



**ACADÉMIE  
DE NANTES**

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## **SESSION 2022**

**BACCALAURÉAT PROFESSIONNEL  
ÉPREUVE ORALE SPÉCIFIQUE « SECTION EUROPÉENNE »**

**SPÉCIALITÉ : Plastiques et Composites**

**LANGUE : ANGLAIS**

### **SUJET N°1**

**Durée de l'épreuve : 40 minutes**

|  |              |
|--|--------------|
| - Préparation  | - 20 minutes |
| - Présentation de la situation   | - 10 minutes |
| - Entretien sur les activités et travaux effectués dans la discipline non linguistique | - 10 minutes |

## SITUATION

You are a technician at **Biome Bioplastics**, one of the UK's leading developers of intelligent, natural plastics.

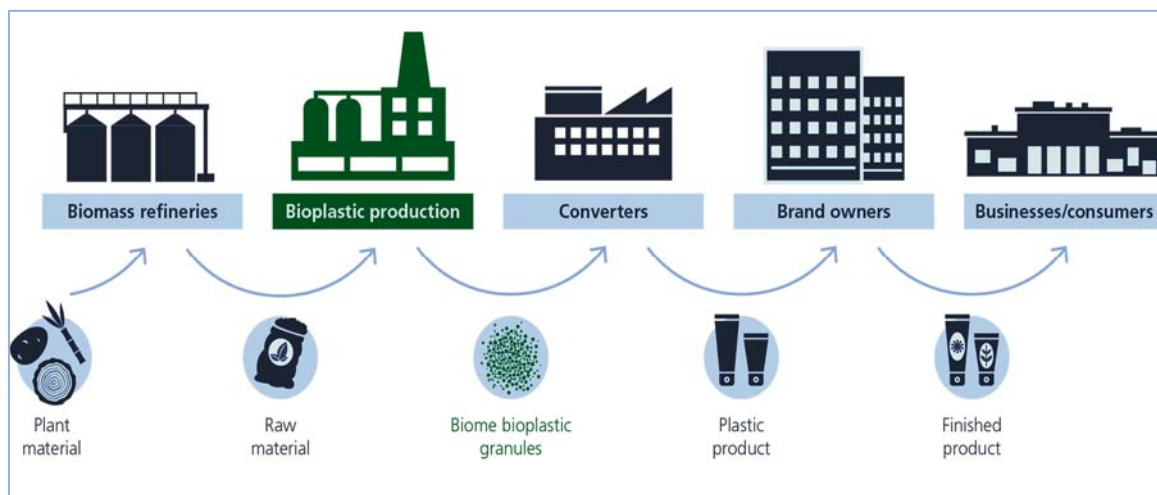
Their mission is to produce bioplastics that can challenge the dominance of oil-based polymers, and ultimately replace them completely.

A client wants to produce one of those bioplastic products.

Explain how bioplastics are different from the more common plastics and how interesting it is to have these materials from \*plant-based resources.

Vocabulary :

\***plant-based resources** : ressources végétales



## DOCUMENTS :

- **DOCUMENT 1 : BIOPLASTICS**
- **DOCUMENT 2 : WHY BIOPLASTICS ?**

## DOCUMENT 1 : BIOPLASTICS

What is a bioplastic ?

A bioplastic is a plastic that is made partly or wholly from materials derived from biological sources, such as sugarcane, potato starch or the cellulose from trees and \*straw.

Bioplastics are often designed so that they biodegrade or compost at the end of their useful life, aided by \*fungi, bacteria and enzymes.

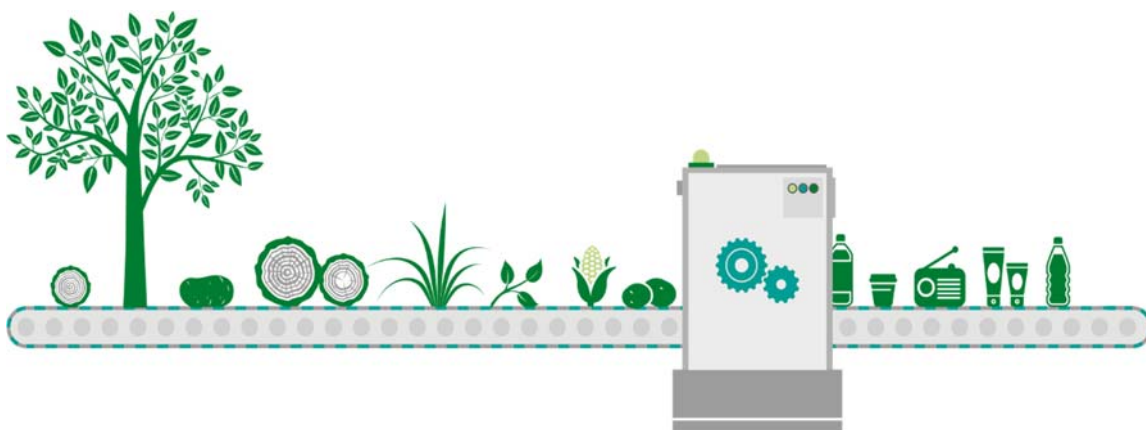
Bioplastics can generally be directly substituted for their oil-based equivalents. They can also be made to be chemically identical to standard industrial plastics.



Vocabulary :

\***straw** : paille

\***fungi** : champignons



Source : <https://biomebioplastics.com/company/>

### Why bioplastics?



#### A more sustainable product

Bioplastics reduce the use of non-renewable, oil-based resources, which are increasingly scarce and unstable in price.



#### Managed end-of-life

Bioplastics can biodegrade or compost at the end of their useful life. Durable plant-based bioplastics can also be recycled as well as their conventional equivalents.



#### Consumer engagement

Consumers are increasingly seeking more environmentally friendly products, and looking to brands to demonstrate their sustainability credentials. Products and packaging made from bioplastics send a direct message to consumers.



#### Intelligent benefits

Bioplastics can be engineered to have novel technical characteristics such as vapour control and tactile properties. Tailored to biodegrade after a determined period of time, they can also enrich the soil on decomposition.



#### Improving carbon footprints

Biomass feedstock absorbs carbon dioxide as it grows. In addition, bioplastic manufacture can use less energy in production, reducing manufacturing costs and lowering the carbon footprint of the final product.

#### Vocabulary :

\***scarce** : rare

\***Biomass feedstock** : matières premières de biomasse

Source : <https://biomebioplastics.com/company/>