ACADEMIC READING EXAMPLE

Read the free sample text below which is taken from **'Target Band 7' book** and then answer the questions on pages 3 and 4. The correct answers are on page 5.

Biodegradable Plastics

With advances in technology and the increase in global population, plastic materials have found wide applications in every aspect of life and industry. However, most conventional plastics are non-biodegradable, and their increasing accumulation in the environment has become an ecological threat.

Biodegradable plastics are seen by many as a promising solution to this problem, because they are environmentally friendly. Biodegradable plastics offer a lot of advantages, such as increased earth fertility, a low accumulation of bulky plastic materials in the environment (which would certainly minimise injuries to wild animals), a reduction in the cost of waste management and the fact that they can be derived from renewable feedstock, thereby reducing greenhouse gas emissions.

The theory that people like to believe is that biodegradable plastic is synthesised in a factory from plant ingredients and then moulded to create whatever product is required. After the product life is over, decomposition breaks the plastic down to carbon dioxide, which in turn can be returned to plants in nature through photosynthesis. The plant materials can then become part of the plastic creation process again. The key part of this process is the decomposition, which will be looked at in more detail below.

So, what are biodegradable plastics? Biodegradable plastics are plastics that can be broken down by microorganisms such as bacteria or fungi. It is important to note that biodegradable plastics are not necessarily made from biomaterial (i.e. plants). Several biodegradable plastics are even made from oil, in the same way as conventional plastics. It is also important to note the distinction between plastics that are degradable, biodegradable and compostable. People should be cautious when they see a plastic product that advertises that it is 'degradable,' but not 'biodegradable' or "compostable," because this is nothing special. These three terms are not really different 'classes' of plastic, in the sense of being separate sets. They are subsets of one another: all compostable plastics are biodegradable, and all biodegradable plastics are degradable. There are many methods that can be used to break down degradable plastic, but this often just reduces it to extremely small pieces of the same plastic. Over a matter of years, it is possible for the pieces to become small enough to be assimilated by, and be harmful to, wild creatures.

When something is biodegradable, it means it is degradable, but it also means something more: it means that it can be broken down by the metabolism of microorganisms. When a plastic is biodegradable, it can be digested, so that the carbon atoms in the chains of the polymer are broken apart and can actually participate in the creation of other organic molecules. They can be processed by, and become safe parts of, organic living things. This returns them to nature in a very real sense: they become part of the carbon cycle of the ecology of the earth.

When something is compostable, it means that it biodegrades, but it also means that it will degrade within a certain amount of time, under certain conditions. For many types of degradable plastic, it is possible to say that it will break down ‘eventually,’ but if it were to be sealed in an airtight room, this could take thousands of years.

Using biodegradable plastics as an environmentally friendly solution for things such as plastic bags seems sensible at first glance, but is it really better for the environment? There is a growing environmental lobby that feels that the rubbish issue should be solved by changing people’s attitudes rather than by changing the products they are throwing away. Making products biodegradable may actually make the problem of rubbish worse, by making people think that it is acceptable to throw away valuable resources like plastics. For example, a biodegradable plastic bag that’s thrown into a hedge will still take years to disappear, rather than days, as some people believe. Even a thrown away banana skin needs one to three years before it is biodegraded. What is more, biodegradable plastics require specific conditions to biodegrade properly, including the presence of micro-organisms, temperature, and humidity, and if not managed properly, they may be worse for the environment than conventional plastics. When biodegradable plastics are put into landfill, which should always be avoided in any case, they produce harmful greenhouse gases when breaking down.

So what are biodegradable plastics good for? In principle, plastics are valued for their ability to make strong, durable products, for example in food storage, transport, building and construction. Biodegradability should therefore be regarded as an additional functionality when the application demands a cheap way to dispose of the item after it has fulfilled its job. One theoretical example of a useful biodegradable product can be found in the food packaging industry. The packaging itself can be composted together with its contents when the product is past its sell-by date or spoiled. There are plenty of other examples such as in agriculture or medicine.

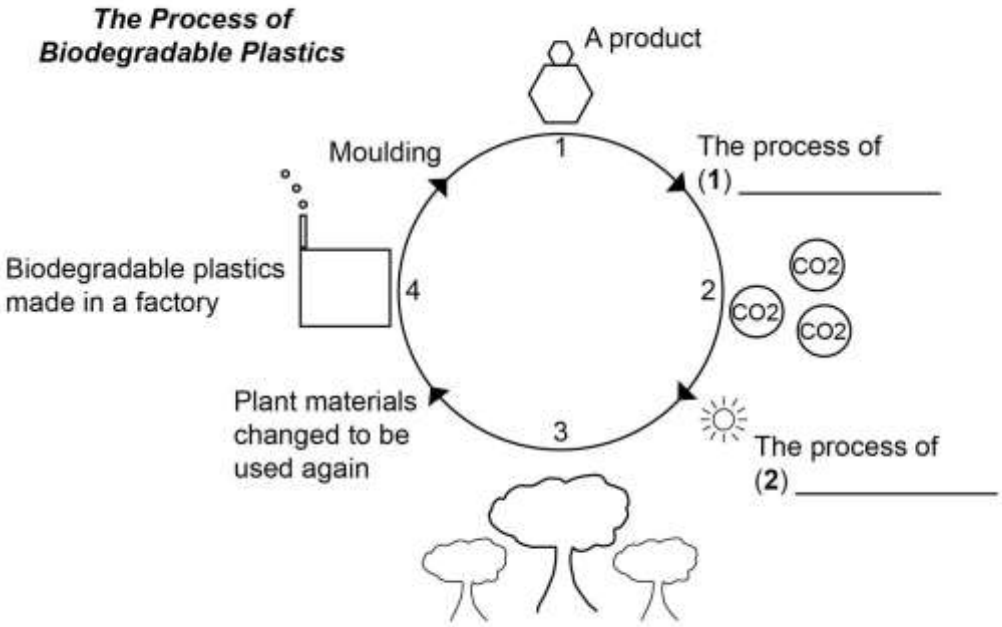
In conclusion, it is a mistake to focus on finding ways to make products easier to throw away in the name of helping the environment. Biodegradable plastics are exciting and useful materials, but they should only be used when they have a definite benefit for a specific product. The best way to help save the planet is to save energy and improve ways of recycling and recovering all plastics.

Questions 1 and 2

Label the diagram below.

Write **NO MORE THAN ONE WORD** from the text for each answer.

Write your answers in boxes **1** and **2** on your answer sheet.



Questions 3 – 8

Do the following statements agree with the information given in the text?

In boxes **3 – 8** on your answer sheet write:

TRUE	if the statement agrees with the information
FALSE	if the statement contradicts the information
NOT GIVEN	if there is no information on this

3 Compostable plastics can break down in the required time in any circumstances.

4 If people are not careful, biodegradable plastics could make the waste problem worse.

5 Biodegradable plastics planned for use in the construction industry are currently going through an approval process.

6 Biodegradable plastics can produce unsafe by-products when breaking down.

7 Biodegradable plastic is already being used with food that can be disposed of into the ground together with it.

8 Farming is one industry where biodegradable products can be useful.

ANSWERS

1. Decomposition
2. Photosynthesis
3. FALSE
4. TRUE
5. NOT GIVEN
6. TRUE
7. TRUE
8. TRUE

Need more practice? Visit http://www.ielts-blog.com for more IELTS practice tests, complete with audio and answers.