Che	cklist Comput	ters		
School:				
Group (n	names of all pupils):			
Taker of	the minutes:			
Tutor of	the group (name, position):			
Dialogue	e partner (name, position):			
Date:				
answer t	he questions together with yo	energy-saving way! Ask the careta	blems yourselves.	
	ne questions in sequence! Be in line with your topic!	considerate when walking through	the school! If possible take pictures	
1 Con	nputers as electricity co	onsumers		
	nputers as electricity consumption often isn't easy			
Electricity a) With	y consumption often isn't easy		e when determining electricity	
Electricity a) With	y consumption often isn't easy the help of the illustration thin sumption.	to determine. k about which difficulties could arise		
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Electricity a) With cons	y consumption often isn't easy the help of the illustration thin sumption.  Typ  Typ k  ung (kW)	en von Stromverbra  Typ e-a	uchern Typ v	
Electricity a) With cons	y consumption often isn't easy the help of the illustration thin sumption.  Typ  Typ k  Ing (kW)	en von Stromverbra  Typ e-a	uchern Typ v	
Electricity a) With cons	y consumption often isn't easy the help of the illustration thin sumption.  Typ  Typ k  ung (kW)	en von Stromverbra  Typ e-a	uchern Typ v	

nach: ecoteam

## Climate detectives: checklist computers p. 2

b)	How comes that the electric power of a computer changes while operating?
c)	Later (question 2) you will measure the electric power of computers and based on this, you will determine the electricity consumption. Why aren't you able to get a particularly exact result?
d)	What could you do to get a more exact electricity consumption?
2	Examination of the computers
	d out where computers are used in our school and make a guess about the electricity consumption per ar. Please proceed as follows:
	to the computer room. Take an averagely equipped computer workplace. Have a look at the entire mputer workplace, that is computer, monitor and, if applicable, speaker, printer and other hardware.
a)	Determine the <b>electric power</b> for the entire computer with the electrical energy consumption measurement device.
	Have your teacher or tutor explain to you exactly how the electrical energy consumption measurement device works. Attention! Keep in mind that it can be extremely dangerous to touch the line current and work accordingly and responsibly. If you find any damaged cables, switches, plugs or sockets, never ever touch them but tell your tutor.
	Switch off all hardware at the computer workplace and pull the plug/s (this is important, because it could damage the computer if you pull the plug when it is running). Install the measurement device as follows: Socket – electrical energy consumption measurement device – connector – computer and all included hardware. Now switch on again all everything. Read the result at the measurement device (in W) and enter it into the checklist. Switch everything off again, take off the measurement device and the connector. Eventually connect all plugs back to the sockets.
	If there several computers are the same in this room, note their number and calculate the whole electrical power.
h\	If there are more computer rooms, check them in the same way.
•	Calculate the <b>electrical power</b> of all computers in all rooms.
C)	Then make an estimate of the <b>running time</b> of the devices. First make a guess on the running time per day and multiply this by the running days each year. For example the computers in room A are used 6 h a day – and on 200 school days per year; this equals 1.200 running hours a year.
d)	Multiply the running time (hours per year) by the sum of the electricity power (kW); thus you get the <b>yearly electricity consumption</b> (kWh per year) for the computers.

The point remarks allows you to enter how the computer workplaces are equipped, or of they are switched

Enter all this information into the record: computer (next page).

on even if nobody works on them.

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Examination record: computer					
a)	Room no. / name	Number of computer- workplaces	Electrical power per computer-workplace (W)	Total electrical power (W)	Remarks
		•••••			
		•••••			
	0 (' 140)				
b)	Sum (in W)				
- \	Sum (in kW)	-l	, da		
c)	Running time (estimated va	alue) in nours per	day		
	Running days per year				
-1\	Running time in hours per				
d)					
e)	e) Ask your teachers of informatics or technology about what is done in our school to keep electricity consumption of the computers as low as possible.				

3	Research					
cor	t information on how one can reduce the electricity mputers! Use the internet or other information mate a and ask the tutor of your group.	-				
	ite down the results of your research in headwords ernet address where you found the information.	and always quote the				
		L				
4	Evaluation and presentation					
	soon as you've arrived at this point, present yo	our results to your tead	cher or tutor			
	w start with the evaluation:	our results to your tout	inor or tutor.			
	Ask the group that did electricity consumption about the annual electricity consumption of our school.  Then calculate the percentage of computers (in %).					
		, 				
b)	Then compare the situation in our school with the that you have researched.	e possibilities for an ene	rgy-saving use of computers			
	w summarise your findings about electricity consursessment in such a way that teachers and pupils u		ur school. Justify your			
It is	s good	It is not good				

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Discuss what we could do better! Justify your suggestions!
Think about how you would like to present your results to other pupils and teachers!
Work out a very short text for example or a comic on the topic of energy-saving use of computers, make an appealing image file out of it and ask you informatics teacher to install it as desktop background of the school computers.
Or prepare a paper that informs younger pupils about the possibilities of energy-saving of computers. Take into account that they know a lot less about technology than you!
Now get ready to present your results!

This Climate Detectives Checklist from Tilman Langner / Environmental Office North, registered association, <a href="www.umweltschulen.de/klima/climatedetectives.html">www.umweltschulen.de/klima/climatedetectives.html</a> is provided under the terms of Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported (CC BY-NC-SA 3.0, <a href="http://creativecommons.org/licenses/by-nc-sa/3.0/">http://creativecommons.org/licenses/by-nc-sa/3.0/</a>). Translation: BUPNET, <a href="www.bupnet.de">www.bupnet.de</a>

