

Checklist Environmentally Sound Food Situation

School:.....

Group (names of all pupils):.....

.....

.....

Taker of the minutes:

Tutor of the group (name, position):.....

Dialogue partner (name, position):

Date:



Take a look at the food situation at our school and examine the environmental effects of our diet.

Answer the questions in sequence! Be considerate when walking through the school! If possible take pictures that are in line with your topic!

1 Introduction

Remember what you have already heard about the environmental impact of agriculture and the food industry:

- a) Agriculture and the food industry cause global warming gases because

- b) There is “virtual water” in each food because.....

2 Environmental impact of the production of food

- a) The following list shows you how much carbon dioxide (CO_2) is set free at the production of food and how much water is used.

Food	CO_2 (kg)	Water (l)	Food	CO_2 (kg)	Water (l)
1 kg apples (6 pieces)	0,55	420	1 kg potatoes	0,2	250
1 l apple juice		950	1 kg cheese	8,5	5000
1 banana		200	1 l milk	0,95	1000
1 kg bread	0,75	1300	1 kg pasta	0,9	1400
1 kg butter	23,8	4800	1 kg oranges		500
1 kg eggs (about 17 pieces)	1,95	3300	1 l orange juice		850
1 kg vegetables (fresh)	0,15		1 kg beef	13,3	15500
1 hamburger		2400	1 kg chocolate (10 bars)		3000
1 kg chicken	3,5	3900	1 kg ham	4,8	5000
1 kg coffee (ground)		21000	1 kg pork	3,25	4800
1 cup of coffee (125 ml)		140	1 kg tomatoes (field-ground)	0,35	180
1 kg cocoa		10000	1 kg sugar	1,5	1500

- b) As you can see the environmental impact of these foods varies to a great deal.

Try to understand the reasons! Think about the different ways how things are produced. Take a new piece of paper and draw a scheme of the production process. The following examples are highly simplified – your sketches should be a lot more exact. Take into consideration for example which forage plants are fed to the animals and where these are grown. Get your information in your school books or on the internet.

You should enter into your sketches as exactly as possible where water is used or polluted during the production process, where energy is consumed and where global warming gases are set free.

Apple: apple tree → apple → food at school

Butter: forage plants → cow → milk → butter → food at school

Potato: potato plant → potato → food at school

Milk: forage plants → cow → milk → food at school

Pasta: cereal → grain → flour → pasta → food at school

Beef: forage plants → cow → meat → food at school

Pork: forage plant → pig → meat → food at school

- c) Now you have got to know some specific food better. Try to generalise your findings.

The following kinds of food are rather environmentally friendly (in terms of global warming gases and virtual water):

.....

.....

As soon as you've arrived at this point, present your results to your teacher!

3 An environmentally sensible menu

- a) Imagine you are the cooks now: create an environmentally sensible menu for lunch at our school for a whole week!

Name each meal by an interesting name. Write down the most important ingredients for each meal.

You may use other ingredients than listed in question 2a). Then estimate their environmental sustainability based on your answer to question 2c)!



	Name of the meal	Most important ingredients
Monday
Tuesday
Wednesday
Thursday
Friday

- b) Now get the original menu of the corresponding week and compare it to your menu!

What do you notice?

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4 Evaluation and presentation

Try to evaluate your findings: what is good – what is less good about our food and drinks at our school?

Justify your evaluation as best as you can.

It is good ...

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It is less good ...

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Discuss what we could do better!

Think about how you would like to present your results to other pupils and teachers!

Be ready for example to prepare an environmentally friendly meal together with the whole class. Write a shopping list and discuss with your teacher about how you could proceed.

Or choose an environmentally friendly lunch from your menu and think about how much of each of the most important ingredients you need to prepare one portion. Based on the list of question 2a) estimate how much carbon dioxide is set free for this meal or how much virtual water is hidden in one portion.

Also estimate the amount of carbon dioxide that is set free by the following "traditional" lunches: beef with gravy (100g beef), mashed potatoes (150 g potatoes, 75 g milk) and vegetables (150 g), accompanied by a milkshake (200g milk, 20 g sugar).

Visualise all this! You could cut suitable pictures from journals and make collages out of it that show the meals. You could also build a block from cardboard or rubbish bags, which contains the volume of the virtual water. You can visualise the volume of the carbon dioxide in the same way; 1 kg carbon dioxide as gas equals about $0,5 \text{ m}^3$.

Now prepare your environmentally sound menu to the menus of the groups „Satisfaction with the food situation“ and „Healthy meals, snacks, drinks etc. during breaks“.

Design a poster with your best texts, ideas and sketches.

Now get ready to present your results!

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