

Solar

Date:

Name:

Class:



Task 1 – Using the words and numbers in the list below, fill in the gaps in the following paragraph

Heat ~ shadows ~ radiates ~ sundials ~ 24 ~ revolution ~ star ~ length ~ Greek ~ hours ~ Sun ~ light



The ___ is our closest ___, it is at the centre of our 'solar' system. The word solar comes from the _____ word for Sun, Sol. Some of the Sun's energy _____ as far as the earth we receive this in the form of ___ and ___ energy. One _____ of the earth takes ___ hours giving us day and night. As the earth turns, the Sun seems to move across the sky and _____ cast by objects and people will change in _____ and direction, these shadows can be used to chart the passage of time and _____ were designed to make this easier to read by dividing the day into segments or _____.

Task 2 - Examine the image of the **solar installation** on the house below and see if you can answer the following questions

1. Do solar panels require direct sunlight to produce energy?

2. What direction should the solar panels be facing in the UK?

3. How is direct current from the panels converted into alternating current that can be used in the house?

4. Circle the point on the image where this is happening

5. What happens to any excess energy produced?

6. Circle the point on the image where this is happening



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Task 3 – The solar challenge!

In pairs, **design a solar streetlight** that could be used on pathways between villages to light the way making it **safer for children to walk to school**.

- Your streetlight will be powered by a solar panel
- Work together to present your Ideas to the class
- The design must use energy efficiently and fit nicely into it's planed location

Present your ideas in the form of a drawing with notes in the space below