



Lifelong Learning Programme

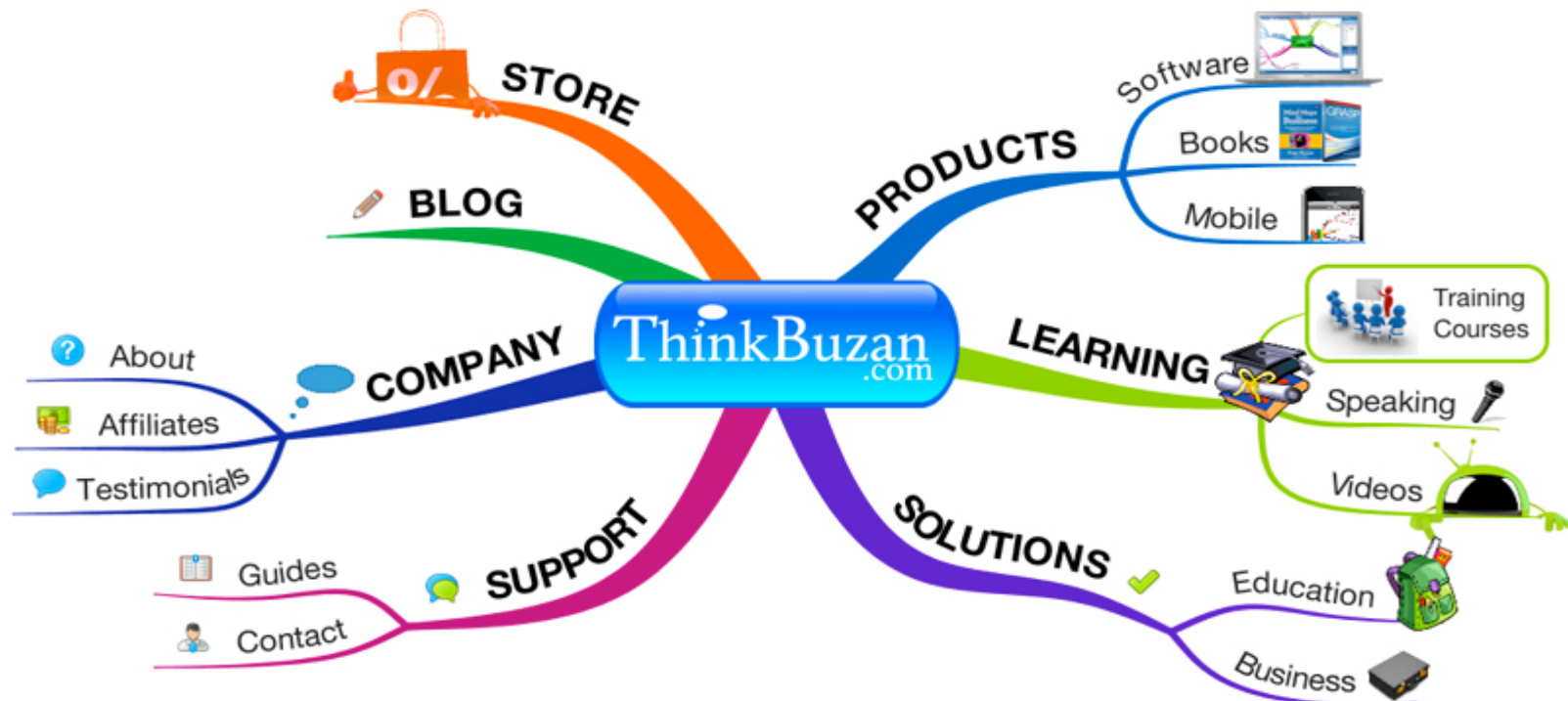


The OPEDUCA Project



# Mind mappings, a powerful tool in the Secondary Education

# Les Mind Mappings, un outil performant dans le Secondaire



## SUMMARY

- I – Une méthode dans le cadre du Projet OPEDUCA ;
- II – Une méthode qui permet de mobiliser simultanément un grand nombre de compétences ;
- III – Une méthode qui permet de repérer des difficultés et d'y remédier ;
- IV – Une méthode applicable dans les différentes disciplines.

XXX

- I – A method as part of the OPEDUCA Project ;
- II – A method that can simultaneously mobilize a large number of skills ;
- III – A method that enables to identify and correct difficulties ;
- IV – A relevant method for all disciplines.

# OPEDUCA Project – Teaching children how to think instead of what to think





Lifelong  
Learning  
Programme



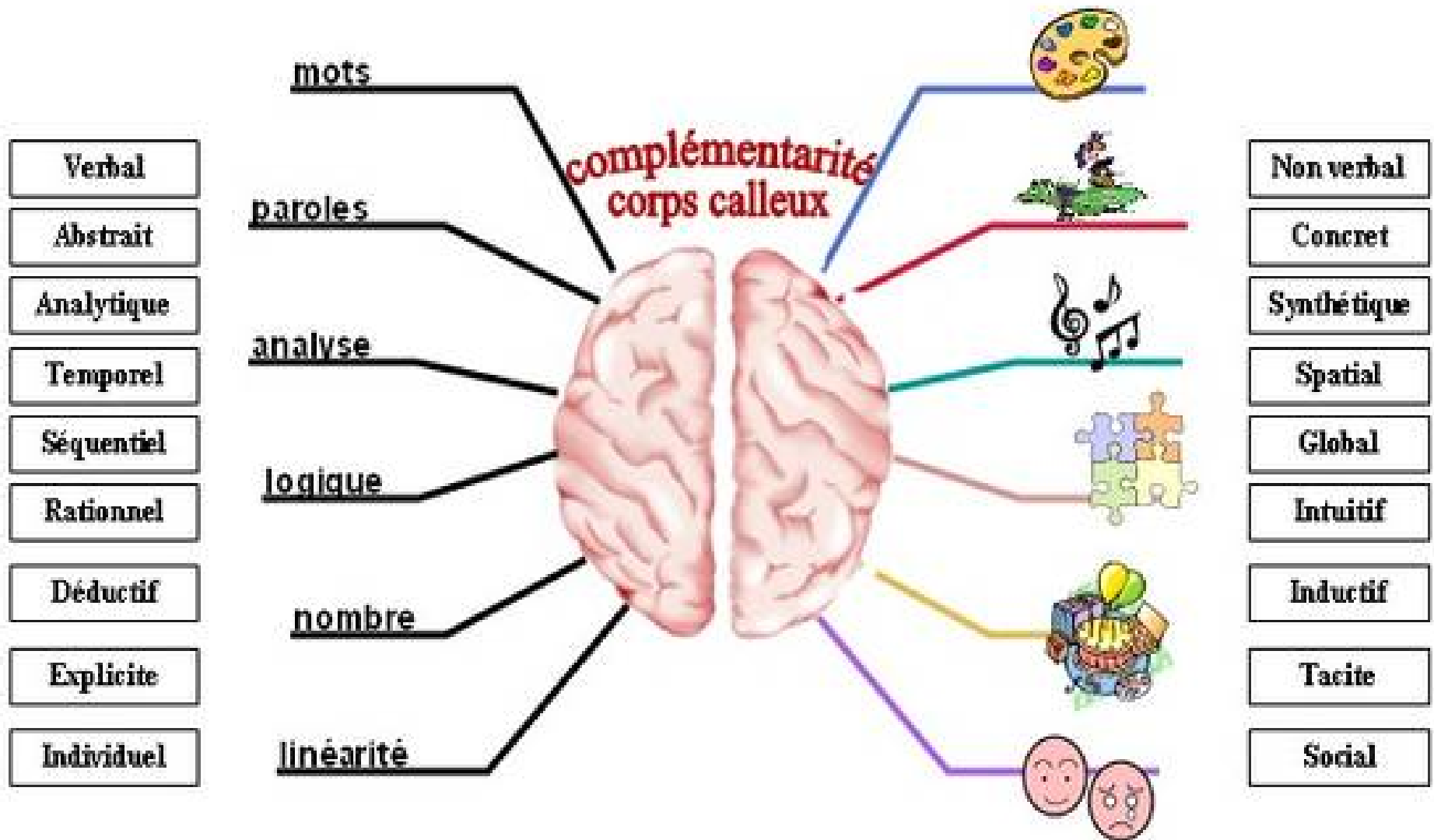
The  
OPEDUCA  
Project



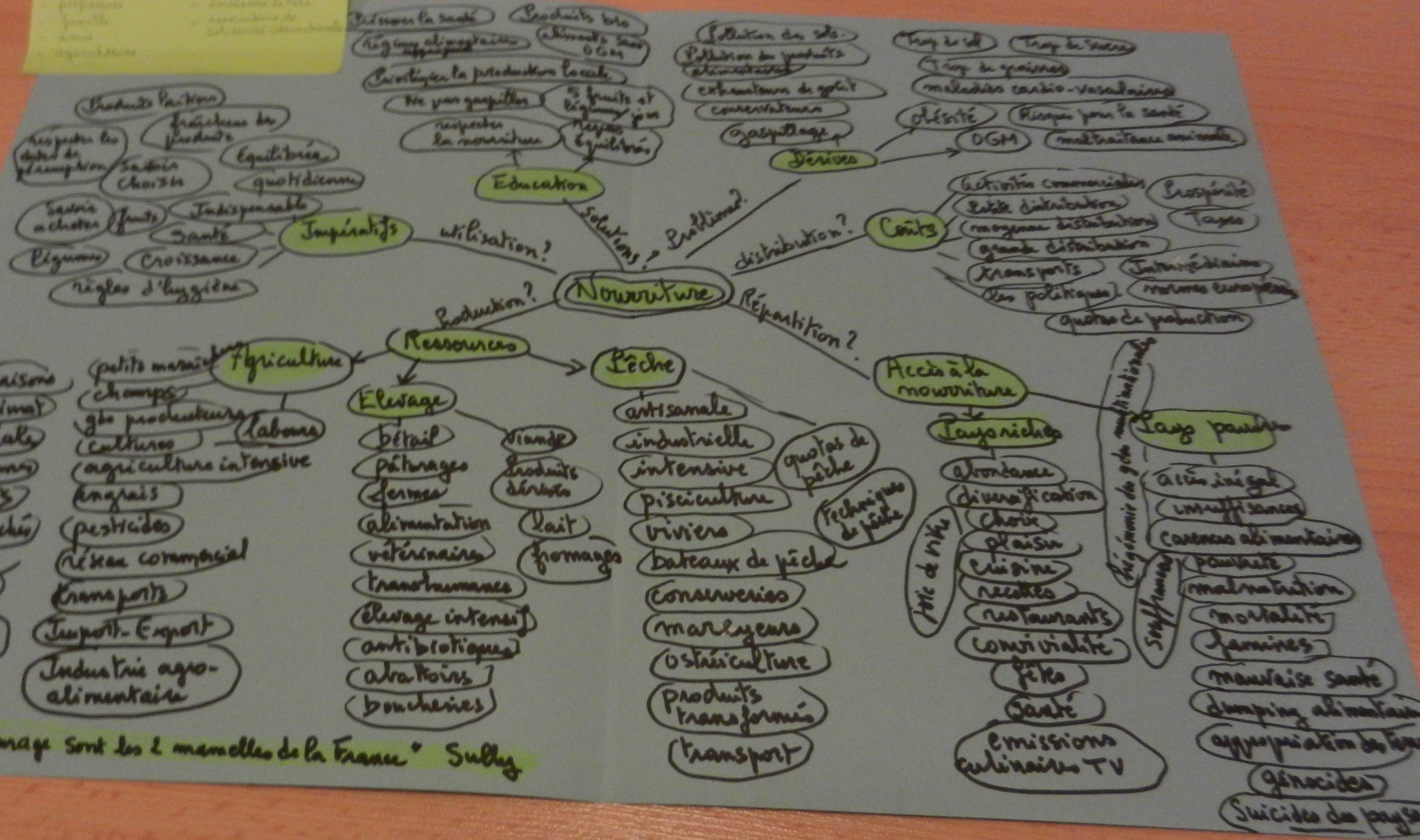
# Les deux *hémisphères corticaux*

## HÉMISPHERE GAUCHE

## HÉMISPHERE DROIT



- Produits  
 - L'impact de la chaîne  
 - L'ET  
 - L'impact  
 - Préférences  
 - Qualité  
 - Sécurité  
 - Responsabilité

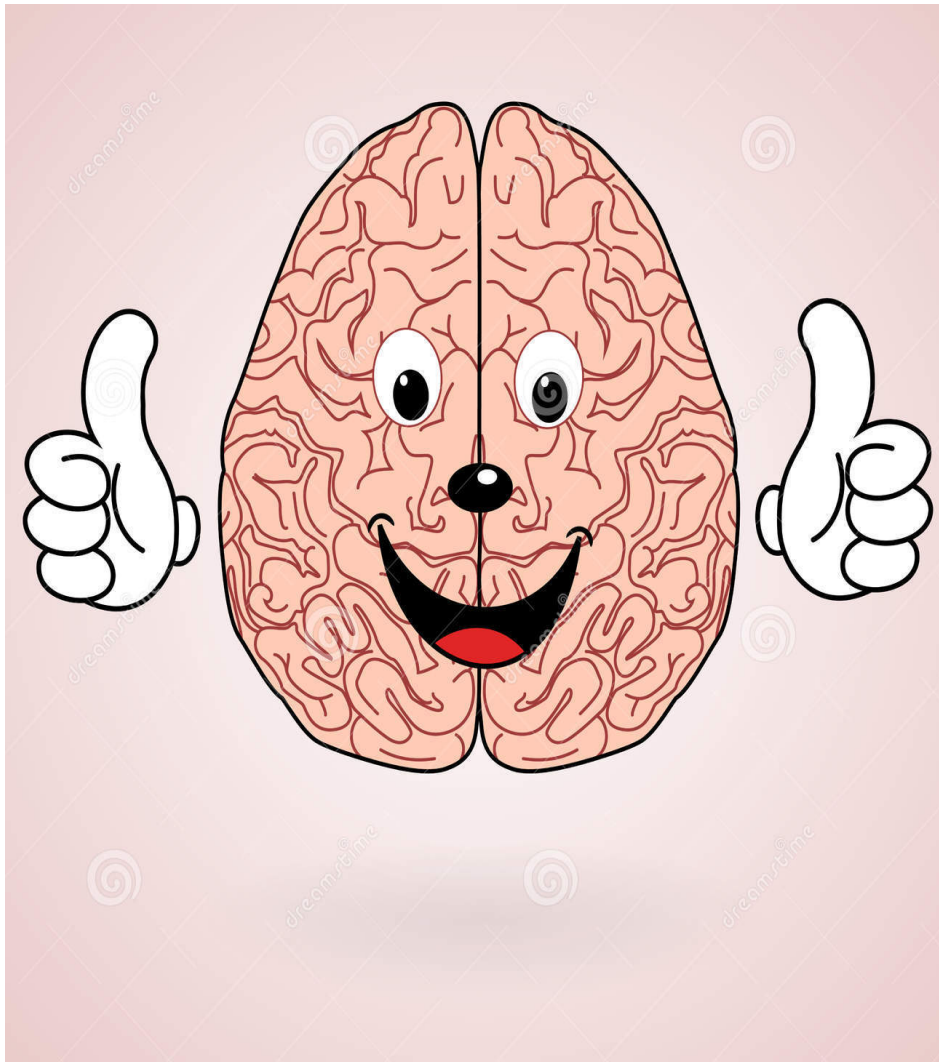


# Skills used in this first experience of doing a research through a Mind Mapping

- Involving associations of ideas ;
- Asking relevant questions ;
- Broadening the thinking ;
- Putting ideas in order ;
- Classifying information ;
- Defining sub-themes ;
- Identifying keywords ;
- Using an inductive or deductive analysis, according to the students;
- Deepening analysis;
- Finding problematics.

**It is interesting to notice that they used the inductive method consisting in starting from particularities to determine the general.**

- They have used the abilities of their two cerebral hemispheres simultaneously ;**
- Their work has been done much more faster than with another usual method.**





# L'eau

## Distribution

### Stockage

Il y a-t-il des moyens de stocker l'eau plus massivement ?

### Transport

Comment réduire l'énergie nécessaire à transporter l'eau ?

### Packaging

Peut-on encore réduire les matières utilisées dans le packaging des bouteilles d'eau ?

## Traitement

### Eau usée

Comment rendre plus efficace et moins coûteux le traitement des eaux ?

## Récupération

### Océan

Comment desaliniser l'eau de mer à grande échelle ?

### Eau douce

L'eau de pluie est-elle une ressource inépuisable ?

## Economie

### Individuelle

Comment peut-on minimiser l'utilisation de l'eau ?

### Mondiale

Comment chaque pays peuvent économiser de l'eau selon leur climat ?

## Commercialisation

### Prix

Comment empêcher la hausse du prix de l'eau ?

### Quantité

Est-ce que tout le monde aura assez d'eau dans les années futur ?

# Mind Mapping about WATER : qualities, problems and solutions

## Qualities :

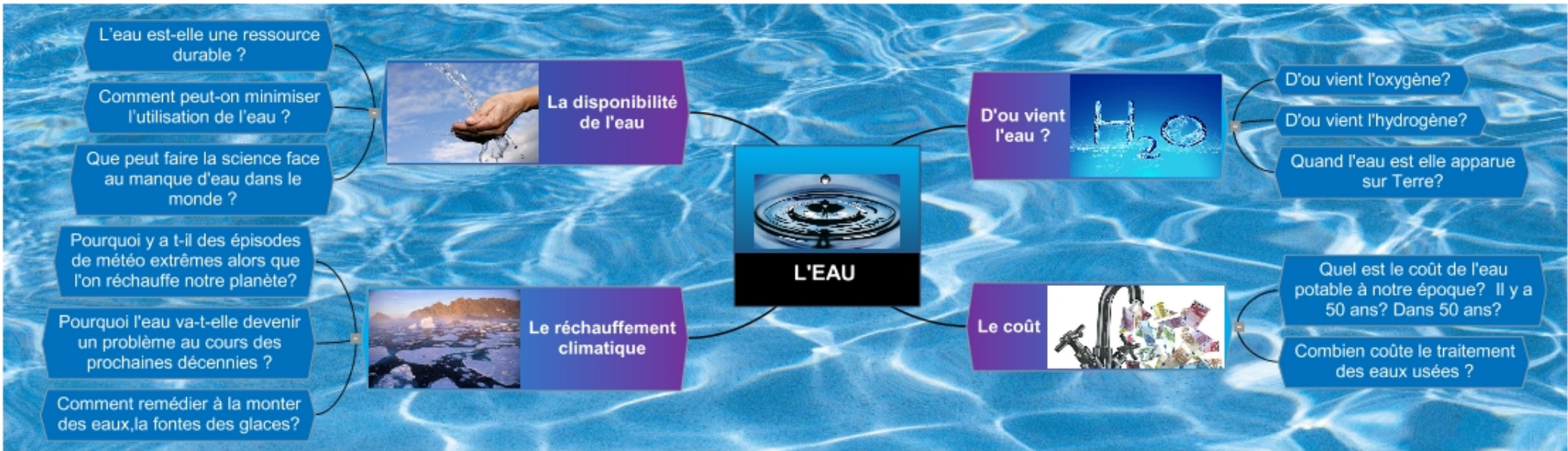
- a well-structured thinking ;
- a coherent classification of the topics ;
- clear information ;
- well identified key words ;
- pertinent questions.

## Difficulty :

- Only one sub-theme covered but not clearly identified as such : **the Water consumption.**

## Solution :

**Inductive thinking would have enabled the student to identify the sub-theme, and searching for answers to the questions would have allowed him to expand his thinking and finding other sub-themes.**



## **Special features of this mind mapping about Water :**

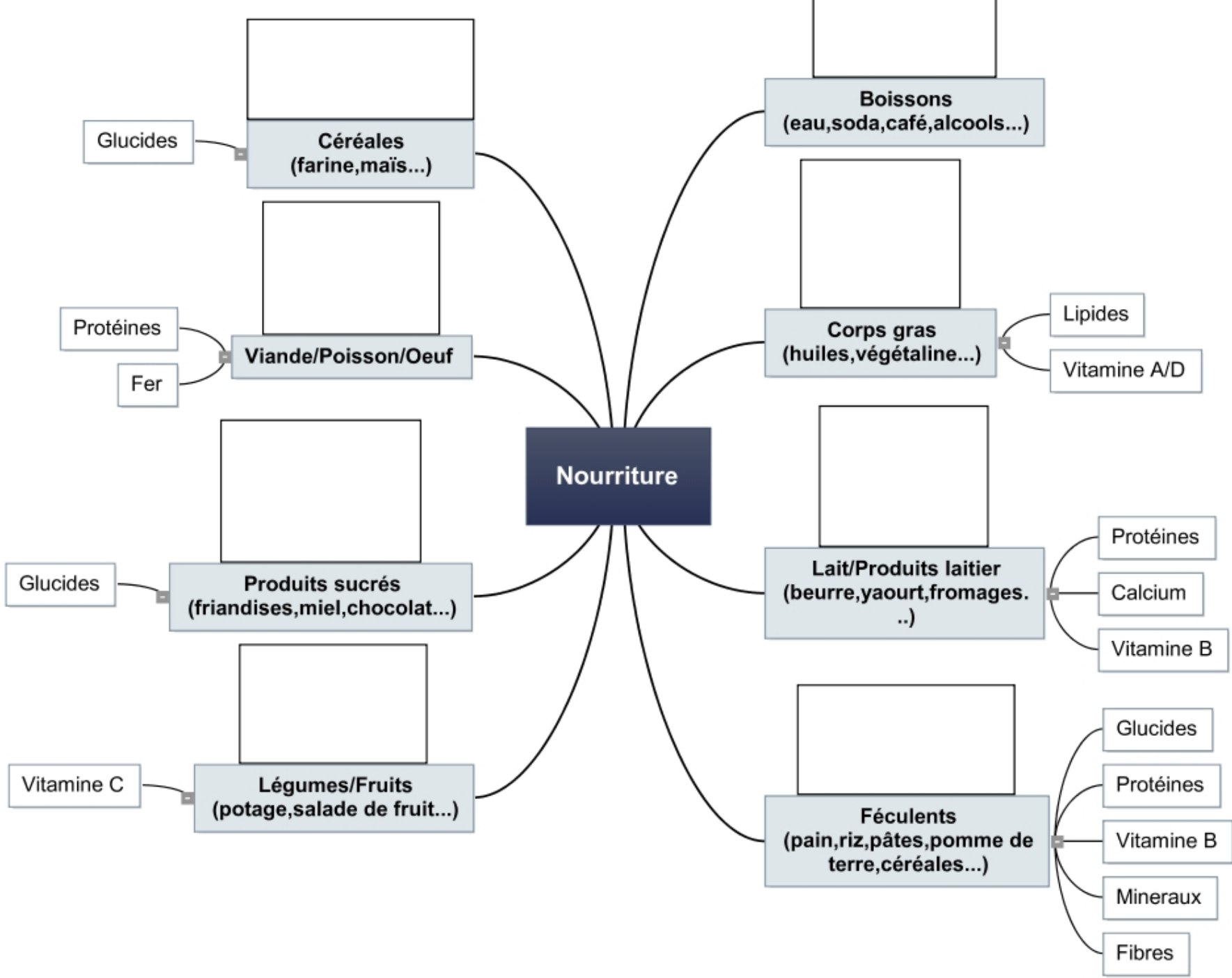
- A visually attractive mind map ;
- relevant issues relating to the availability of water in the world and global warming.

## **Difficulties :**

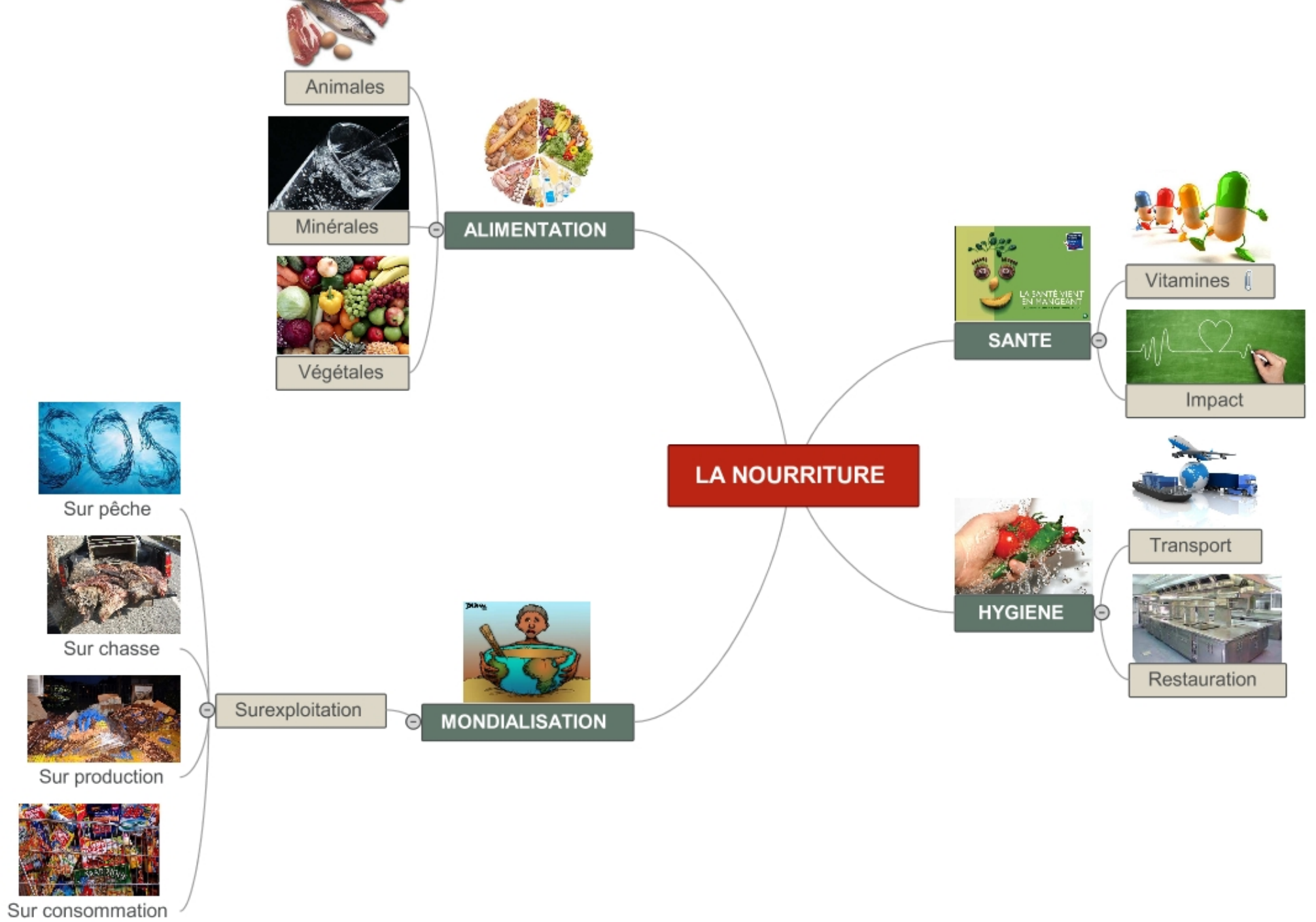
- The unifying sub-theme (the Water-related problems) has not been identified, the four topics are not so much logically linked.

## **Solution:**

- a thorough research on relevant issues would have allowed the student, by induction, to find the unifying sub-theme and determine other topics such as the distribution of water in the world and the problems of water pollution for example.



- **Qualities of this Mind mapping about Food** : it is visually pleasant, clearly organized, with good topics and well classified ideas ;
- **Features** : it has been approached from the angle of health, and the necessary vitamins and nutrients, but the key word « **Health** » does not appear.
- The problem is also considered in terms of consumption but there is no distinction between what is good and what is bad for health, and why.
- **Solution** : nevertheless, starting from this mind mapping, a deeper thinking could easily enable the student to expand his analysis.



## **Special features of this mind mapping :**

- a very succinct diagram focused on the different roles of food ;
- a starting approach of overconsumption ;
- keywords replaced by pictures :
- an attractive visual but a too superficial analysis.

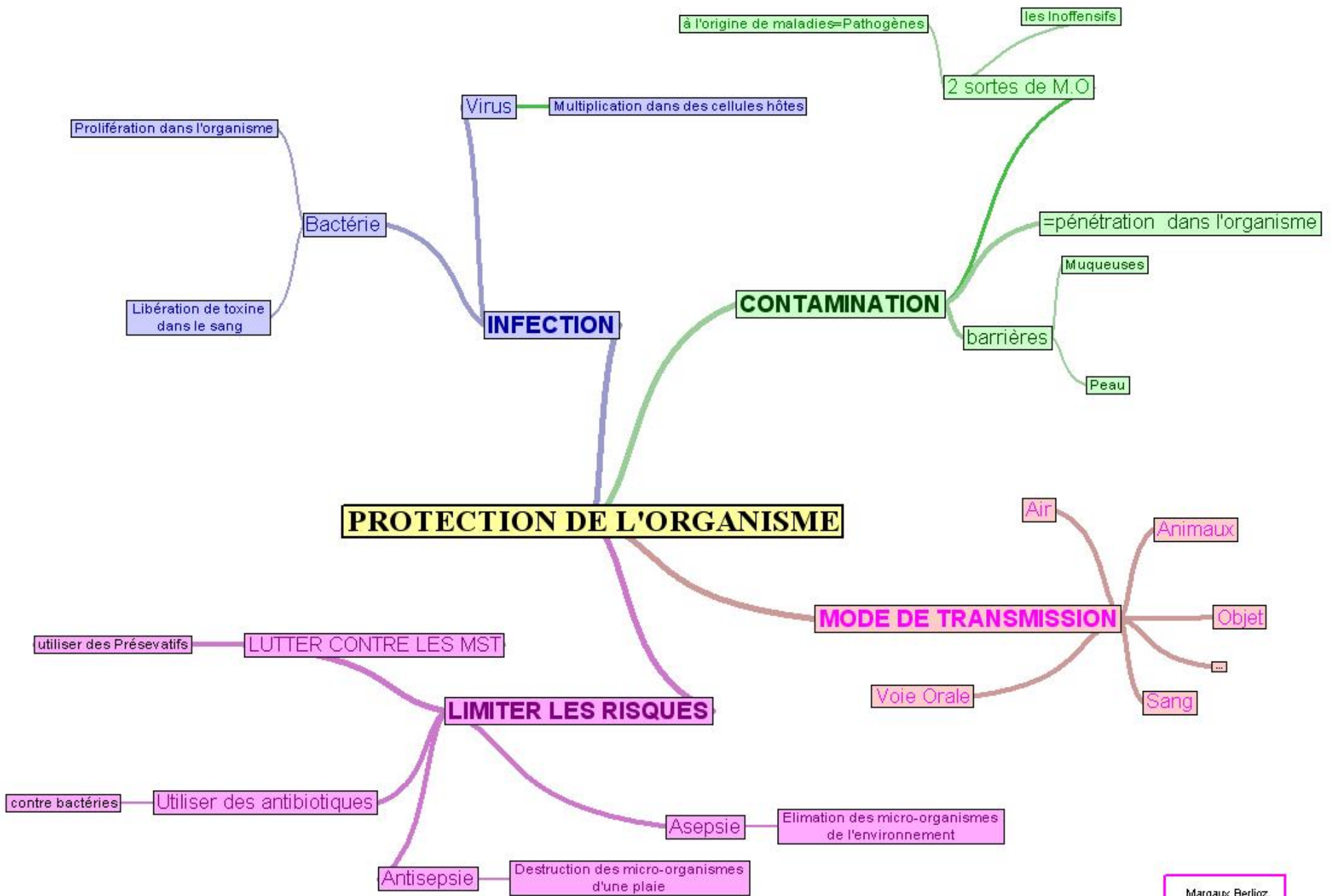
## **Solution :**

- Encouraging the student to ask questions about the pictures he has himself selected in order to deepen his analysis.



# Partial Conclusion

- The mind mappings enable to determine which skills are acquired by the student and which are not ;
- The student can be helped individually ; his research can be correctly re-directed by simple means ;
- He can be helped to better coordinate his ideas and to deepen his thinking through an appropriate further research.



Margaux Berlioz,  
2008

A Biology lesson ; theme : **the disease** ;  
problematic : **how to protect one's organism**

## **Qualities :**

- a clear visual facilitating the memorization ;
- a logical ordering of the sub-themes in the direction of clockwise : from the problem, then its expansion, to the solutions ;
- a lesson quickly and easily memorizable.
- Consequently, a better learning process : time saving, efficiency, better memorizing.

# LE PORTRAIT

## Le sujet abordé

- Un individu en particulier
  - Le duc Jean
  - L'amour de Frédéric
  - Le vieillard de la peau de chagrin
  - Quasimodo
- Un type d'individu
  - Narcisse

## L'orientation du portrait

- Neutre, objectif
- Subjectif
  - 😊 Portrait mélioratif
  - 😞 Portrait péjoratif

## Les outils du portrait

- Les expansions du nom
- La périphrase
  - Pour être précis, éviter les répétitions et caractériser
- L'opposition

## Le point de vue adopté

- Point de vue interne
- Point de vue externe
- Point de vue omniscient

## Quoi décrire ?

- Description sociale
- Description morale (caractère)
- Description physique
- Description d'actions
  - Actions habituelles
  - Gestes ou attitudes révélateurs de la personnalité
- Informations biographiques



# A Literature course ; theme : the modalities of **the portrait** in novels and short stories

## **Qualities :**

- An attractive presentation, summarizing the different points to study and the steps to follow : mode of narration, mode of description, targets of the description, meanings, stylistic tools ...
- This mind mapping is well made because it can be used both for studying a portrait in a novel as for writing a literary portrait.
- Using a mind mapping is more efficient than following the various advices indicated in an usual pedagogical sheet.

# LES EXPANSIONS DU NOM

**CC LES CC...**  
Elles permettent "l'agrandir" un nom, en lui donnant des précisions supplémentaires



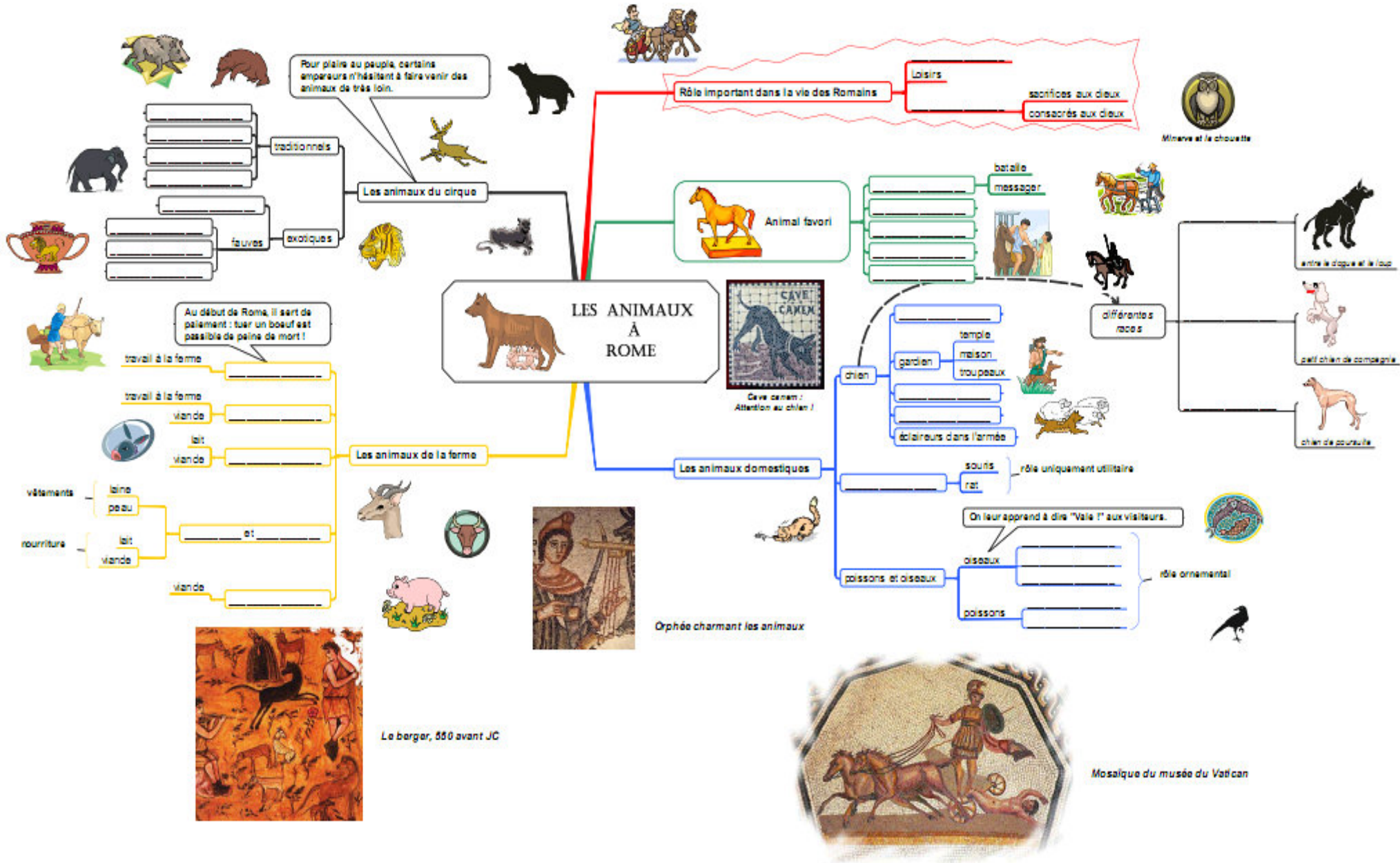
Prépositions les plus fréquentes :  
à - dans - par - pour - en - vers - avec - de - sans - sous - chez - sur



# A Grammar course about **the expansions of the name**

Such a mind mapping was made by a teacher ; for the pupil it may seem difficult ; it can't be memorized as such, but it can be used as a game :

- For example the pupil can go directly to : « le chien d'Ulysse »(Ulysse's dog) at the end of the line, and read the process by turning the line back ; he will discover the grammatical specificities of this expansion of name.
- He will memorize examples step by step thanks to this playful method.

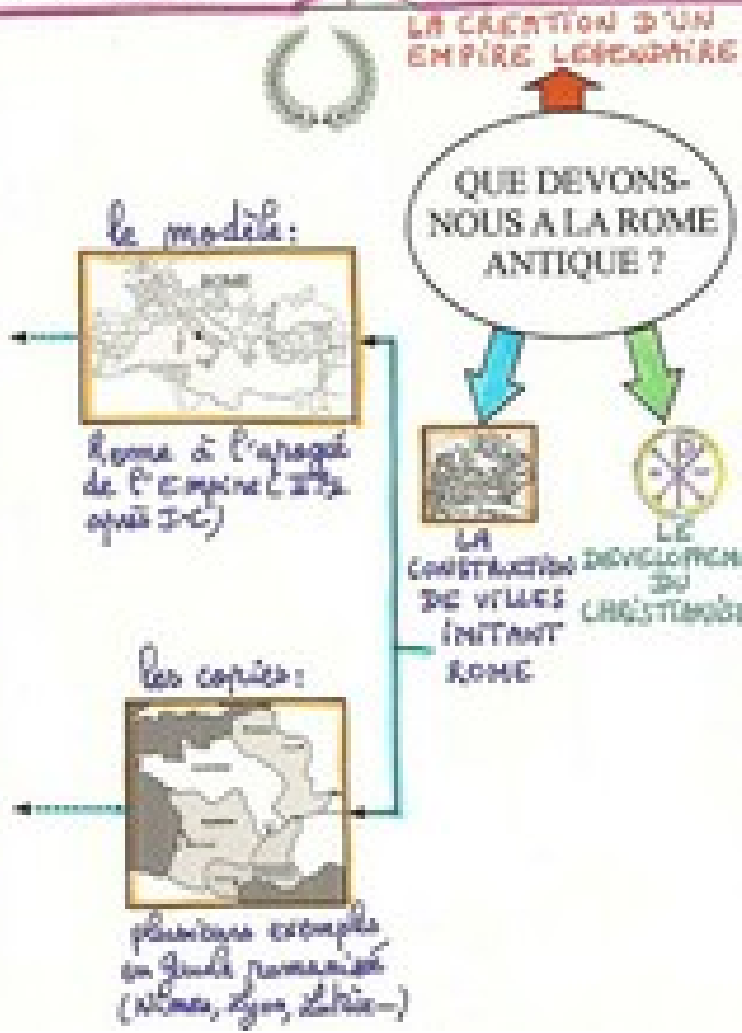




# A Latin course on the theme of **animals in ancient Roma**

## **Specificities of this mind mapping :**

- Research, concentration and creation at the same time ; listing all the animals in Roma and ranking them according to their function : pets, farm animals, circus animals, religious function... then arrangement of the illustrations in the mind mapping.
- The pupils had to rely on the texts studied in class, hence the idea of the teacher to add boxes to be completed by the pupils to complete the information, thanks to questions.
- Such a method is stimulating and inspiring for the pupils who learn early how to do a research.
- It also facilitates the memorizing of what is interesting and important.



# History course : documentary research of what we owe to Ancient Roma

- Three issues : the reproduction of cities such as Roma ; the development of Christianity ; the creation of a legendary Empire.
- Qualities : a rigorous plan, ideas classified in a logical order, a good progression, precise subtitles, a geometric arrangement of the sequences, a visual facilitating the memorization of the progression, headlines, examples...
- This kind of research also enables the pupils to mobilize their own knowledge, and the playful side of finding illustrations **give the opportunity to pupils to participate to the creation of the lesson instead of receiving it passively and getting bored.**

# General conclusion

The benefits of using mind mappings in the Secondary Education are endless : it's a useful tool for :

- A documentary research ; finding ideas and classifying them in a logical and progressive order ;
- Concentration and structuration of thinking ;
- **Learning how to determine the important information to be kept (and not the secondary one) ;**
- Learning to be efficient, to be active, creative, to participate freely and actively ;
- Developing and facilitating memorization ;

## In addition :

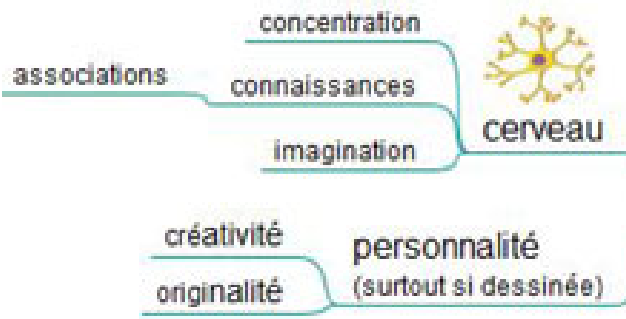
- It's a playful and inspiring method ;
- It is useful for both oral and written practice ;
- It enables to mobilize the knowledge during an exam, and to better organize the ideas (oral and written) ;
- **It learns the students how to take notes** (another recurrent difficulty for them) ;
- Is is helpful to revise lessons before an exam ;
- It helps pupils and students to be more self-confident ;
- **It helps all students, regardless of their level : it's good for their welfare at school.**

# MERCI POUR VOTRE ATTENTION

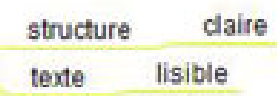




reflète



qualités

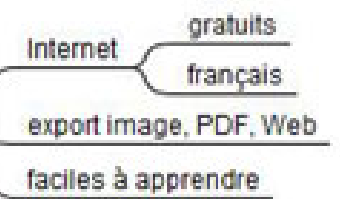


à la main



à l'ordi

logiciels



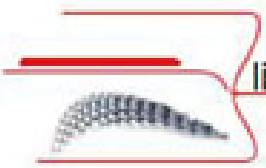
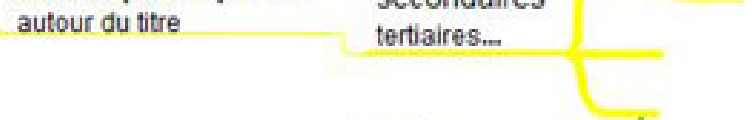
caractères



titre

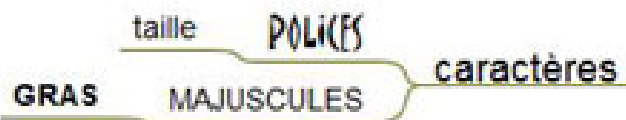
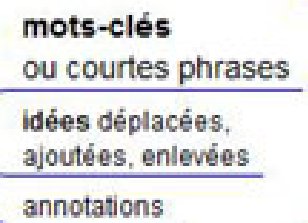


idées principales

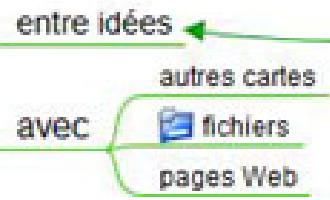


lignes

développement

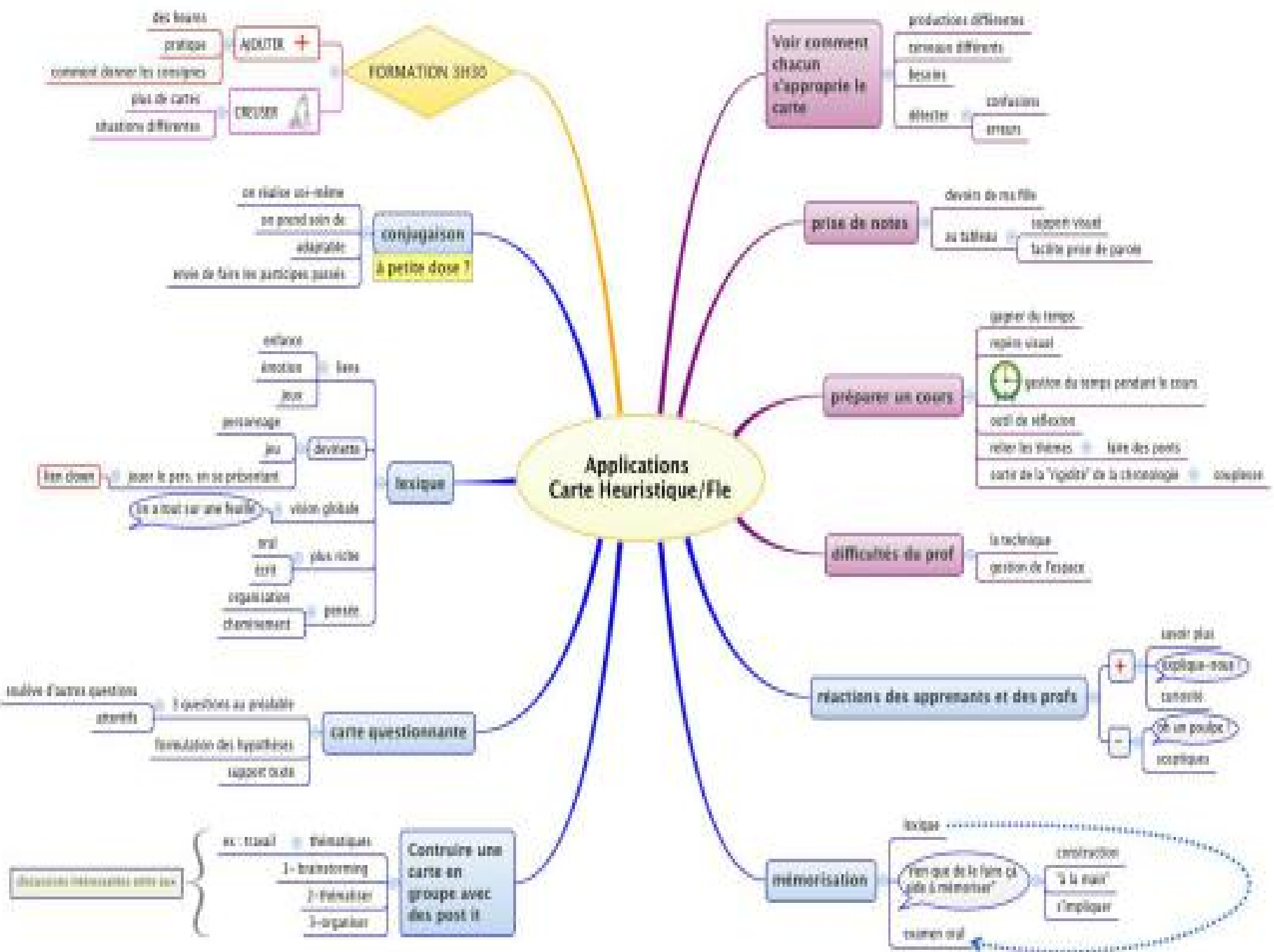


liens

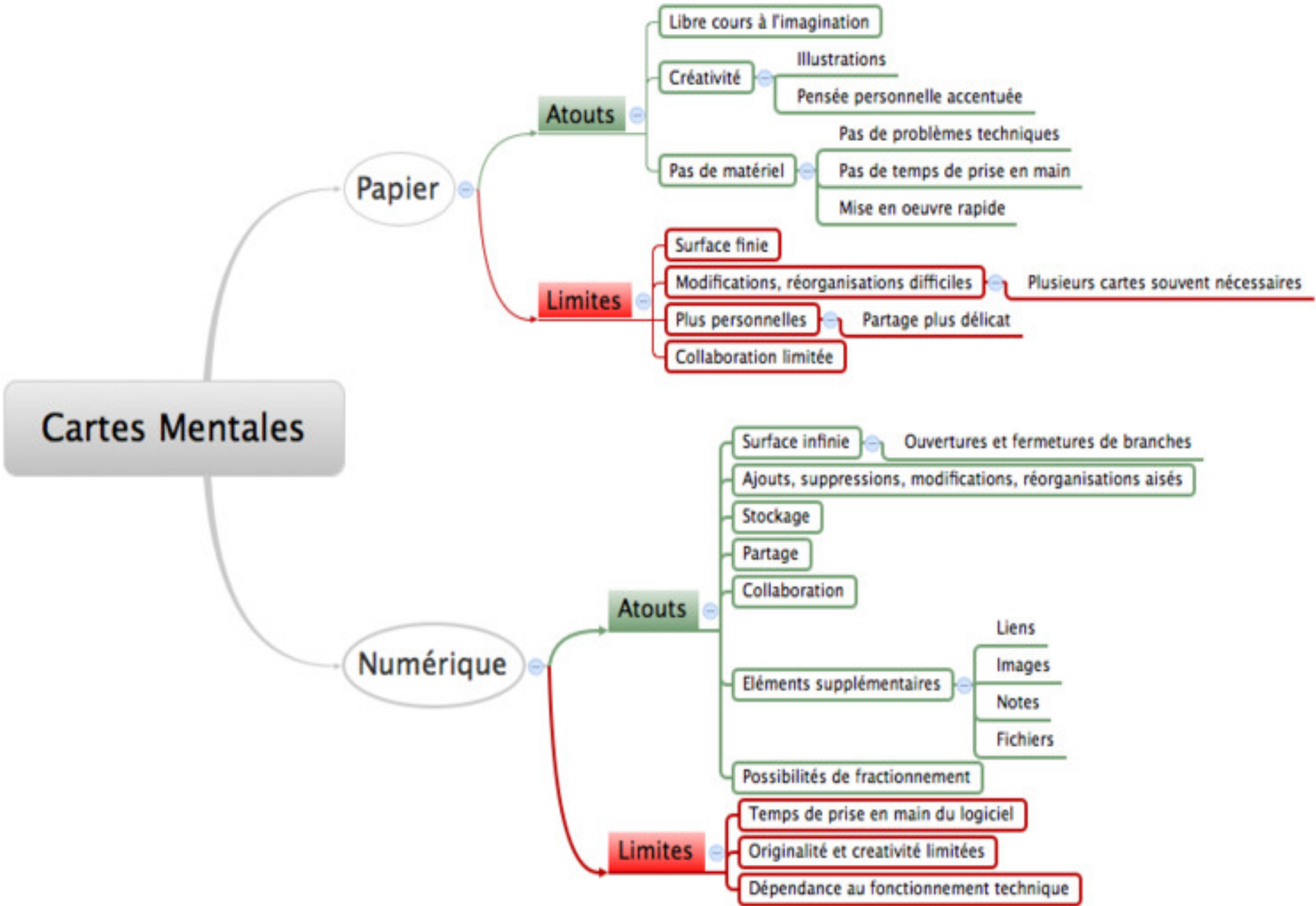


illustrations









# Cartes Mentales

## Papier

### Atouts

- Libre cours à l'imagination
- Créativité
  - Illustrations
  - Pensée personnelle accentuée
- Pas de matériel
  - Pas de problèmes techniques
  - Pas de temps de prise en main
  - Mise en oeuvre rapide

### Limites

- Surface fine
- Modifications, réorganisations difficiles
  - Plusieurs cartes souvent nécessaires
- Plus personnelles
  - Partage plus délicat
- Collaboration limitée

## Numérique

### Atouts

- Surface infinie
  - Ouvertures et fermetures de branches
- Ajouts, suppressions, modifications, réorganisations aisés
- Stockage
- Partage
- Collaboration
- Éléments supplémentaires
  - Liens
  - Images
  - Notes
  - Fichiers
- Possibilités de fractionnement

### Limites

- Temps de prise en main du logiciel
- Originalité et créativité limitées
- Dépendance au fonctionnement technique

**CARTE HEURISTIQUE**  
Stratégie de contournement  
de la DYSLEXIE

**PLAISIR** 😊

- Prise de notes ←
- Plan de cours ←
- Plan de dissertation ←
- Mémorisation des leçons ←
- Préparation d'exposés ←
- Résumés  
comptes-rendus ←

**GAIN**  
de **TEMPS** 🕒

- Peu de mots ✍️
- Mots clés 🔑
- Relecture facilitée 📄

**DOCUMENT**  
**CLAIR, AERE** 📋

**VALORISATION**  
de la production de l'élève 😊

💡 **CREATIVITE**

✓ **COMPREHENSION**

📌 **ORGANISATION**  
de la **PENSEE**

! **VISION** { globale  
de détail

👤 **MEMORISATION**  
optimisée

👤 **CHOIX**  
**PERSONNALISES** { Carte manuelle  
Logiciel  
Style, dessins,  
images, couleurs