

1.4. Home Energy Saving Detectives

Aim: To monitor energy consumption at home and make arrangements to reduce it.

Duration: 40 minutes

Preliminary preparation:

- 2 weeks before the activity, students are asked to collect recyclable materials. The materials collected in Activity 2.3 can be used in this activity.
- Reproduce the attached "Energy Saving Detective Diary" for the number of students.

Instruction:

Let's Design a Detective Costume

"What is energy saving?" The question is asked and 2-3 students respond. "Saving energy and reducing energy consumption means using less energy to conserve resources and reduce the negative impact on the environment. So, how can we save energy in our home, to find the answer to this question, you will all be energy saving detectives. Each detective will have a costume. We will do a study where everyone will design the costume they want." It is said. Students are asked to design their own detective costumes using the materials they have collected. They are told that they can design bow ties, hats, magnifying glasses, glasses, etc. At the end of the activity, students show their designs to each other by wearing them.

Detectives at Work

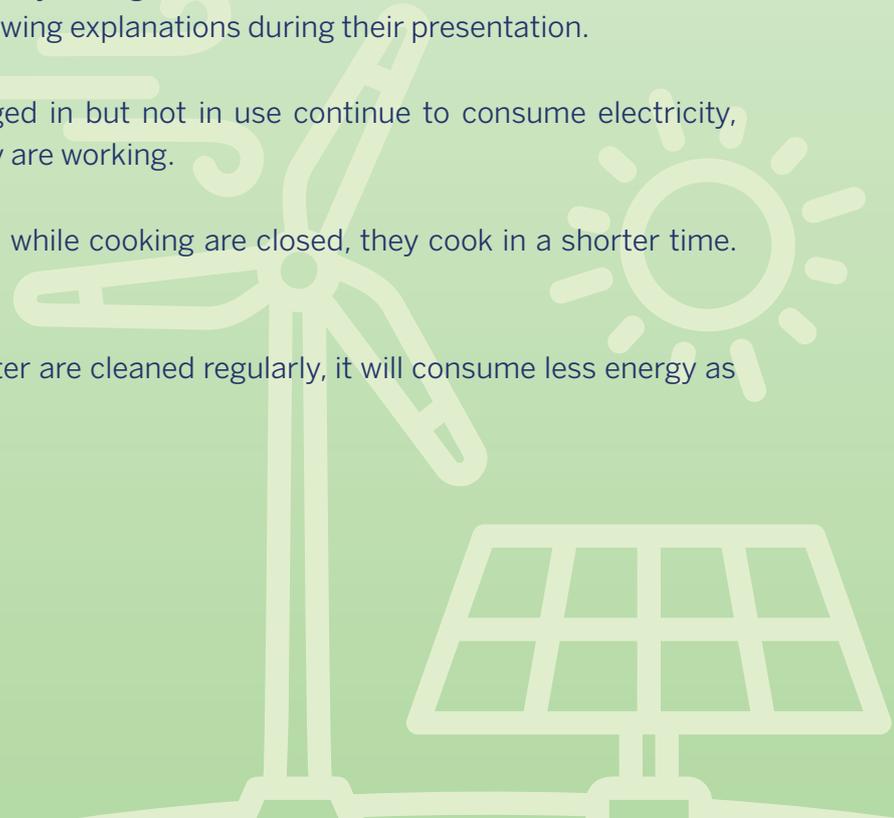
"Now we are ready, it's time to investigate." The "Energy Saving Detective Diary" sheets are distributed. They are asked to take notes using the instructions on the paper for a week.

Exit Ticket

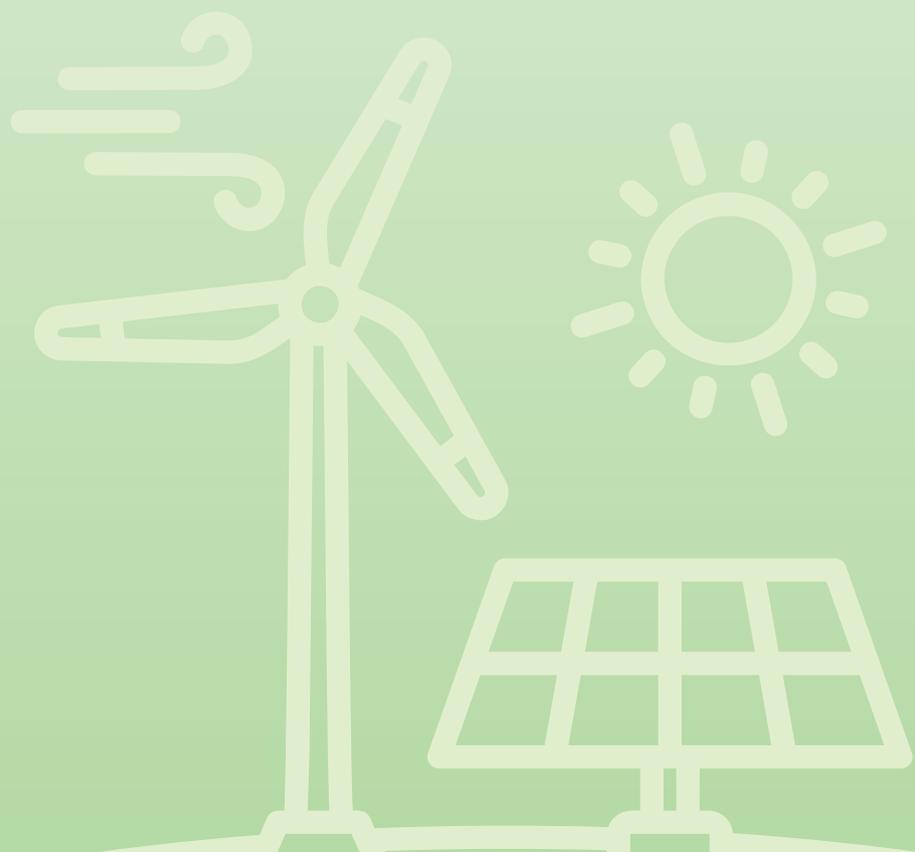
At the end of the week, students share with their classmates at least 3 things they would do differently now after the information they have gathered.

Students are supported with the following explanations during their presentation.

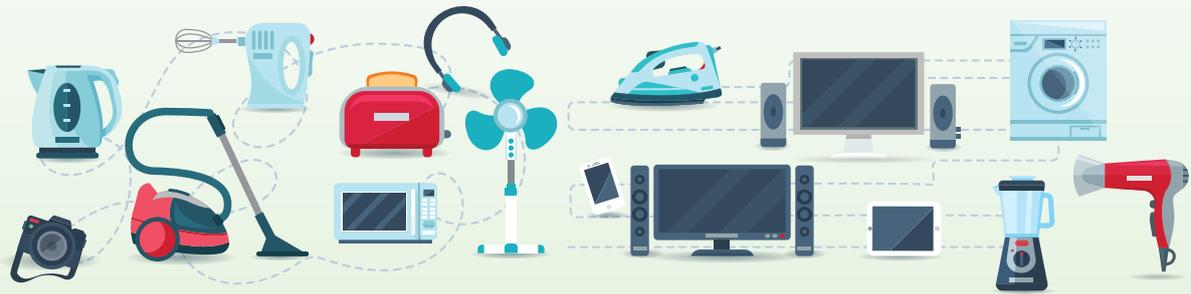
- Electronic products that are plugged in but not in use continue to consume electricity, although not as much as when they are working.
- If the lids of the containers we use while cooking are closed, they cook in a shorter time. Thus, we consume less energy.
- If the vacuum cleaner's bag and filter are cleaned regularly, it will consume less energy as its traction will increase.



- When your fridge or freezer is overfilled, the air flow is not good enough and the cooling system works harder to compensate, thus increasing electricity consumption.
- Turning air conditioners on and off frequently causes more electricity consumption. For this reason, the temperature setting of the air conditioner should be set according to the ideal home temperature and the device should be operated at the specified temperature continuously. Air conditioners should be operated below 21°C or 23°C. When air conditioners are operated above or below this range, they consume more electricity than normal.
- Public transportation should be preferred over personal vehicles, and walking or cycling should be preferred if possible. Vehicles consume fossil fuels, increasing non-renewable energy consumption and increasing the carbon footprint.



APPENDIX: ENERGY SAVING DETECTIVE DIARY



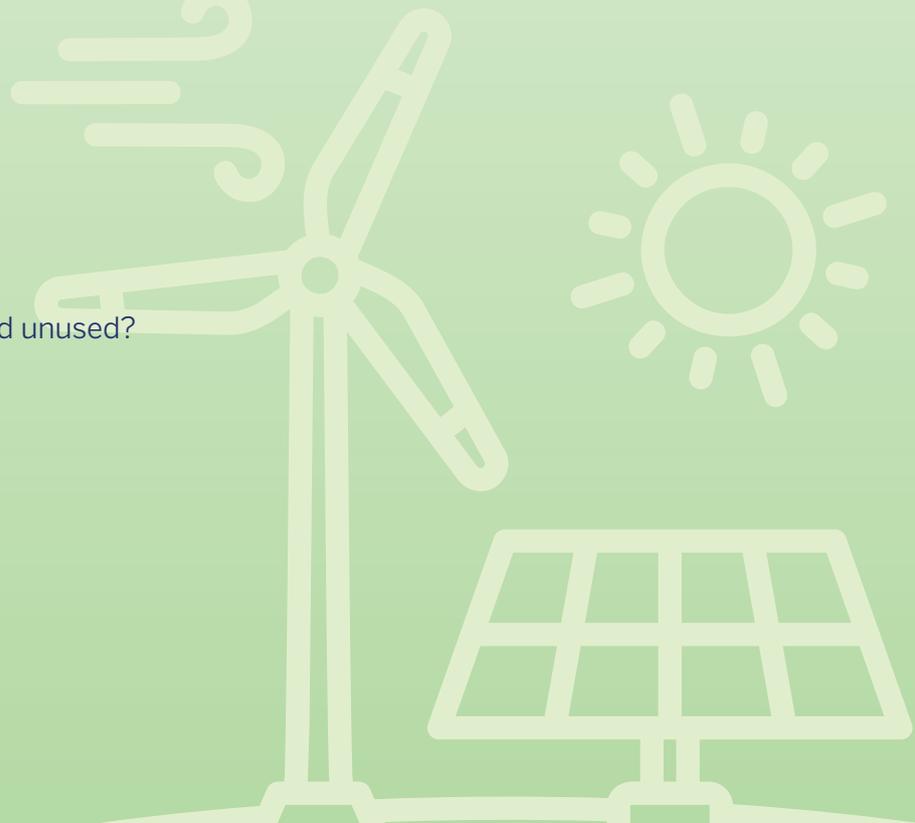
Are you dressed as a detective? If yes, then you are ready. Let's get started.

- List of various electrical appliances in my home.

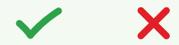
- Which of these were left open unnecessarily?

- Which ones were used when they were not needed?

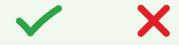
- Which ones remain unplugged and unused?



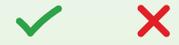
Did the lights stay on when you were not using them? Circle the green tick symbol if yes and the red cross if no.



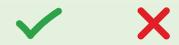
Were the lids on the utensils you used for cooking closed? Circle the green tick symbol if yes and the red cross if no.



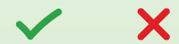
Are the bag and filter of your vacuum cleaner cleaned regularly? You can ask your family. Circle the green tick symbol if yes and the red cross if no.



How full is your fridge or freezer? Is it filled more than it should be? You can ask your family. Circle the green tick symbol if yes and the red cross if no.



Do you turn the air conditioners on and off frequently and at what temperature? Circle the green tick symbol if yes and the red cross if no. Write how many degrees.



A list of places you visit during a week, e.g. school, market.

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How did you get to the places on your list?

I walked:

I rode a bicycle:

I took a bus-train-bus:

I got in the car:

Were there possible alternative modes of transportation?

