

## Grade 7 Natural Science Worksheet

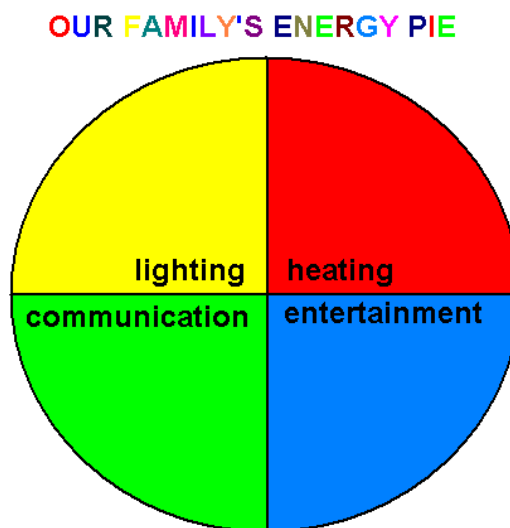
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### Assessment Task: Energy: electricity

#### Energy in the home

#### Part One: Your Energy Pie

Draw a chart similar to this one in your workbook. Write down all the things in your home that use energy. Write them into the correct quarter of your Energy Pie.



[15 marks]

#### Part Two: The most important uses of energy in our homes

If you have electricity at home, think about which 10 things you use every day that use electrical energy. Before you start, think carefully of how important each one is to you.

Write them down in order from the most to the least important. If you do not have electricity at home, write down the ten things you would use if you had electricity.

When you have completed your list, you will have a class discussion. Use your lists and contribute to the discussion in order to prioritise the most important uses of energy in our homes. You may want to reprioritise your list after listening to the discussion. Edit your original work.

[12 marks]

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### Rubric to assess list and discussion

Criteria	Level 4 [4]	Level 3 [3]	Level 2 [2]	Level 1 [1]
<b>Learner initial list</b>	List compiled after careful thought; list complete.	List compiled after some thought; list basically complete.	List compiled with little thought; list not complete.	List carelessly compiled; list incomplete.
<b>Participation in discussion</b>	Mature and serious participation which contributed positively to discussion.	Good participation which contributed positively to discussion.	Fair participation which contributed in a limited fashion to discussion.	Poor participation which did not contribute positively to discussion.
<b>Revised list</b>	Editing showed careful consideration of discussion.	Editing showed some consideration of discussion.	Editing showed little consideration of discussion.	Editing showed no consideration of discussion.

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### Part Three: Compare the energy values of different foods

You need energy in order to survive, but you cannot plug yourself into an electrical source when you require energy! Food is your source of energy.

Look at the table below. It shows approximately how much energy there is in 100 grams of different foods. Draw a bar graph comparing the energy values for the different foods in the table.

[15 marks]

<b>FOOD (100 g)</b>	<b>ENERGY VALUE (kj)</b>
Apple	240
Chips	900
Bread	250
Tomato	70
Peanut butter	2 600
Cheese	1 600
Chocolate	2 000

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### Suggested Solutions

Question number	Possible marks	Solution
1	15	Examples for 'heating': Various types of stoves e.g. electric, gas, paraffin, wood, braai, hair dryers, washing machines, fridges and freezers. Examples for 'lighting': Electric light bulbs/globes, candles, different types of lamps and lanterns, torches. Examples for 'entertainment': Computers, TV, DVD player, CD player, PSP/PlayStation, Wii. Examples for communication: Cell phones, computers.
2	12	See rubric in Appendix of Assessment Tools.
3	15	See graph in Appendix of Assessment Tools.

### Appendix of Assessment Tools

#### Rubric to assess list and discussion

Criteria	Level 4 [4]	Level 3 [3]	Level 2 [2]	Level 1 [1]
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### Bar graph

