



DISSEMINATING INQUIRY-BASED SCIENCE  
AND MATHEMATICS EDUCATION IN EUROPE

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<b>This learning environment was created within the European project Fibonacci, a project focused on inquiry based science and mathematics education.</b>	
<b>Age:</b>	15-19 years
<b>Subject:</b>	Mathematics
<b>Topic:</b>	Elementary statistics in practice
<b>Target:</b>	Data collection, processing, and evaluation.
<b>Form:</b>	Individual (homework)
<b>Time needed:</b>	First lesson: 5 minutes to familiarize with the task Second lesson: 15 minutes for final presentations
<b>Tools:</b>	PC
<b>Sources:</b>	
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<b>Twin Centre:</b>	TC1 České Budějovice, <a href="http://www.pf.jcu.cz/stru/katedry/m/fibo.html">http://www.pf.jcu.cz/stru/katedry/m/fibo.html</a>

## **TASK 1 – Collecting the Data**

1) Monitor and write down data about electricity consumption of your home appliances:

- ✓ cooker, oven
- ✓ refrigerator,
- ✓ freezer,
- ✓ jug kettle,
- ✓ TV, video
- ✓ audio appliances (CD player, radio),
- ✓ microwave,
- ✓ PC,
- ✓ lights,
- ✓ etc.

Find out their power input; observe how often and how long they are switched on during this week.

2) Find out the price of electricity in your house.

## **TASK 2 – Processing the Data**

Present the results of your investigation:

- ✓ compose a list of appliances ordered by the amount of consumption during the week,
- ✓ calculate the total weekly consumption of your home,
- ✓ determine the average daily consumption of every appliance,
- ✓ determine the average daily electricity costs of every appliance.

## **TASK 3 – Evaluation**

- ✓ propose some electricity saving strategies for your home,
- ✓ compare your results with the results of your schoolmates,
- ✓ try to account which attributes of home appliances effect their consumption.