The secrets of Periodic table of elements: Bioluminescence.

El Gegant del Rec School
Magalí Masó i Ribera

Generació Plurilingüe (GEP)

Year 2

2018-2019

Identification of the GEP project:

Title	"The secrets of The Periodic Table of Elements: Bioluminescence".
Authorship	Magalí Masó i Ribera
School	El Gegant del Rec
Students' CEFR Level (A1, A2...)	-
Grade	3rd Grade
Content area(s)	Science
Number of sessions (4, 6 or 9)	4
Teacher(s) involved	Ingrid de la Barrera - "The secrets of the Periodic Table of Elements: Leonardo da Vinci" (6th Grade). Davinia Díaz - "The secrets of the Periodic Table of Elements: Prehistory" (4th Grade). Magalí Masó - "The secrets of the Periodic Table of Elements: Bioluminescence" (3rd Grade).
Key words	-

1. OUR PROJECT

Introduction:

The most immediate difficulty we found when we started this project was that the three teachers involved in the course are implementing a CLIL in different levels (Primary 3, 4 and 5) and from different areas (Art and Science). We had been asked to design a common PBL, and at the beginning it looked that it was impossible to find a common thread to link our works.

After a few weeks of hesitation, we remembered this is the international year of is the Periodic Table of Elements and that it is the main project of our center this scholar year. The periodic table of elements would help us to put our tasks into a relationship.

In my case, I will focus on Bioluminescence, as fireflies appeared one day in a reading and students were so curious about these insects.

I will start the project creating a special atmosphere in the classroom, as if it was a forest at night. I will turn off the lights, I will light an incense stick, I will play some jungle sounds music and I will ask students to close their eyes and relax. After some minutes, I will ask them to open their eyes, I will imitate the flight of fireflies using a flashlight and I will ask them to guess what animal I am representing. After that, I will project a nice and relaxing video called "**Firefly experience**".

Driving question:

Why do fireflies glow?

Final product:

Big poster collecting all the information.

2. GOALS	2. HOW DO YOU KNOW STUDENTS ARE MAKING PROGRESS? (assessment criteria)
1. Discover why fireflies glow.	1.1. They can describe why bioluminescence happens.
2. Describe how bioluminescence works.	2.1. They can describe how bioluminescence happens in simple chemical terms. 2.2. They can identify the chemical elements of the Periodic Table of Elements involved in this process,
3. Identify the main characteristics of fireflies' life.	3.1. They can explain the reproduction of fireflies. 3.2. They can explain the nutrition of fireflies.
4. Share the information among groups and with an audience (4th graders and 6th graders in this case).	4.1. They are able to create a poster showing the discoveries. 4.2. They are able to design and perform an oral presentation of the topic.

3. CURRICULUM CONNECTIONS
SPECIFIC COMPETENCES AND KEY CONTENTS

Subject-matter curriculum		Foreign language curriculum	
Specific Competences	**Key Contents**	**Specific Competences**	**Key Contents**
<u>Our world Skill</u>: **Competence 1:** Ask oneself questions about the environment, use data search strategies and analyze results to find answers.	• The design of the search: phases, criteria, control of variables, sources of information ... • The analysis of results. • The elaboration of conclusions and synthesis. • Communication of results: oral, written and graphic. • The hypothesis formulation, the anticipation of answers,	**<u>Oral Communication Skill</u>:** **Competence 2:** Plan and produce oral short and easy texts taking into account the communicative situation. **<u>Reading comprehension Skill</u>:** **Competence 4:** Use strategies to obtain meaningful information to understand written texts. **Competence 5:** Interpret the visual, discursive and linguistic features of a text to understand it.	**<u>Oral Communication Skill</u>:** • Identification of basic vocabulary related to a specific topic, with visual support. • Strategies for planning and structuring oral expression: use of sources, selection of information, drawing up scripts, scripts and graphic organizers. • Non-verbal elements: gesture and use of

	the scientific curiosity. • Data collection: rigor and reliability. • Scientific questions.	**<u>Written expression Skill</u>:** **Competence 7:** Plan simple texts based on the identification of the most relevant elements of the communicative situation. **Competence 8:** Produce simple texts with visual supports.	complementary visual support. **<u>Reading comprehension Skill</u>:** • Printed and digital support. • Comprehension strategies: make hypothesis, verification, identification of key words… • Topic, main idea and secondary ideas. • The expository text. • The instructive text. • Textual structure based on typology. **<u>Written expression Skill</u>:** • Evaluation of the information. • Lexical repertoire and expressions related to the

			topic. • Strategies for planning: generation, organization and selection of ideas. • Resources for planning: ideas organizers (scripts, schematics), visual organizers, conceptual maps… • Use of digital resources for the generation, organization and selection of ideas. • Printed and digital support.

4. 21st CENTURY COMPETENCES			
Collaboration	✓	Information, media and technology	✓
Communication	✓	Leadership & Responsibility	✓
Critical Thinking and Problem Solving	✓	Initiative & Self-direction	✓
Creativity & Innovation	✓	Social & Cross-cultural	
Others:			

5. KEY COMPETENCES			
Communicative, linguistic and audiovisual competence	✓	Digital competence	✓
Mathematical competence		Social and civic competence	
Interaction with the physical world competence	✓	Learning to learn competence	✓
Cultural & artistic competence		Personal initiative and entrepreneurship competence	✓

6. CONTENT (Knowledge and Skills)

CONTENT-RELATED KNOWLEDGE	CONTENT-RELATED SKILLS
The content-related knowledge we are going to work is: • Why do fireflies glow? • How does bioluminescence work? • The reproduction of fireflies. • The nutrition of fireflies. Moreover, we have a content-related knowledge in common with primary 3 and 4, which are the elements from periodic table used on our projects.	The content-related skills help students learn through critical thinking, creative thinking, communicating and collaborating. To be more specific, in this project we are going to focus our attention to the following learning skills: • Goal setting, that requires the group to analyze the situation and clearly state an achievable objective. • Team building and cooperatively work to achieve the goal. • Identifying and explaining the main characteristics of fireflies' life. • Listening actively to a story and to the classmates. • Using technology to work, concretely Kahoot and Popplen and Plickers. • Sharing information, exemplifying, relating facts and ideas, coming to agreements about the project. • Participating actively. • Accepting different opinions. • Interacting and helping other students.

7. REFERENCES

BOOKS

"HOW TO SURVIVE AS A FIREFLY" *(Kristen Foote & Erica Salcedo)*

WEBSITES

"10 FUN FACTS ABOUT FIREFLIES"(used to make the Kahoot)

http://mentalfloss.com/article/51971/10-fun-firefly-facts

THE FIREFLIGHT LIFE CYCLE

https://www.thoughtco.com/life-cycle-fireflies-lightning-bugs-1968137

FIREFLY INFORMATION FOR KIDS

https://www.mrnussbaum.com/insects-play/firefly/

VIDEOS

PRESENTATION VIDEO "FIREFLY EXPERIENCE" (nature and lights)

https://www.youtube.com/watch?v=k72jGJTC_3o

"WHY DO FIREFLIES GLOW?" (group 1)

https://www.youtube.com/watch?v=Ts7JIS3M2S4

"HOW DO FIREFLIES GLOW?" (group 2)

https://www.youtube.com/watch?v=s5lidSB2Y1E

BANK OF PICTURES

PIXABAY

https://pixabay.com/

ICT TOOLS

KAHOOT

https://kahoot.com/

POPPLET

http://popplet.com/

PICKLERS

https://www.plickers.com/library

8. COMMENTS (optional)

To understand a bit more about this PBL project about FIREFLIES it is important to take into account two main facts:

- It's part of the Interdisciplinary School Project about the Periodic Table of Elements.
- We are three teachers involved in GEP subjects:

  Ingrid de la Barrera - "The secrets of the Periodic Table of Elements: Leonardo da Vinci" (6th Grade).

  Davinia Díaz - "The secrets of the Periodic Table of Elements: Prehistory" (4th Grade).

  Magalí Masó - "The secrets of the Periodic Table of Elements: Bioluminescence" (3rd Grade).

To work together on this project, the pupils are going to prepare oral presentations in order to expose their discoveries about the secrets of the periodic table to other grades.

I also would like to mention that the group work is heterogeneous, and pupils with Special Needs are going to be helped by other pupils and by the teacher, who will guide their work by giving them extra help.

Skills: R: reading , S:speaking, L: listening, W: writing, I: Interaction
Interaction: T-S: teacher-student, S-S: student-student, SG: small groups, WG: whole group, S-Expert, S-World
Assessment: PA: Peer assessment, SA: Self-assessment, TA: Teacher assessment, AT: Assessment tools

10. UNIT OVERVIEW

Session	Activities	Timing	Skills	Interaction	ICT	Assessment
1	**The flight of fireflies.** Creation of a relaxed ambient and expectation. Presentation video.	10 min.	S, L, I	T-S, WG	Music Video	SA, TA Rubric for homework
	Who knows more about fireflies? Quiz to activate previous knowledge.	25 min.	R, L, I	T-S, SG, WG	Kahoot	
	What do we want to know about fireflies? Sharing knowledge in pairs.	10 min.	S, L, I	S-S	-	

	Let's put it together! Sharing knowledge with the whole group.	15 min.	R, S, L, I	T-S, WG	Popplet	
	Assessment. Rubric for homework.	5 min.	R	-	-	
2	**Storytelling: How to survive as a firefly** *(Kristen Foote & Erica Salcedo)*.	40 min.	L	T-S	Projected book	SA, TA Rubric for homework
	Giving out the work. - Group 1: Why do fireflies glow? - Group 2: How do fireflies glow? - Group 3: Reproduction of fireflies. - Group 4: Nutrition of fireflies.	20 min.	S,L, I	T-S, SG, WG	Popplet	

3	Different activities for each group with the aim of filling a table with some information. - **Why do fireflies glow?** Video + listening comprehension. Why do fireflies glow? - **How do fireflies glow?** Video + listening comprehension. How do fireflies glow? - **Reproduction of fireflies:** Jigsaw reading. - **Nutrition of fireflies:** Jigsaw reading.	40 min.	R, L, I	T-S, SG	Videos	SA, TA Rubric integrated on the worksheets
	Give feedback to other groups. Each group will communicate their discoveries to others.	20 min.	S, L, R, I	SG, WG	Popplet	
4,5 and 6	**We are journalists.** The members of the groups will be given a role to work cooperatively and complete the final product.	150 min.	S, R, W, I	T-S, SG, S-S	-	-

	Final assessment. We will use the application Plickers to assess: • The PBL. • The teacher. • The students. • the group work. • The materials.	30 min.	R, L, I	T-S, SG, WG	Plickers	SA, TA Picklers quiz

11. SESSION PLANNING

SESSION 1: PRESENTATION

Objectives of the session:

- Motivate students for the topic.
- Activate previous knowledge.
- Focus on what we want to know.

Content-obligatory language for the session:

VOCABULARY:

- Mammals, birds, insects, spiders.
- Flies, butterflies, bettles.
- Life processes: nutrition, reproduction, interaction.

STRUCTURES:

- Use of question words: how, what, which...
- Use of auxiliary verbs can and do.

Activities

include : Name and description; Assessment tool (if any); Material (including language support)

1.1	**The flight of fireflies.** I will start the project creating a special ambient in the classroom, as if it was a forest at night. I will turn off the lights, I will light an incense stick, I will play some jungle sounds music and I will ask students to close their eyes and relax. After some minutes, I will ask them to open their eyes, I will imitate the flight of fireflies using a flashlight and I will ask them to guess what animal I am representing. After that, I will project a nice and relaxing video called "Firefly experience". **Firefly experience**	10 min.	S, L, I	T-S, WG	✓	SA, TA
1.2	**Who knows more about fireflies?** The next activity has been designed through *Kahoot* application. **Who knows more about fireflies?** Students will be distributed by groups of 3 or 4, formed at random, and these will participate in a quiz competition. The questions they will be asked have been specially designed with two objectives. • Activate previous knowledge of students on the topic. • Provide students with some vocabulary and structures they will need for the project The answers of the quiz will be commented one by one after the competition.	25 min.	R, L, I	T-S, SG, WG	✓	

1.3	**What do we want to know about fireflies?** After warming up engines through Kahoot, I will ask students to speak about the about the topic in pairs. I will write down on the blackboard the question: *"What do we want to know about fireflies?"*. I will use the Kagan technique *"Stand Up, Hand Up, Pair Up"* to make the pairs.	10 min.	S, L, I	S-S		
1.4	**Let's put it together!** Once students have spoken about the presented question with a partner, it will be the time to put our proposals in common. With this aim, we will use the application *Popplet* and the teacher will collect all the opinions on a concept map. Here you are an example of what I consider I should expect from my students, more or less: **Example of Popplet 1** And here there is an example of how would I try to organise their proposals in order to get 4 different blocks of contents to form 4 groups of work. **Example of Popplet 2**	15 min.	R, S, L, I	T-S, WG	✓	
1.5	**Assessment.** Students will be given a rubric to fill in at home, for homework. **Assessment rubric session 1**	5 min.	R	-	-	

SESSION 2: HOW TO SURVIVE AS A FIREFLY.

Objectives of the session:

- Listening actively to a story.
- Discover fireflies' life through storytelling.
- Giving out the work to the groups.

Content-obligatory language for the session:

VOCABULARY:

- Metamorphosis.
- Egg, larva, pupa, adult.
- Slug, snail, worm.
- Bioluminescence, luciferin, luciferase, oxygen.

STRUCTURES:

- Use of instructive text.

Activities

include : Name and description; Assessment tool (if any); Material (including language support)

2.1	**Storytelling: How to survive as a firefly.** On the first part of this session I will switch off the lights of the classroom and I will play with a flashlight to make my pupils find the book we will read. Actually, to make the book more accessible to everybody, I've scanned it and I will tell them the story using the projector. **How to survive as a firefly (Kristen Foote & Erica Salcedo)**	40 min.	L	T-S	✓	SA, TA
2.2	**Giving out the work.** On the second part of the session we will need to make 4 groups (of 6 pupils in this case). The grouping will be easy: I will take advantage of the heterogeneous groups of students with whom I have organized the tables in the classroom. This way, I make sure they can help each other. I will present them the second *Popplet* of the last session, explaining how I will have put their proposals in order. Probably, it will be more difficult to come to an agreement about the distribution of the tasks. If they do not reach an agreement, we will have to do decide it at random. The four topics to work on will be the following: 1. Why do fireflies glow? 2. How do fireflies glow? 3. Reproduction of fireflies. 4. Nutrition of fireflies.	20 min.	S,L, I	T-S, SG, WG	✓	
2.3	**Assessment.** Students will be given a rubric to fill in at home, for homework.	5 min.	R	-	-	

	Assessment rubric session 2					

SESSION 3: LET'S INVESTIGATE!

Objectives of the session:

- Solve some activities of listening comprehension and reading comprehension in groups to focus on the topic.
- Work collaboratively in groups.
- Give feedback to other groups.

Content-obligatory language for the session:

VOCABULARY:

- Mate, taste, predator.
- Bioluminescence, luciferin, luciferase, oxygen.
- Metamorphosis, soil, chamber.
- Jaw, poison.
- Egg, larva, pupa, adult.
- Slug, snail, worm.

STRUCTURES:

- Use of "to do something to".
- Use of present simple tense.
- Phrasal verbs: to be involved in, to turn into, to let something rest.

	Activities *include : Name and description; Assessment tool (if any); Material (including language support)* .					
3.1	I have planned a different activity for each group, with the aim of relating facts and ideas and collecting the information needed. - **GROUP 1: Why do fireflies glow? Vídeo Why do fireflies glow? + G1 - Listening worksheet.** - **GROUP 2: How do fireflies glow? Vídeo How do fireflies glow? + G2 - Listening worksheet.** - **GROUP 3: Reproduction of fireflies: G3 - Jigsaw reading: The life cycle of fireflies.** - **GROUP 4: Nutrition of fireflies: G4 - Jigsaw reading: Steps to finding food.** All the activities include a glossary with vocabulary and expressions to facilitate the comprehension, as well as an assessment rubric to complete at the end of the session.	40 min.	R, I	T-S, SG	✓	SA, TA
3.2	**Give feedback to other groups.** We will keep the last 20 minutes of the session to let each group communicate the others their discoveries. The teacher will use the application *Popplet* and collect the information on a common concept map.	20 min.	S, L, R, I	SG, WG	✓	-

SESSIONS 4, 5 and 6: FINAL PRODUCT AND ORAL PRESENTATIONS.

Objectives of the session:

- Design and produce the final product.
- Give an oral presentation about the topic.
- Work cooperatively in groups.
- Give opinion and evaluate the whole PBL.

Content-obligatory language for the session:

VOCABULARY:

- Metamorphosis.
- Egg, larva, pupa, adult.
- Slug, snail, worm.
- Bioluminescence, luciferin, luciferase, oxygen.

EXPRESSIONS:

- Hello, Good morning, Good afternoon…
- Today we will talk about, We are here to present…
- Have you got any question?, Do you want to ask something?, Is everything clear?...
- We hope you enjoyed our oral presentation, Thank you for listening, Goodbye, See you soon...

	Activities *include : Name and description; Assessment tool (if any); Material (including language support)*					
4.1	**We are journalists.** We will continue working with the same groups of the last session. In all the groups we will give different roles to students, as if they were members of the team of a TV programme: 2 graphic designers, 2 script writers and 2 TV presenters. They will be the ones who decide democratically who is going to be who. They will all cooperate in all the tasks, but everyone will need to be responsible of his or her role. • The graphic designers will collect the information to make a poster as a final product. • The script writers will fill in the templates for the oral presentations. • The TV presenters will practice for the performance of the oral presentations. Each group will be given an **oral presentation template** with language support and a copy of the **book pages** they need to complete the information they collected last session. Students will also be provided with the material they need to make the poster and with a space on a big common surface.	150 min.	S, R, W, I	T-S, SG, S-S	-	SA, TA
4.2	**Final assessment.** We will use the application Plickers to assess: • The PBL. • The teacher.	30 min.	R, L, I	T-S, SG, WG	✓	

	• The students. • The group work. • The materials. **Final assessment**					

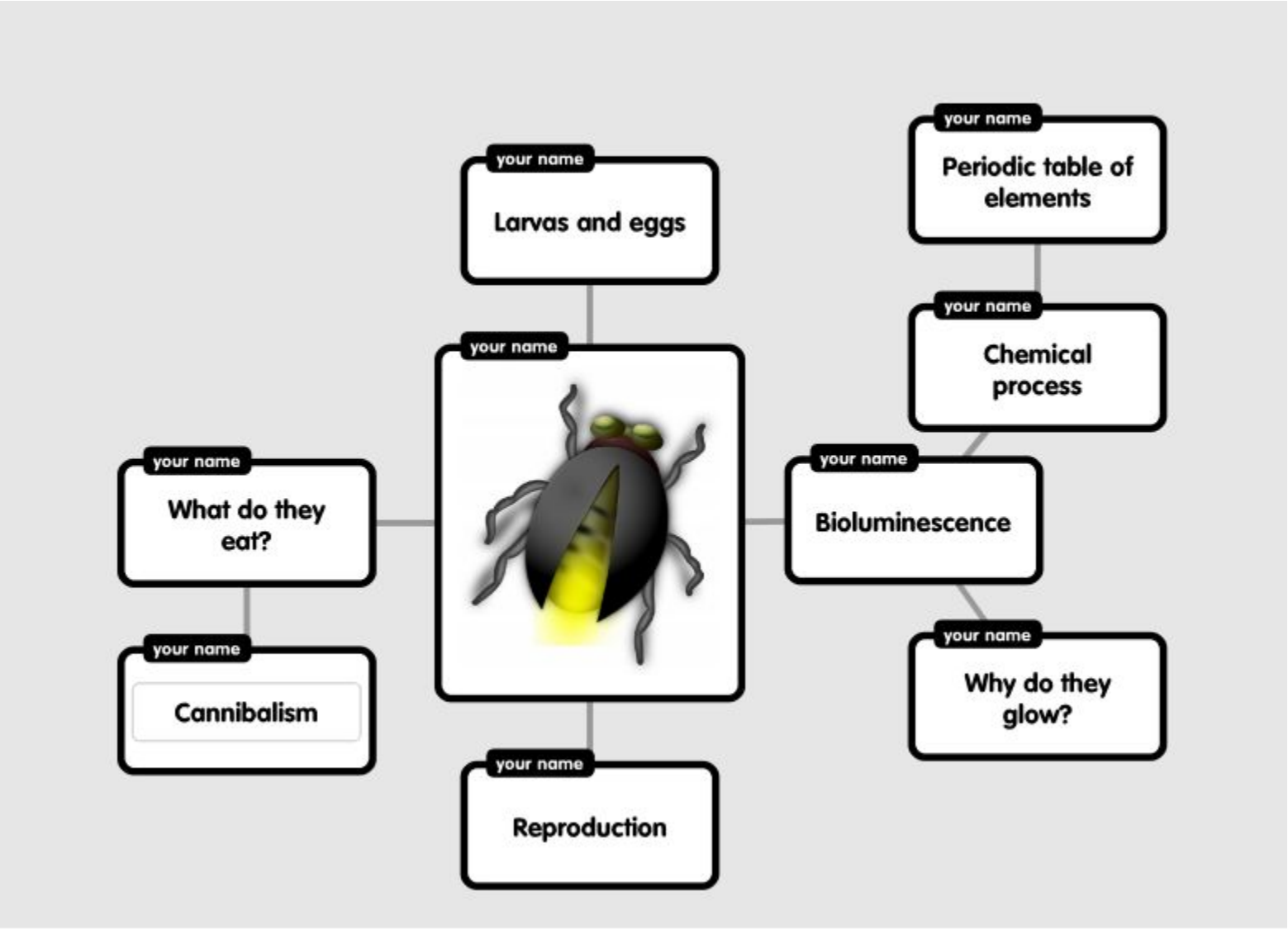
TEACHING MATERIALS SESSION 1

VIDEO: Firefly experience

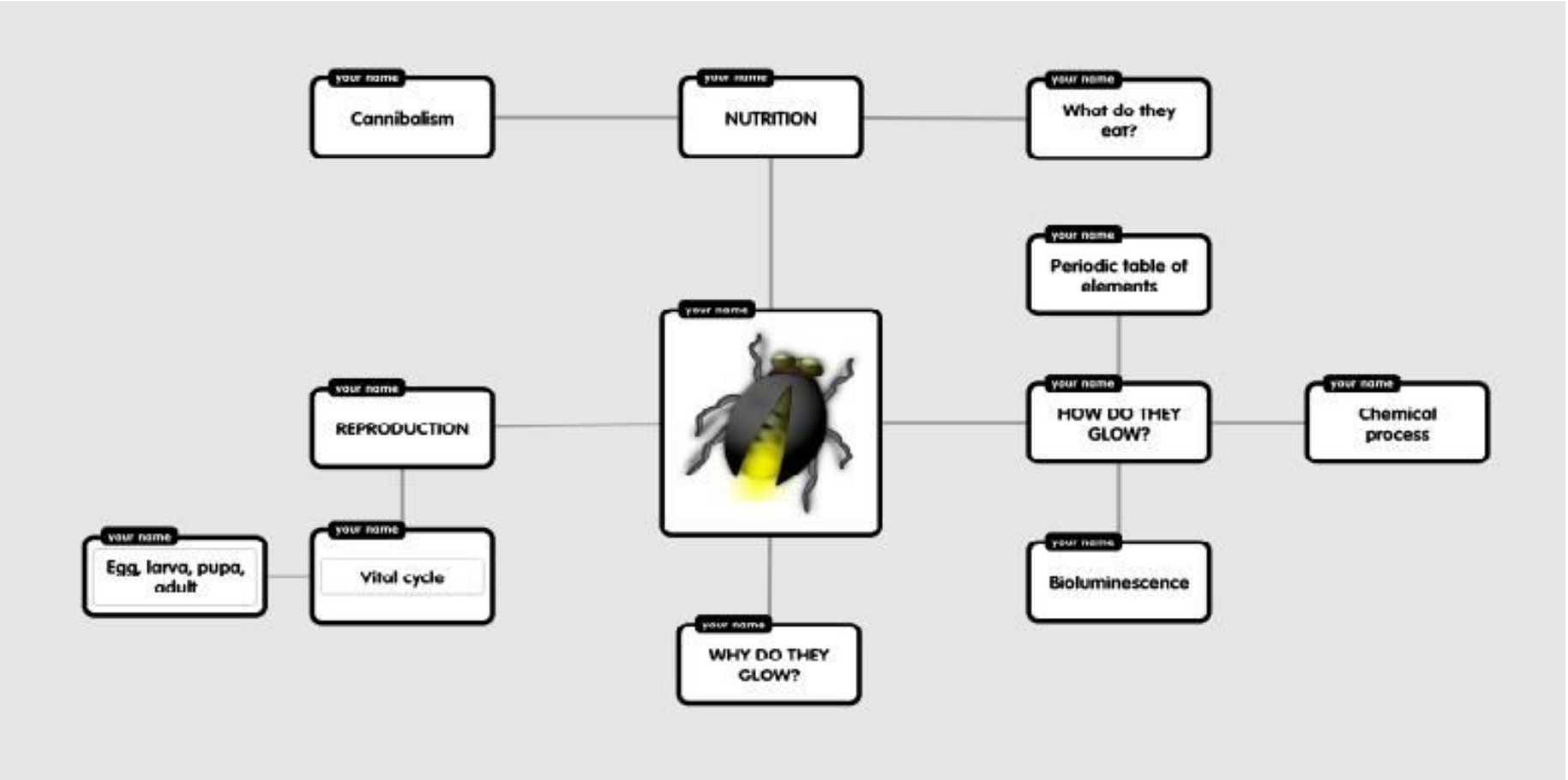
KAHOOT: Who knows more about fireflies?

WHO KNOWS MORE ABOUT FIREFLIES?

POPPLET 1:



POPPLET 2:



Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

FIREFLIES

ASSESSMENT SESSION 1:

Were the activities fun?		
Yes, a lot. 	Not much. 	Not at all. 

Did the teacher help you to understand?		
Yes, she did. 	More or less. 	No, she didn't. 

Did you work as a group?		
Yes, a lot.	Not much.	Not at all.

I listened carefully and I worked hard.		
I absolutely agree. 	I partly agree. 	I don't agree at all. 

Comments:

.....

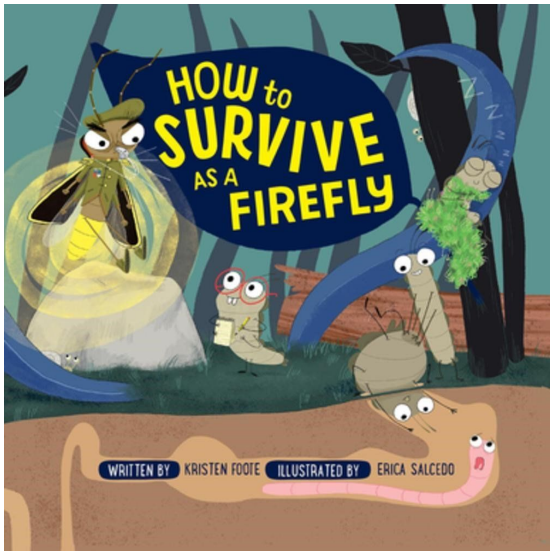
.....

.....

TEACHING MATERIALS SESSION 2

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

STORYTELLING: [How to survive as a firefly: Official book trailer]



FIREFLIES

ASSESSMENT SESSION 2:

Was the story fun?		
Yes, a lot. 	Not much. 	Not at all. 

Did the teacher help you to understand?		
Yes, she did. 	More or less. 	No, she didn't. 

Are you happy with the topic given to your group?		
Yes, a lot.	Not much.	Not at all.

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

I listened carefully to the story.		
I absolutely agree. 	I partly agree. 	I don't agree at all. 

Comments:

.....

.....

.....

TEACHING MATERIALS SESSION 3

VIDEO GROUP 1: Why do fireflies glow?

VIDEO GROUP 2: How do fireflies glow?

GROUP 1.

WHY DO FIREFLIES GLOW?

According to the video fireflies glow for two different reasons. Which of the following are correct? Copy them on the table below.

They glow to attract other insects and eat them. 
They glow to find a **mate** and reproduce.
They glow to **taste** bad and avoid **predators**.
They glow to illuminate the streets at night.

WHY DO FIREFLIES GLOW?

Reason 1:

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

Reason 2:

GLOSSARY:

Mate – The sexual partner of an animal.

Taste – The sensation of flavor produced in the mouth.

Predator – An animal that naturally eats another.

ASSESSMENT:

Was the activity fun?		
Yes, a lot. 	Not much. 	Not at all. 

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

Did we solve the activity by ourselves?		
Yes, we did. 	We did with help. 	We didn't solve it. 

Did we work as a group?		
Yes, a lot. 	Not much. 	Not at all. 

Now I can explain why fireflies glow.		
I absolutely agree. 	I partly agree. 	I don't agree at all. 

Comments:

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

GROUP 2.

HOW DO FIREFLIES GLOW?

Answer the questions below according to the video you watched. Tick the correct options.

HOW DO FIREFLIES GLOW?

1. How do fireflies glow?

- **<u>They glow using</u>** a **magic wand**.
- **<u>They glow using</u>** a **chemical reaction**.

2. What part of the body do they illuminate?

- **<u>They illuminate</u>** the head.
- **<u>They illuminate</u>** the lower abdomen.
- **<u>They illuminate</u>** the upper abdomen.

4. What chemical elements <u>are involved in</u> this process?

5. Who glows?

- Eggs.

• Lithium. • Luciferin. • Oxygen. • Luciferase. • Titanium. • Magnesium.	• Larvae. • Pupas. • Adults.

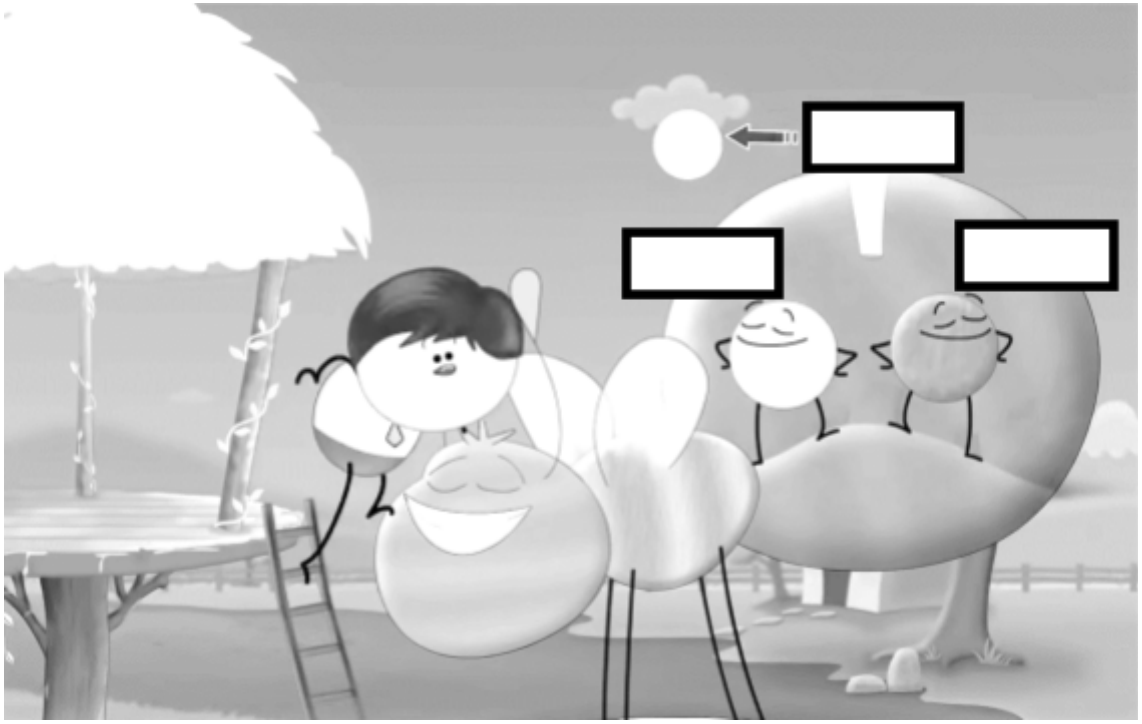
6. Is the light produced by fireflies hot?

- Yes, it is.
- No, it isn't. Almost all energy **is turned into** light.

WHO IS WHO ON THE PERIODIC TABLE OF ELEMENTS?

Write the names of chemical elements in the correct box.

1. Luciferin.
2. Luciferase.
3. Oxygen.



GLOSSARY:

Magic wand – Stick used in magic performances.

Chemical reaction – A process that changes the molecular structure of a substance.

To be involved in – To participate.

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

To be turned into – To convert.

ASSESSMENT:

Was the activity fun?		
Yes, a lot. 	Not much. 	Not at all. 

Did we solve the activity by ourselves?		
Yes, we did. 	We did with help. 	We didn't solve it. 

Did we work as a group?		
Yes, a lot. 	Not much. 	Not at all. 

LED CLIL~SI

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

Now I can explain how fireflies glow.		
I absolutely agree. 	I partly agree. 	I don't agree at all. 

Comments:

.....

.....

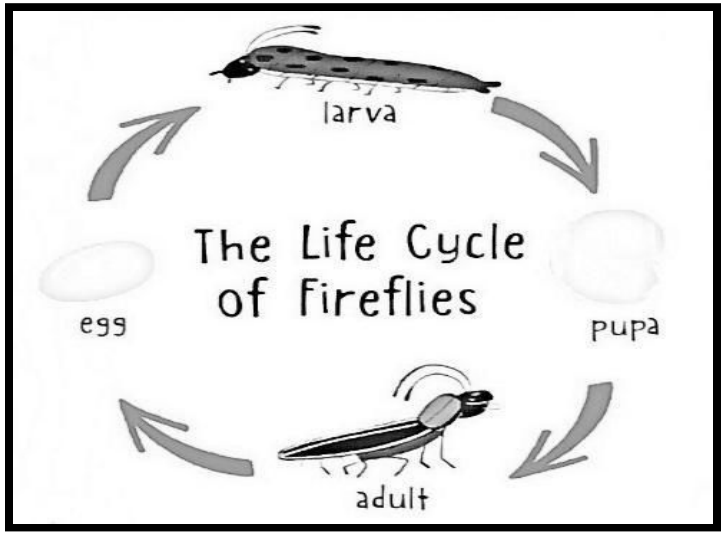
.....

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

GROUP 3.

REPRODUCTION OF FIREFLIES.

The statements of this text have been mixed up. Cut them and put them in order.



Larvae emerge from their eggs in late summer and live through the winter. They look like **worms** and they eat a lot. At night, they hunt **worms, snails**, **slugs**, and other insects.

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

When adult fireflies finally emerge, they have only one purpose: to reproduce. In fact, they don't even need to eat. The males fly low to the ground flashing a signal with the light on their abdomens, the females resting on vegetation answer with more flashes and they find a mate.

The firefly life cycle starts with an egg. In mid-summer, females deposit about 100 eggs on the **soil**. Firefly eggs are also bioluminescent.

When larvae are big enough, they make a **chamber** in the soil and they settle inside it to complete their **metamorphosis**. About ten days later, the adult fireflies are ready to emerge.

GLOSSARY:

Worm – Invertebrate long animal with soft body.

Snail – A slow-moving mollusk with an external shell.

Slug – Snail without shell.

Soil – Surface of earth in which plants grow.

Chamber – A room, a compartment or a closed space.

Metamorphosis – The extraordinary changes that some animals go through during the process of becoming adults.

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

STICK HERE YOUR JIGSAW READING

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

ASSESSMENT:

Was the activity fun?		
Yes, a lot. 	Not much. 	Not at all. 

Did we solve the activity by ourselves?		
Yes, we did. 	We did with help. 	We didn't solve it. 

Did we work as a group?		
Yes, a lot.	Not much.	Not at all.

LED CLIL~SI

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

Now I can explain the reproduction and the life cycle of fireflies .		
I absolutely agree. 	I partly agree. 	I don't agree at all. 

Comments:

.....

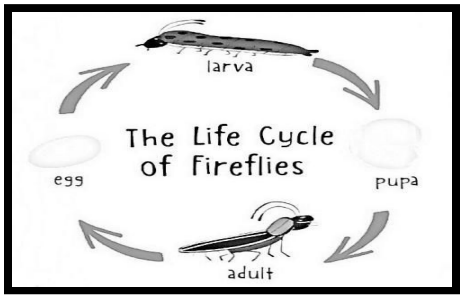
.....

.....

GROUP 4.

NUTRITION OF FIREFLIES .

Fireflies do not always look the same. They go through a metamorphosis and they change radically several times during their lifes. Fireflies go through 4 stages, but they only need to feed themselves while they are larvae. Nutrition is not the mission of pupas, adults or eggs.



The statements of this text have been mixed up. Cut them and put them in order.

Now, quick! Use your **jaw** and inject some **poison** into your victim to make him stop moving!

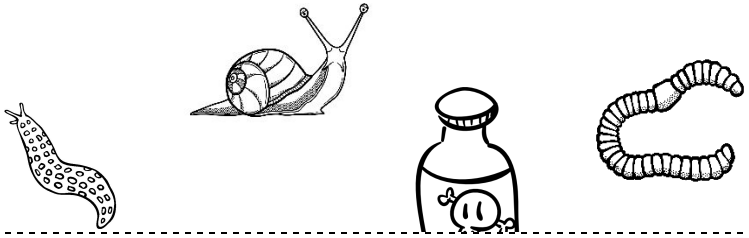
DIRECTIONS:

Look for a juicy **worm**, **snail**, or **slug**. Don't let him get away!

Bon appétit! Slurp up that **snail** soup, served in a shell!

INGREDIENTS:

- Snails.
- Worms.
- Slugs.



Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

- Poison.

Let it rest and the poison will also **turn him into** a liquid.

A NICE FIREFLY MEAL

GLOSSARY:

Jaw – Part of the skeleton that holds the teeth.

Poison – Substance that can kill a living thing.

Worm – Invertebrate long animal with soft body.

Snail – A slow-moving mollusk with an external shell.

Slug – Snail without shell.

Metamorphosis – The extraordinary changes that some animals go through during the process of becoming adults.

Let something rest (cooking) – To let a food cool or at low temperature before you serve it.

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

To be turned into – To convert.

STICK HERE YOUR JIGSAW READING

ASSESSMENT:

Was the activity fun?		
Yes, a lot. 	Not much. 	Not at all. 

Did we solve the activity by ourselves?		
Yes, we did. 	We did with help. 	We didn't solve it. 

Did we work as a group?		
Yes, a lot. 	Not much. 	Not at all. 

LED CLIL~SI

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

Now I can explain the nutrition of fireflies.		
I absolutely agree. 	I partly agree. 	I don't agree at all. 

Comments:

.....

.....

.....

TEACHING MATERIALS SESSIONS

4, 5 AND 6

Adapted from CLIL-SI 2015.
More information at: http://grupsderecerca.uab.cat/clilsi/

Name …… Date ……

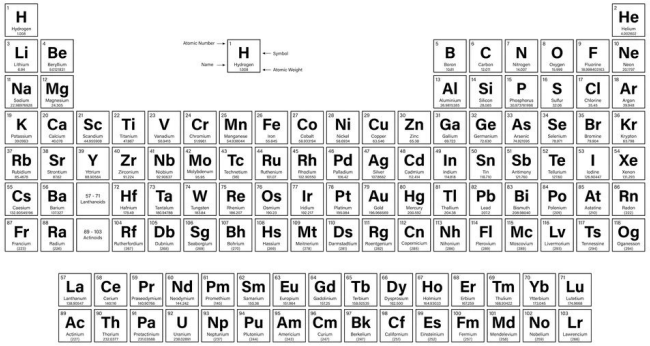
ORAL PRESENTATION TEMPLATE

GREETINGS AND TOPIC PRESENTATION	*Say hello to the audience and say what are you going to talk about.*
MEMBERS OF THE GROUP	*Present yourselves.*
BODY	*Describe the topic with the use of visual support.*
CHEMICAL ELEMENTS INVOLVED	*Explain what chemical elements are important.*
INVITE TO QUESTIONS	*Ask the audience if they have any questions.*

Adapted from CLIL-SI 2015.
More information at: http://grupsdererecerca.uab.cat/clilsi/

ENDING	*Say goodbye and thank you to the audience.*

Periodic Table of the Elements



LANGUAGE SUPPORT

GREETINGS AND TOPIC PRESENTATION	**MEMBERS OF THE GROUP**
Hello... Good morning...	Our names are... We are...

Good afternoon... Today we will talk about... We are here to present...	
INVITE TO QUESTIONS Have you got any question? Do you want to ask something? Is everything clear?	**ENDING** We hope you enjoyed our oral presentation. Thank you for listening. Goodbye. See you soon.

PLICKERS QUIZ: Final assessment