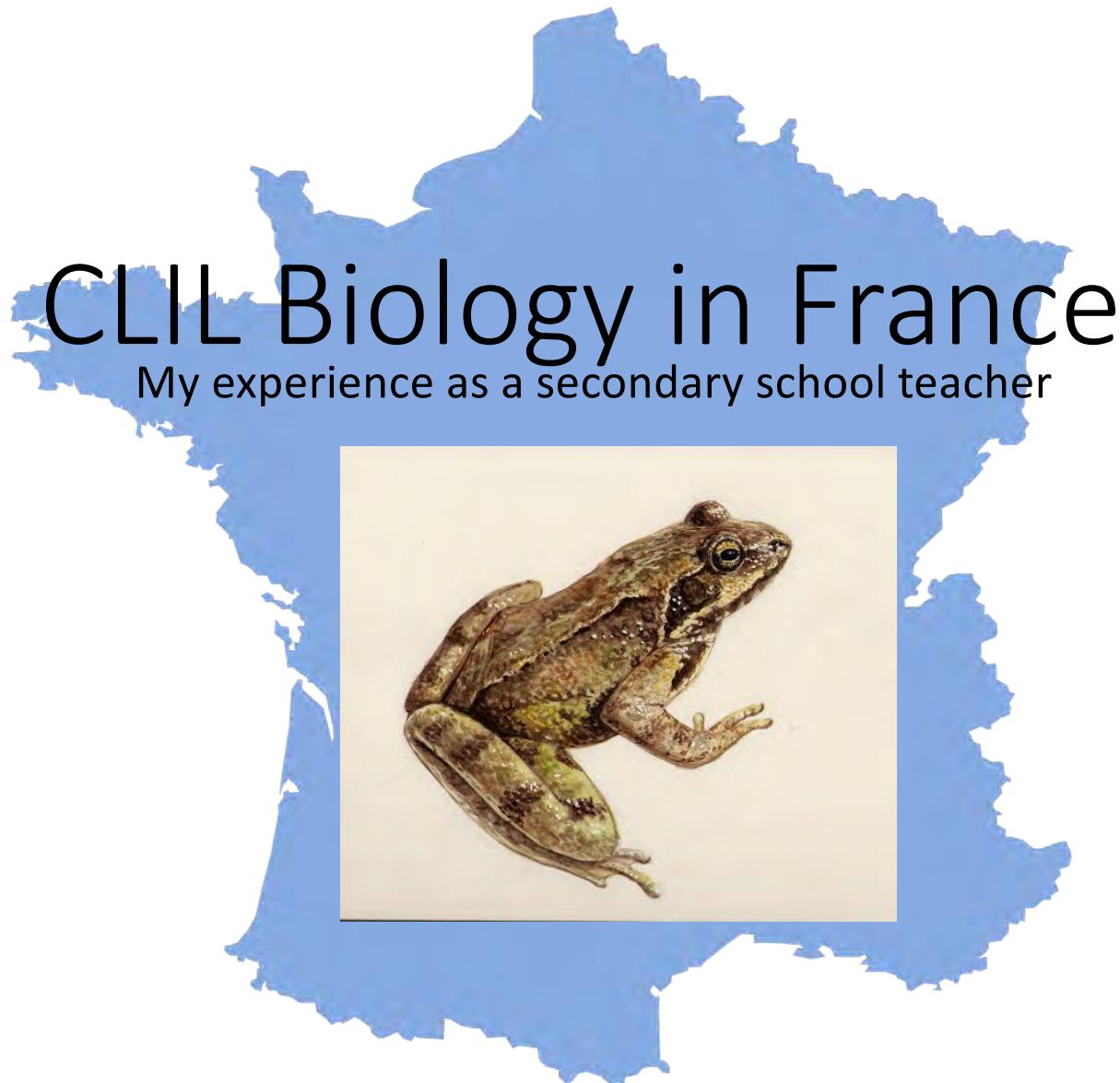


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« European or oriental languages Sections »

Additional courses for students, approx. 2h/week

2 hours/week

1 extra hour of
language with a
language teacher

1 hour of another
subject, taught
through a language
other than French

« Non-linguistic subject » !
= *Discipline non linguistique*
= *DNL*

« European or oriental languages Sections »

Since 1992

>2000 secondary schools

10% of students in upper
secondary schools in 2015

Languages

- German
- English
- Spanish
- Italian
- Portuguese
- Russian
- Arabic
- Chinese
- Japanese
- vietnamese

Subjects (« DNL »)

- History and geography
- Life and Earth science
- Mathematics
- Physics and Chemistry
- Economics
- ...

Aim of the European or Oriental Language Sections (EOLS)

« Les développements de la construction européenne, l'ouverture internationale croissante des économies, la multiplication des échanges culturels, élèvent désormais au rang d'impérieuse nécessité la maîtrise d'une ou plusieurs langues vivantes et rendent souhaitable la formation du plus grand nombre d'élèves à un niveau proche du bilinguisme, assorti d'une connaissance approfondie de la culture des pays étrangers. »

Circulaire 92-234 du 19 août 1992
Education nationale et Culture :
Cabinet du ministre.

« The developments of the European construction, the increasing opening of international economies, the increasing number of cultural exchanges, make it henthforth an imperious necessity **to master one or more languages**, and make it desirable to train the highest number of pupils at a level close to bilingualism, accompanied with **a deep knowledge of the culture** of foreign countries ».

How did I get the opportunity/position to teach CLIL ?

- I got a certification to teach in another language
- I applied to a job that required this certification

Only subject teachers teach CLIL
in French « European sections »

2002-2016 : a drift in CLIL practices in the « European sections »

2002 Focus on science and specific vocabulary

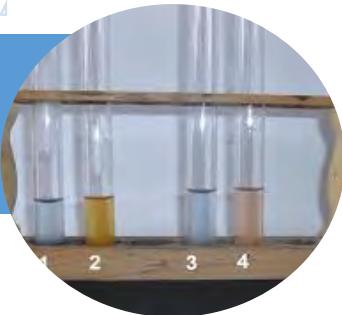
Slow drift in the discourse of the education inspectors

2016 Focus on « culture », more no-strictly-scientific activities

Possible reasons for the drift

- The number of pupils affects the possible use of a science classroom
- The number of pupils increases
- Inspectors insist the students mustn't be assessed twice in the subject = pupils a bit weak in science shouldn't be penalised in their CLIL assessment
- It has become easier to find interactive games, videos, interviews to nourish a course outside a science classroom.

Science classroom



Final assessment



Diversity of media



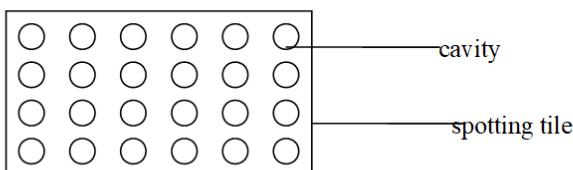
Example of two ways to teach enzymes with CLIL

*- For a pH around 4-5, first dilute a drop of hydrochloric acid (HCl) into 3 mL of water (in a third tube), mix gently, and then add a drop of this solution to your tubes. Then use pH paper to check the pH. (If the pH is not correct, try again, diluting the HCl more or less.)

*Be careful while manipulating these acids or bases. Wear plastic glasses. Wash your hand immediately after a contact.

4. Draw a suitable result table.

5. Put a drop of iodine solution into each of the cavities on two spotting tiles :



One spotting tile will be for your test tube, the other for your control tube.

6. At $t = 0$, add 0.5 mL of amylase solution in your **test** tube. (it's expensive ! Don't spoil it !) Add the same amount of distilled water in your control tube. Stir each one with its own glass rod.

~~7. At one or two minutes intervals (and then four to five minutes intervals)~~, check **each tube** to see if it still contains starch. Do this by dipping a **clean** glass rod into the tube, and then into a spot of iodine solution.

Stop the experiment after 30 minutes.

Instructions adapted from *Biology*, Mary Jones and Geoff Jones, Cambridge University Press

Making use of enzymes

Enzymes are used in biological washing powders.

Biological washing powders contain enzymes, as well as detergents. The detergents help greasy dirt to mix with water, so that it can be washed away. The enzymes help to break down other kinds of substances which can stain clothes. They are especially good at removing dirt which contains coloured substances from animals or plants, like blood or egg stains.

Some of the enzymes are proteases, which catalyse the breakdown of protein molecules. This helps with the removal of stains caused by proteins, such as blood stains. Blood contains the red protein haemoglobin. The proteases in biological washing powders break the haemoglobin molecules into smaller molecules, which are not coloured, and which dissolve easily in water and can be washed away.

Some of the enzymes are lipases, which catalyse the breakdown of fats to fatty acids and glycerol. This is good for removing greasy stains.

The first biological washing powders only worked in warm, rather than hot water, because the proteases in them had optimum temperatures of about 40 °C. However, proteases have now been developed which can work at much higher temperatures. These proteases have often come from bacteria which naturally live in hot water, in hot springs. This is useful, because the other components of washing powders - which get rid of grease and other kinds of dirt - work best at these higher temperatures.

Biology, Mary Jones and Geoff Jones, Cambridge University press, 1995.

- Underline the sentences which explain why enzymes are useful in washing powders
- The first biological washing powders were used at 40 °C. It was not satisfying because detergents work better at 60°C. How was this problem solved ?

Vocabulary

washing powder : lessive en poudre

Greasy : gras

Dirt : saleté

To stain : tacher

A stain : une tache

Fats : les graisses

Fatty acids : acides gras

To remove : enlever

Cold < Warm < hot

A spring : une source

Example of a lesson plan on cancer

Lesson plan : cancer : causes and treatments
listening reading writing talking

Title	Main idea	Resource	Activity	vocabulary
1 Example of the skin cancer: a) prevention campaign	it's rare but young people can be affected by cancer Skin cancer is mainly due to UV exposure Prevention	lesson plan from govt. student presentation	student's presentation	sunburn exposure to UV to protect so from prevention campaign to have cancer
b) what normal skin cells do	different layers one layer divides a lot	BBC video	listening comprehension	layer dermis, epidermis flask cover
c) basal cell carcinoma	UV, burns, scars, ulcers damage the skin and can provoke cancer = genetical aspect : fair skin	Patient information leaflet from British Association of Dermatologists	read, memorize and cross questions in a doctor patient role game	leaflet numbs awkward vessels burn, scar, scab, fickle, mole, scale rodent pimplas surgery cure treat clothing, sunscreens diagnosis/ps to be aware of
2. General properties of cancer cells	immortality, different metabolism, different shape, different properties in culture	Biochemistry, voet & Voet,	student's presentation, picture/label matching	to differ from rounded immatural rate, consumption
3. Cancer causes	environmental and genetical factors: uncontrolled mitosis	www.cancerquest.org abschools.org.uk	prepare a speech where they expose environmental and	mutated uncontrolled heritable

- Tip :

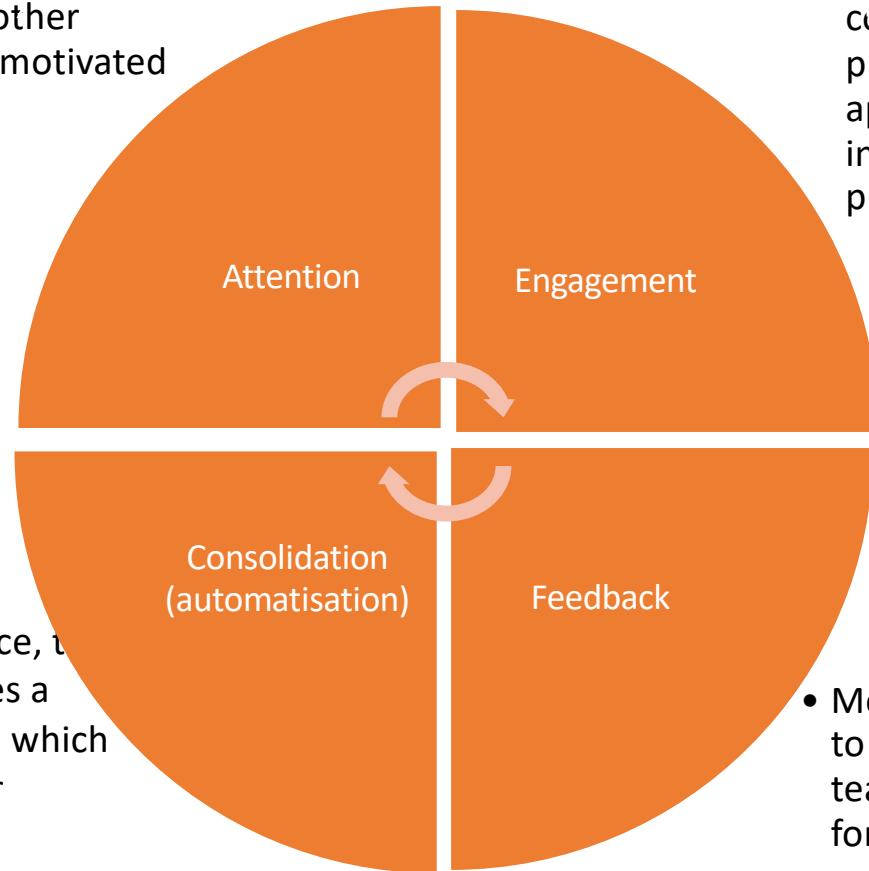
First find a valuable document.
Then get inspired by this resource to design your activity.

Why I think CLIL is a good educational approach

CLIL offers a learning environment that seems to fulfill the conditions of a good memorisation.

Focused on science, the language becomes a secondary target, which could be good for automatisation.

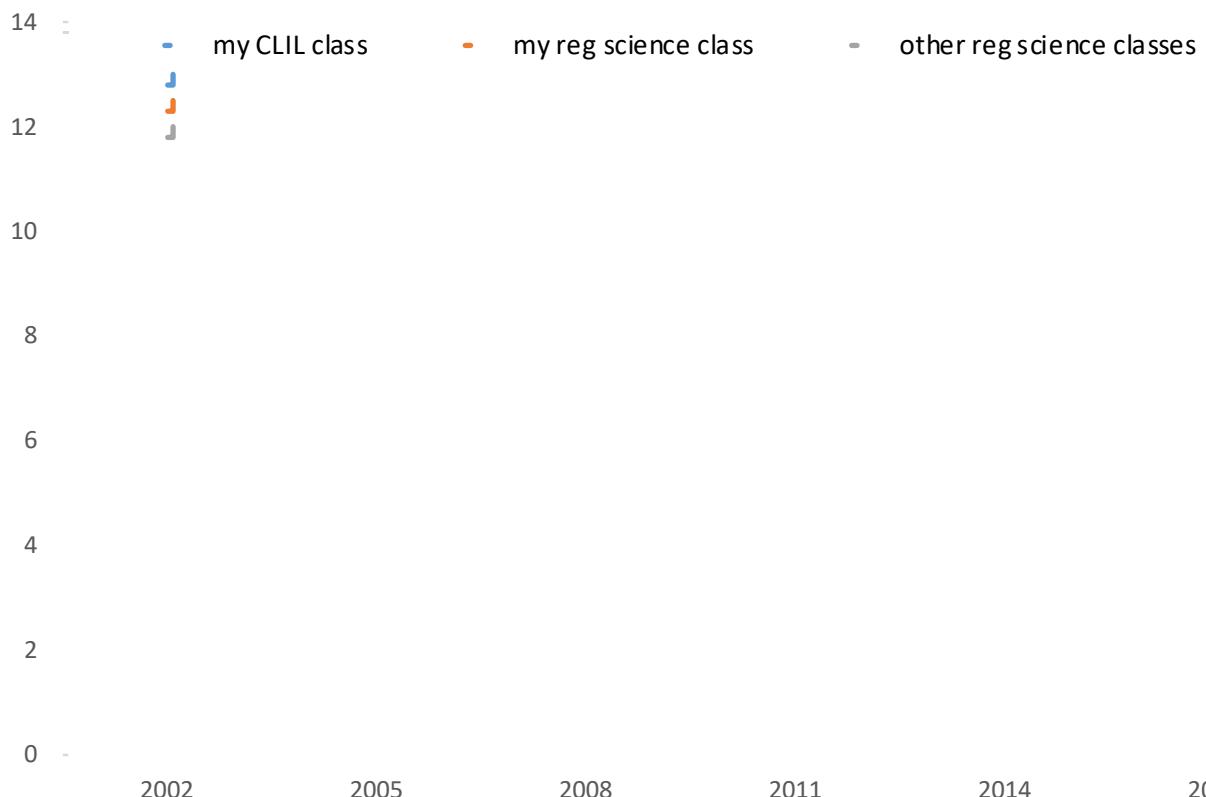
- Attention is triggered by the use of another language... IF motivated students



- Activities implying collaboration or practical activities ; appeal of international projects
- More opportunities to get feedback, from teacher, other pupils, foreign partners

Impact of Clil on my teaching style

Diversity of class activities



These are subjective, a posteriori curves !

Teaching CLIL gave me some advance and confidence in the implementation of multiple forms of classroom activities.

How CLIL practices transferred to my other classes

Thank you !

Suzanne.Dijon@ac-orleans-tours.fr

Question : How many students are there in a class ?

Answer : Usually, for CLIL, around 24.

I've had less sometimes, which enabled me to go in a lab room. I've had more, up to 30.

Computer rooms are very useful, for students to access online ressources.

I also used the « language lab » in my former school, where students were able to listen or record.

Q. Do the students already know the topic you teach, that is, is it covered in French before ?

Contrary to was done in the first years, nowadays the DNL (clil) class is an elective module. This implies that all pupils have the entire curriculum taught in French in their « Life and Earth Science » course (I can be the teacher there or it can be a colleague).

A difficulty in the articulation of the DNL with the regular science class is that my pupils can belong to different forms, have different teachers who do not start with same topic for various reasons. Sometimes some students are already familiar with immunology, and some are not !... It is not easy then, but a nice opportunity for peer teaching !

Q. How much content do you have to teach with CLIL and how do you chose the topics ?

In the CLIL class I'm not supposed to teach the entire curriculum (which is lucky because I have about a third of the time allocated for the regular class). A third of the content is a proportion that has been proposed.

It would not be interesting for students to have content covered twice, especially since many students in the CLIL class are rather bright.

We discard the most complex biological and geological phenomena. We usually :

- **choose topics that are peripheric to those in the curriculum**, or their continuation

Examples :

- recall what enzymes are, then study what their USES are
- study contraception and see some cultural differences
- instead of the features of ocean ridges (covered in French), we study life near the hot vents around these ridges.

- **Teach the same concept but through another example**

example : Ehlers Danlos syndrome, a rare collagen defect, instead of the classical sickle cell disease to teach heritable disorders.

- **Address an issue that is only quickly overseen in the regular lessons**, for instance « mass extinctions » or « doping ».

This shows that DNL is a space of freedom I have in no other course (freedom comes with a lot of choices to make and thinking, doesn't it ?).

Q How do you assess CLIL ?

Let's start with the end (after 3 years of CLIL).

The **final assessment -students are 17 or 18-** is an oral exam. Each student individually has a 20 min exam in front of two teachers, one a language teacher, one a CLIL teacher. The student is given a short text, or text + picture, unknown to him. He has a 20 min preparation time.

The first 10 minutes of the interview, the students has to « demonstrate his understanding of the main ideas » and to show he can relate it to his scientific culture and general culture. At the end of the continuous speech the teachers ask questions to help the student develop his idea or to offer him

a chance to correct any mistake. The question should not be too deep in the scientific field (which is very difficult to define, and this is the matter of endless and repeated debates in pre- and post- exam commissions).

The 10 next minutes, the student gives the teachers a list of activities that were carried out in the european section (trip, online exchange, paper writing, science fair...). An open dialogue starts about the activities, what they consisted of, and meta-cognitive considerations.

Now, during the shool years, you can imagine I can not interview students this way ! So all kinds of assessments exists. I will send a few examples in a next mail. It ranges from vocabulary questions, to elaborate papers, or debates, or oral group reports.

N.B. : As Do Coyle mentioned, in France, marks are out of 20. On way to show CLIL is different is to use another system. I've used A to E letters for years. Students found it very exotic and were excited about it. (Now it is not as exotic as it was because more and more, skills are assessed one by one with levels like 1,2,3, or Aquired/not acquired/on the way... but the marks out of 20 still hold for the final exams, or term reports).