
 - The water takes low-level heat out of the ground.
06. What did you understand concerning the water used in the house?
- The toilets have no need to use water.
 - The water necessary for the house comes from the sunlight.
 - Baths and showers use water from the rain.
 - Daily needs are filtered and used in the shower.
 - The household is supplied by the water from rivers.



**SERVIÇO PÚBLICO FEDERAL
MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE SERGIPE
CAMPUS PROFESSOR ALBERTO CARVALHO
PROGRAMA DE PÓS-GRADUAÇÃO EM CIÊNCIAS NATURAIS (PPGCN)**



07. Talking about global warming, the authors suggest that:
- Houses like this should be built in every country.
 - Intelligent houses are not enough to stop global warming.
 - Developing countries should afford such houses to spend energy.**
 - People developed countries with houses with less need for energy.
 - None of the above.
08. In your opinion, according to the text, which are the main sources of energy for the house?
- Water and sunlight.
 - Wind and the sun.
 - Generator and solar panels.
 - The ground, generator, and solar panels.
 - The sun, the ground, and the wind.**
09. Why this house pictured in this text above can be considered a house of the future?
- The house uses energy from rainwater.
 - The sunlight is responsible for the energy used.
 - The wind is not necessary for energy.
 - The house uses a minimal amount of energy.**
 - The energy used is filtered from the wind.
10. The heating of the house is supplied from:
- The refrigerator and generator.
 - The geothermal and solar energy.**
 - Low-level heat from the ground.
 - The geothermal radiator.
 - None of the above.