

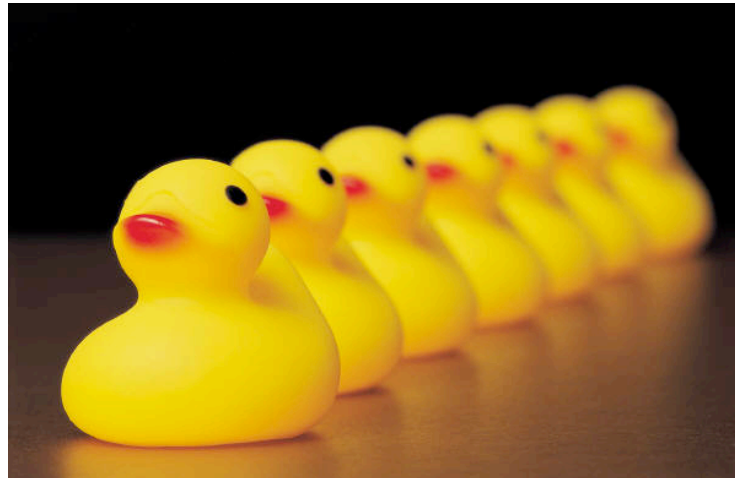


**centre de
développement
pédagogique**

*pour la formation générale
en science et technologie*

PLASTICS

STUDENT BOOKLET



May 2008

WORKING DOCUMENT

CONTEXT

Our lifestyle habits and industrial processes in 2007 are far removed from those of 100 years ago. We are in an age of speed (production, transportation, work, food, etc.) This rhythm of life makes us forget that as a society we are responsible for the upheavals with which we are now faced.



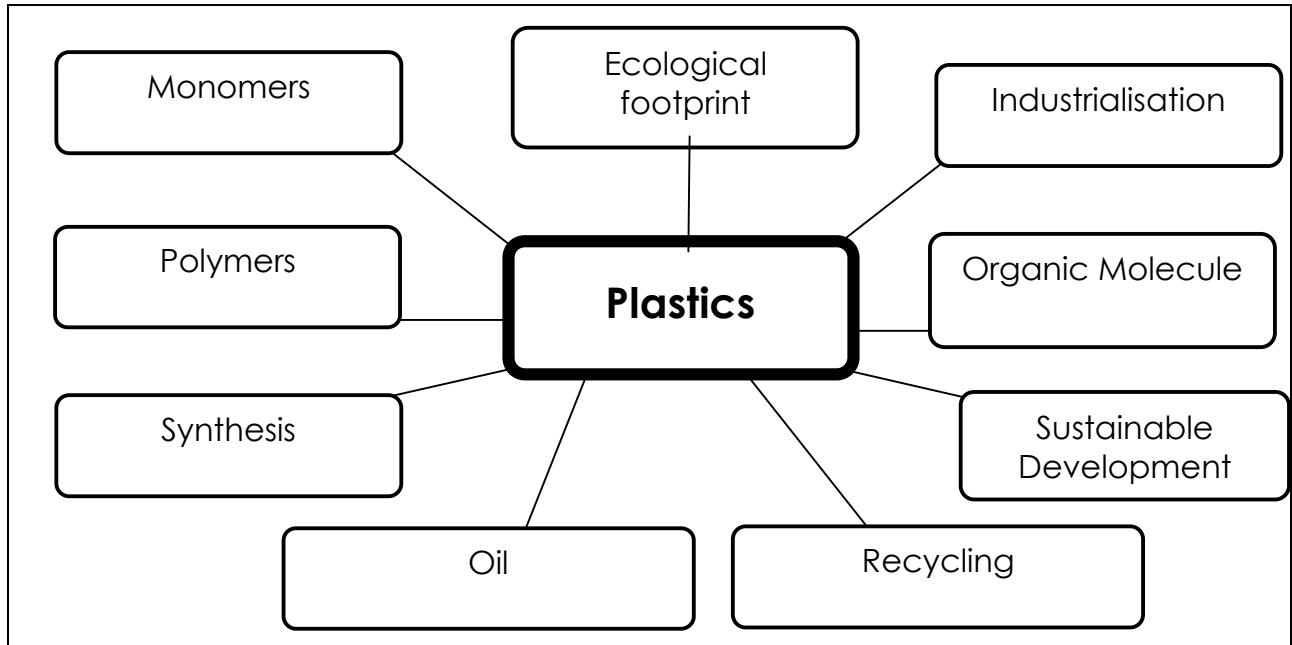
On the one hand, we promote the use of reusable grocery bags, but we also speak of the plastics industry as being tomorrow's solution, more energy efficient for the production of consumer goods. On the other hand, many organisations seem to want to boycott the use of plastics. Who is right? Whom do we believe? What to think?

In this context and within the framework of your science and technology class, we invite you to take a stand on the following question:

« Are plastics a good material? »

Your initial opinion:

Theoretical notions explorations card



The results of my research (what I need to remember)

Blank space for writing the results of research.

Activity 1 – History of plastics

Cyber quest

Document: Plastics 101 - EPIC-

<http://www.cpia.ca/epic/>

Referring to the above website, **answer the following questions:**

1. What invention is attributed to Alexander Parkes?

2. To what activity can we attribute the appearance of celluloid?

3. What was the first entirely synthetic substance? How was it revolutionary? Is it still used today?

4. Since when has plastic become the most used substance in the world?

Activity 2 – The recycling bin

Several objects have finished their useful life cycle and have been placed in your recycling bin. They are all made out of plastic. By looking at them more closely, we can find clues that tell us how they were produced.

Choose an object from your bin and suggest answers to the following questions:

1. How is it made?

The animation called « *Industrial processes* » version 2.5 may be useful to you.

Object chosen: _____

The most likely shaping process is: _____

Justification:

2. Of what is it made?

CAPSULE REGARDING THE IDENTIFICATION OF COMMON PLASTICS

My object is made from: _____

Justification :

Activity 3 – Cooperative work

In order to become familiar with certain aspects relative to plastics, you can count on specialists' expertise.

Instructions:

1. Form teams of four people.
2. Choose a specialisation.
3. All the specialists from the same field have 20 minutes in which to prepare a resume of pertinent facts in their field of expertise.
4. Three minute presentation per specialty.

Specialists:

1. Contractor in the field of plastics recycling.

Suggested document: Fiche-plastiques.pdf From Recyc-Quebec's website
<http://www.recyc-quebec.gouv.qc.ca>

2. Ecologist

Suggested document: The carbon cycle from the « Planète Terre de l'Université Laval » website
http://www.ggl.ulaval.ca/personnel/bourque/intro.pt/planete_terre.html

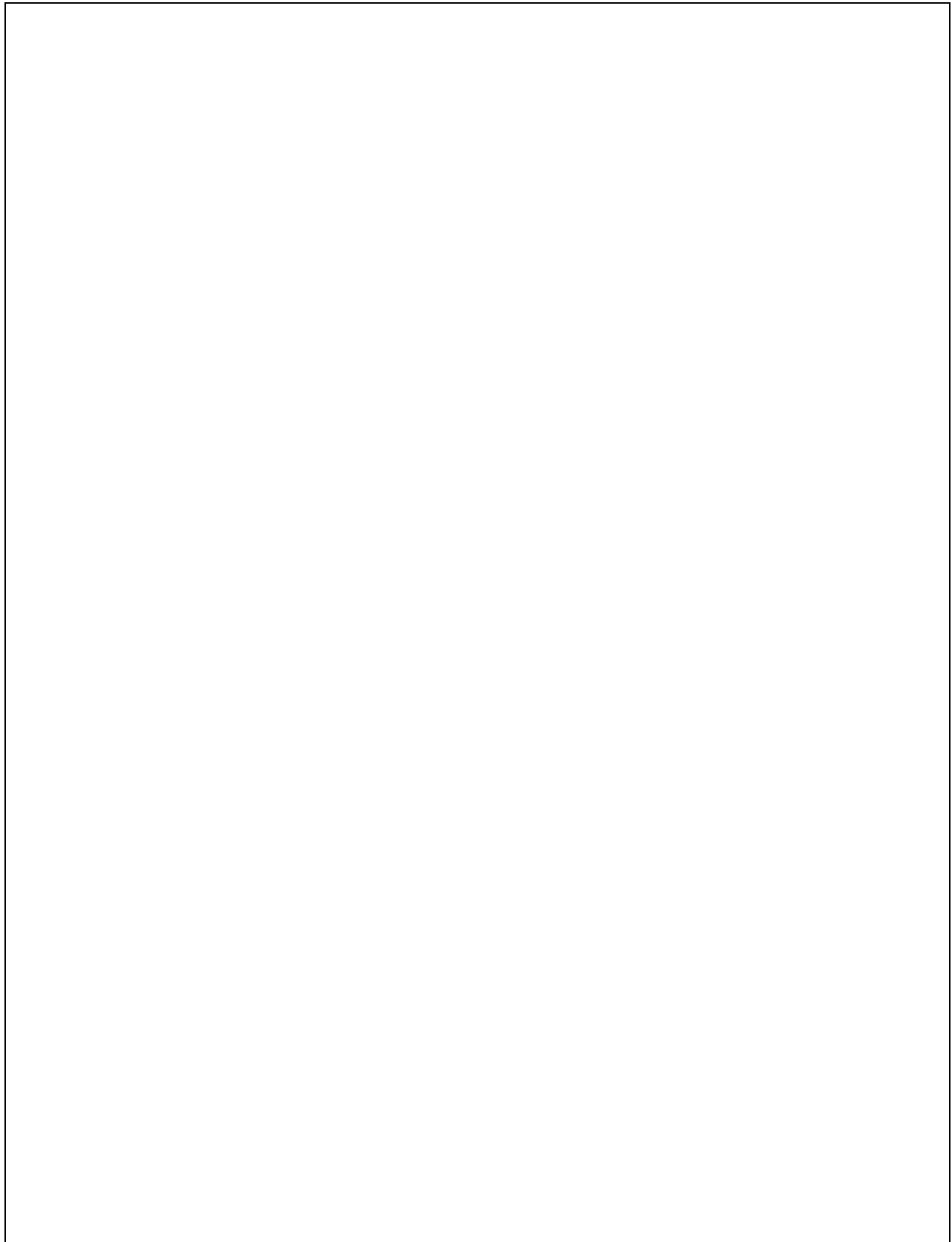
3. Ministry of sustainable development

Suggested document: Sustainable development section on Wikipedia's website
http://en.wikipedia.org/wiki/Sustainable_development

4. Petro-chemist

Suggested document: Oil refinery section on Wikipedia's website
http://en.wikipedia.org/wiki/Oil_refinery

Personal notes from my field of expertise

A large, empty rectangular box with a thin black border, intended for the user to write their personal notes from their field of expertise.

Notes (continued)

