|  |
| --- |
| ENERGY |
| *Complete 20 stars* |
| Rating | No | Exercises in Energy  | Sign |
| \* | 1 | Find and mount pictures of 6 different energy converter devices. State what kind of energy each type of device produces |  |
| \*\* | 2 | Write a short account, in your own words, of someone famous for his / her work in ENERGY |  |
| \* | 3 | Design a bumper sticker on Energy |  |
| \*\*\* | 4 | Build a working candle operated steam turbine from simple materials |  |
| \* | 5 | Make a collection of newspaper and / or magazine articles on the oil industry |  |
| \*\* | 6 | Give a 3 minute illustrated talk on the Maui Gas field or the Synthetic Petrol Pant, or any other large-scale New Zealand energy producing project |  |
| \* | 7 | Make a large wall chart showing what *Conservation of Energy* means |  |
| \*\*\* | 8 | Build a simple wind powered generator, using a small electric motor |  |
| \* | 9 | Write a brief report on an unusual or unconventional energy producer |  |
| \*\*\* | 10 | Build a working model of a solar water heating system using everyday materials |  |
| \*\*\* | 11 | Design, conduct and record an experiment which shows that different colours absorb different amounts of solar radiation |  |
| \*\* | 12 | Build simple cell. Operate a small torch bulb from your cell(s) |  |
| \* | 13 | Units of energy are usually measured in Joules (J). For 10 different common foods, plot a graph of their energy content |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Rating | No | Exercises in Energy | Sign |
| \*\* | 14 | When burning, a candle changes chemical energy into heat energy. Perform and report on an experiment you did to find the heat energy given out by a piece of candle (birthday candles are suitable) |  |
| \*\* | 15 | Build a simple device (or toy) which shows that he more a rubber band is twisted or stretched, the more energy it contains |  |
| \*\*\* | 16 | Stand in a safe place near the road. Conduct a survey of the cars going past in a given time. Show, as part of your survey, the number of people in each car |  |
| \*\* | 17 | Construct, and then use, a questionnaire to find out what people think about the uses of Energy in 100 years from now. Summarise your findings in a chart |  |
| \*\*\* | 18 | Explain how solar cells work and where they are used |  |
| \*\* | 19 | Design and conduct an experiment to demonstrate that objects gain energy the higher they are lifted above the ground |  |
| \*\*\* | 20 | Make a water-wheel that makes a small bulb glow |  |
| \* | 21 | Use a simple machine (eg. A cycle) to locate places where friction occurs. On a diagram, show where that friction hinders and helps that machine to operate |  |