

Biology

Delprov A2
engelsk version

Årskurs

9

Elevens namn och klass/grupp

11. Research shows that young people should exercise about one hour each day to feel good. Examples of activities can be to walk or to bike to school.

Your task is to:

Argue why it is important to exercise about one hour each day

Start from your knowledge about two of the human body's organ systems and reason in two steps.



12. Genetically modified food

Genetically modified food implies that the genetic material in the food has changed through help from genetic engineering. The text is about genetically modified food.

Source: Blog from a nutrition physiologist. Published 2014-10-01.

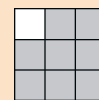
Genetically modified drugs – threat or possibility?

GMO stands for Genetically Modified Organisms and it concerns both animals and plants. At a first glance, it gives fantastic possibilities if you can change the organisms' properties on a gene level. For example, there is a rice called "Golden rice" with a high amount of carotenoids, something that can rescue millions of children from being blind (caused by a deficit of vitamin A). The yield from a farm with GMO crops is also, in general, much higher, keeping down the food prices and also increasing availability, preventing hunger. Approximately 800 million hungry people can get food on their table thanks to GMO, making it deeply unethical not to explore this possibility. Researchers have also produced cow milk without allergens, making it possible for allergists to consume milk. Moreover, GMO has been used to make pigs digest phosphorus from plants, resulting in less pollution of water in the surrounding.

This is just in the beginning as the research field is so young, and you can yourself think about all the possibilities. The question is still whether it is dangerous? There are several opinions about this and a lot of information is spread on the web, information not always relying on science. I agree that we should be aware of our manipulation of the inner bricks of life, and that there are future risks we do not know about today. Certainly, you might consider a fish allergist having an allergy attack if they consume a tomato with fish genes. The fish genes give the tomato better resilience towards frost but as long as it is clearly tagged it should be possible for allergists to avoid eating it. Another concern is that the use of pesticides is enhanced when you have crops dealing with it in a better way. The conclusion from the scientific establishment is that it is not more dangerous to eat GMO products than the more conventional equivalent. But we have to be aware that there might be risks that we do not know about today and there are a few strong voices that claim that we today, 20 years after the introduction of GMO into our food, are starting to see risks.

Your task is to:

- a) Find scientific information in the text and state one advantage with genetically modified food.



- b) Start from the text. Reason about the text's credibility from two different perspectives.



a)

b)

13. Composting or anaerobic digestion of food waste?

In a municipality, inhabitants can choose if the food waste will be composted at home or be digested in an anaerobic digestion plant.

The choice of recovery method can give both positive and negative consequences on the environment.

Facts about composting of food waste

Composting at home requires that you have a compost where you put your food waste.

The food waste is decomposed by microorganisms in the compost, producing fertilizers.

Fertilizers can be used as nutrition for plants and vegetables.

Facts about anaerobic digestion of food waste


Your food waste is gathered and transported to an anaerobic digestion plant.


The digestion implies that the food waste is decomposed into biogases and fertilizers at the digestion plant.


The biogas can be used as motor fuels or in electricity and heat production. In farming, fertilizers can partly replace chemical fertilizers.

Use the facts to write a text with the following parts:

- **A stance**
Taka a stance for composting or anaerobic digestion of food waste.


- **Scientific reasoning**
Formulate two arguments in two steps discussing the recovery method you have chosen and formulate one argument in two steps against one of the two recovery methods.


- **Scientific language**
Be objective and use scientific concepts in your reasoning.



Take a stance:

Whrite your text:



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