

# Solar energy

Name:

Date:

Class:



## Starter:

'Sunset', prompt children to imagine and discuss all the things they would miss if the sun didn't rise.

## Main activity:

PP presentation—Lesson 5 Wind energy. Using slides, key questions, activities and video clips to elicit plenty of discussion, introduce the different types of energy.

## Plenaries and assessment:

Use worksheet activities and review as a class on the board/screen (slides 7, 13, 21) to consolidate learning.

## AFL:

Use questions in presentation for formative assessment. Worksheet activities reinforce this and provide a tool to assess understanding and provide a record of AFL.

## Success criteria:

Children will have a foundation understanding of the harnessing of solar energy as a renewable resource. If linked to a site visit, children will be more able to engage with the tour and with the guide's questions.

## Differentiation:

Involve all children in discussion using differentiated questioning - colour coded in teaching guide **All Most Some**. Where possible use visual aids to aid understanding. Video clips can also help with this.

## Program of study:

Energy, electricity and renewable energy sources. This may be linked to a trip to Westmill wind and solar.

## Key learning objectives, children should:

- Be aware of the importance of the Sun in sustaining life on earth
- Explain how and why sunlight can be harnessed
- Understand how a PV cell transforms light energy into electrical energy
- Identify potential applications for solar technology

## Cross curricular links:

Geography – physical geography, human geography, sustainability

Science – the solar system, heat and light energy, electrical energy

Maths – dimensions, calculating output (side 11)

English - vocabulary, discussion and debate

Design and Technology - materials, structures, systems, manufacture and construction

History – Greek mythology, the history of time keeping

Art and Design – sundial design

See 'Cross curricular activities and worksheets' in 'Educational resources'

## Key vocabulary:

Sun, Sol, solar, fusion, orbit, radiate, heat energy, light energy, climate, revolution, meteorologist, national grid, inverter, direct current, alternating current, photovoltaic, photon, electron, arrays, maintenance, recycling, battery, quality of life, gender equality, environmental sustainability

## Resources:

PPT presentation  
Embedded video clips  
Detailed teaching guide  
Worksheet and answers

**Further suggestions for resources that may aid learning and understanding can be found in the detailed Delivery Guide**