

WARM UP

1 Write the names of household objects, furniture and sports equipment under the headings, according to what they are made of. Then compare your results with your classmates and discuss which list is the longest and why.

Wood

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Metal

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Glass

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Plastic

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

GLOSSARY

**corn starch:** *amido di mais*

**raw materials:** *materie prime*

**processed:** *lavorato*  
**customised:** *fatto su misura*

**twine:** *cordicella*

**cutlery:** *posate*

**organic:** *biologico*

**traps:** *cattura, trattiene*

## Mater-Bi™, the bioplastic revolution

Mater-Bi™ is a new range of bioplastics which uses substances derived from plants, like corn starch, and biodegradable polymers which can be obtained from renewable raw materials. The use of renewable raw materials instead of those derived from fossils can help control greenhouse gases, as these materials use atmospheric CO<sub>2</sub> absorbed by plants through photosynthesis. Mater-Bi™ can be processed like any other kind of plastic and can be used to make all kinds of products, either to the same standard, or even better than those made with traditional plastics, with the important advantage however of being totally biodegradable. It comes in different forms called ‘grades’ which contain a variety of molecular superstructures with a wide range of properties which can be used for many different purposes.



The most recent ‘grade’ has been created from vegetable oils rather than the usual starch processing technology. Mater-Bi™ can be customised in a number of ways which allows it to meet the requirements of diverse areas. In agriculture for example, it is used to make twine, while in the catering world you can find Mater-Bi™ plates, cutlery and cups. Food packaging is also another sector covered by this innovative plastic, as well as accessories and toys.

Another important characteristic of this type of plastic is that it can be composted. This means that Mater-Bi™ bags solve the problem of collecting organic waste, as there is no need to separate the bag from its contents, while Mater-Bi™ plates and packaging can be mixed with food waste, since both are biodegradable and compostable. Therefore the organic recycling of mixed waste cuts down on the time and money spent on collecting and separating waste for recycling.

Moreover, the recycling of this mixed waste in compost greatly benefits the environment, as compost traps carbon in the soil, thus keeping it fertile. In other words, not only does this method of recycling substantially reduce CO<sub>2</sub> emissions, but it also restores organic substances to the soil.



<http://en.european-bioplastics.org/bioplastics/>

READING COMPREHENSION

**2** **PET** Read the text and decide if the statements below are true (T) or false (F).

- 1 Raw materials derived from fossils produce more greenhouse gases than bioplastics.
- 2 Mater-Bi™ isn't as versatile as other types of plastic.
- 3 The latest Mater-Bi™ grade isn't made with corn starch.
- 4 Mater-Bi™ bags are used for organic waste collection because they don't tear.
- 5 It takes less time to sort out recyclable waste if you use Mater-Bi™ bags.
- 6 The earth gets some of its substances back when mixed waste is composted.

T	F
<input type="checkbox"/>	<input type="checkbox"/>

VOCABULARY

**3** Match the following words or expressions with their synonyms.

- |                |  |
|----------------|--|
| 1 substances   | a <input type="checkbox"/> aim         |
| 2 instead of   | b <input type="checkbox"/> needs       |
| 3 through      | c <input type="checkbox"/> reduce      |
| 4 range        | d <input type="checkbox"/> by means of |
| 5 purpose      | e <input type="checkbox"/> restore     |
| 6 requirements | f <input type="checkbox"/> elements    |
| 7 cut down on  | g <input type="checkbox"/> variety     |
| 8 give back    | h <input type="checkbox"/> rather than |

EXAM PRACTICE – ORAL EXAM

**4** Prepare a short presentation (3-5 minutes) about Mater-Bi™, comparing its characteristics to those of other plastic products and explaining the main differences.