

CURRÍCULO CO



TEACHER'S LEARNING GUIDE- 2020

Family and Pets - 6° ano EFAF - 1° Volume

This Volume has activities to be developed during the first two months of the school year. Besides the Student's Learning Guide with directions in each activity (remember you can add or adjust the activities according to the needs of the group), you will find in the box below explanations about the approach / methodology as well as the skills / abilities needed to be developed by students aligned to Currículo Paulista and Base Nacional Comum Curricular. You will also find Adaptação Curricular para o estudante Surdo which brings important suggestions that will help you while preparing/adapting your lessons.

Adaptação Curricular para o estudante Surdo



Olá, professor! Este material traz sugestões de **adaptações curriculares** para o desenvolvimento das atividades para os alunos Surdos.

As adaptações estão identificadas em caixas de texto com títulos azuis e um ícone criado para este material que representa as identidades surdas, pois neste universo, temos estudantes que são seres individuais e compartilham da Língua de Sinais para se comunicarem e também adquirir uma segunda língua, neste caso, a Língua Inglesa.

Quando pensamos em adaptação curricular é necessário ter em mente que são ajustes realizados no plano de aula quanto ao objetivo, metodologia e avaliação. Ao preparar a aula, precisa-se de uma intencionalidade do professor para a turma e outra para o estudante com deficiência.

Diante disso, vamos refletir sobre um possível caminho a percorrer quando nos referimos ao ensino de língua estrangeira para estudantes Surdos:

- o Peça ao estudante que providencie um caderno para ser utilizado como banco de palavras.
- O Converse com o interlocutor sobre a função deste caderno. Durante as aulas, o interlocutor, orientado pelo professor, auxiliará o estudante na construção do conceito (significado e significante) de cada vocábulo em língua estrangeira, sendo registrado no banco de palavras, que ao longo do ano será utilizado como fonte de consulta para a realização de atividades.
- O Defina qual será o vocabulário enfatizado durante a aula. Separe o vocabulário por classe gramatical, a princípio inicie com **substantivos e verbos** e com o passar do tempo inclua as demais de acordo com a sua intencionalidade, **pronomes, adjetivos, advérbios e numerais**, (Cabe pontuar que em Libras usa-se poucas conjunções, preposições e artigos, pois estão incorporados às palavras que se referem).
- Ao longo da aula **defina com o estudante e o interlocutor** uma cor para a classe gramatical que estará em estudo, pois será utilizada no decorrer das aulas subsequentes.

- O estudante deverá pintar a palavra, o interlocutor fará a construção em libras do significado do vocábulo e só então a palavra nova irá para o banco de **palavras do estudante.**
- O segredo não é pintar muitas palavras ou todas de determinada classe gramatical em um único dia, mas a qualidade da discussão e construção do significado, para isso, utilize recursos visuais, vídeos, imagens e ou simulações de cenas teatrais com a participação dos estudantes ouvintes promovendo o engajamento do estudante surdo. Estimamos que se o estudante apropriar-se de cinco (5) palavras em uma aula, ao longo de um bimestre, dezesseis (16) aulas, serão oitenta palavras (80), que ao longo do ano se tornarão duzentas e quarenta (240). Depois que ele apropriar-se deste movimento, o céu será o limite. Esta estratégia pode ser utilizada com a turma toda!
- Quando a palavra já estudada aparecer em aulas posteriores, não deverá ser pintada, mas consultada no banco de palavras e neste momento é hora de verificar se houve a apropriação do vocabulário.
- O Por fim, COMEMORE com seu estudante cada conquista! Eleve a autoestima dele construindo laços de afetividade. Desta forma, o aprender será prazeroso e permanente, pois o que toca a emoção, negativamente ou positivamente é perpetuado.

Acesse o link abaixo para entender um pouco mais:

https://youtu.be/ZXFJ-QarZPo

By the end of the lesson(s), you will be better able to:

Culture/Content/Cognition (Learning Outcomes)

- Identify members of a family;
- Recognize pets considered members of a family;
- Relate information about the same topic;
- Indicate members of your family and their relationship;
- Produce oral conversation using sentence frames;
- Compile statistical data;
- Describe, classify, and compare animal & habitat characteristics with sentence frames orally and in writing;
- Produce words and simple sentences related to animals and habitats in a presentation orally and writing.

Communication

Language of learning:

(Key Vocabulary)

- Family members: father, brother, sister, grandmother, grandfather, cousin
- Family/family tree
- Animals: birds, reptiles, mammals, wild Animal, pet
- Habitats: jungle, forest, savannah, ocean
- Bird, bear, dog, cat, fish, ostrich, bat, lion, mouse, snake, frog, parrot, penguin
- Food: fish, fruit, meat
- Coverings: fur, scale, feather
- Rescue
- Names of animals from English speaking countries: South Africa, Canada, Australia, Alaska

Language for Learning:

(Functions & Structures)

- ____ is my ____
- ____ are my ____
- How many ____ do you have?
- I have
- He/She has a
- Bears
- have
- _____eat ____
- _____ go _____ in ___
- The ____ have ___ and the ____ has ____
- The _____ don't have _
- make good pets.
- ___don't make good pets.

Language through Learning

(Incidental & Revisited (Recycled)

Language During the Lesson)

- dad
- mom
- grandma
- grandpa
- house
- stepmom
- stepdad
- aunt
- uncle
- nephew
- niece
- Food: nuts, seed, seaweed, riverweed

Instruments for Assessment

(how you will measure if outcomes met)

If you successfully identify who the members of the family are;

If you successfully relate information presented in texts about the same topic;

If you successfully represent visual data;

If you successfully produce oral conversations based on a simple framework as model;

If you successfully complete your journal;

If you successfully complete your chart (Activity 15b);

If you successfully talk with your partner using the discussion cards about animal characteristics;

If you successfully build organizers about people and animals;

If you successfully make the diorama.

Adapted from a Lesson Plan Template from Arizona State University (2019)



The template above contains some concepts taken from **Content and Language Integrated Learning – CLIL**. It is an approach or method, which integrates the teaching of content from the curriculum with the teaching of a non-native language. CLIL sometimes is referred to '4 Cs' as components:

Culture - The role of culture, understanding ourselves and other cultures is an important part of the CLIL approach. We want to develop learners who have positive attitudes and who become aware of the responsibilities of global as well as local citizenship.

Content - CLIL develops cross-curricular links among different subjects. Teachers need to analyse content for its language demands and to present content in an understandable way.

Cognition - CLIL promotes cognitive or thinking skills, which challenge learners. These skills include reasoning, creative thinking and evaluating. Teachers need to analyse thinking processes for their language demands and to teach learners the language they need to express their thoughts and ideas.

Communication - Learners have to produce subject language in both oral and written forms. Students need to be encouraged to participate in meaningful interaction in the classroom.

There are three parts on Student's Learning Guide:

1. "Culture/Content/Cognition (Learning Outcomes)" indicates teaching aims that will be developed by students. In the cognitive process students will develop aims to integrate culture, content and communication¹.

¹ The text was adapted from BENTLEY, K. The TKT Course CLIL Module. Cambridge University Press, 2010.

- 2. "Communication" follow the idea from Michael Halliday(1976) that identifies three major simultaneous relationships between language and learning.
- Language OF learning uses language coming from the content areas such as science or social studies. It involves the type of discourse used by experts such as mathematicians, historians, and scientists. This can be modeled, collaboratively constructed, and finally used independently through a gradual release of responsibility sequence (Fisher and Frey, 2013; Gibbons, 2009). This includes vocabulary.
- Language FOR learning identifies the purpose for using the language. These are language functions such as speech acts used in comparing, summarizing, describing concepts and processes. They can be introduced in the form of sentence frames (i.e., It is ... in.... / If ..., then,...) (Kinsella, 2013; Shafer Willner, 2013).
- Language THROUGH learning is developed on demand, within the learning task. This type of language is supported within dialogic, academic conversations because it is recycled, practiced, and becomes more precise the more it is used (Zwiers, 2014).
- 3. "Instruments for Assessment" this part, suggests a different focus of assessment on areas of subject content and on communication skills, cognitive skills and practical skills. Teachers need to put learners at the centre of the process and to find out what standards are achievable when they study subject content in non-native language². It is important to make sure your objectives, learning activities, and assessment indicators are aligned. You assess the learning objectives, not the activities.

² The explanation is part of the "Theoretical Framework - English for STEAM, initially prepared by Barbara Noel, EL Specialist for the Curricular Action 'A Interface entre a Língua Inglesa e outras Áreas do Conhecimento para o empoderamento do Jovem Cientista'.

A INTERFACE ENTRE A LÍNGUA INGLESA E OUTRAS ÁREAS DOCONHECIMENTO

Base Nacional Comum Curricular - Currículo Paulista - Língua Inglesa

Habilidades

- (EF06LI01) Interagir em situações de intercâmbio oral, demonstrando iniciativa para utilizar a língua inglesa.
- (EF06LI08) Identificar o assunto de um texto, reconhecendo sua organização textual e palavras cognatas
- (EF06LI09) Localizar informações específicas em texto.
- (EF06LI11) Explorar ambientes virtuais e/ou aplicativos para construir repertório lexical na língua inglesa.
- (EF06LI12) Interessar-se pelo texto lido, compartilhando suas ideias sobre o que o texto informa/comunica.
- (EF06LI13) Listar ideias para a produção de textos, levando em conta o tema e o assunto.
- (EF06LI17) Construir repertório lexical relativo a temas familiares (escola, família, rotina diária, atividades de lazer, esportes, entre outros).
- (EF06LI19) Utilizar o presente do indicativo para identificar pessoas (verbo to be) e descrever rotinas diárias.
- (EF06LI20) Utilizar o presente contínuo para descrever ações em progresso.
- (EF06LI21) Reconhecer o uso do imperativo em enunciados de atividades, comandos e instruções.

Base Nacional Comum Curricular - Currículo Paulista - Ciências

Habilidades

- EF02CI04) Observar e descrever características de plantas e animais (tamanho, forma, cor, fase da vida e local onde se desenvolvem) que fazem parte de seu cotidiano e relacioná-las ao ambiente em que vivem.
- (EF03CI04) Identificar características sobre o modo de vida (hábitos alimentares, reprodução, locomoção, entre outros) dos animais do seu cotidiano comparando-os aos de outros ambientes.
- (EF03CI05) Identificar, comparar e comunicar as alterações de características que ocorrem desde o nascimento e em diferentes fases da vida dos animais, inclusive os seres humanos.
- (EF03CI06) Comparar alguns animais e organizar grupos com base em características observáveis (presença de penas, pêlos, escamas, bico, garras, antenas, patas, etc.)



- At this moment, the deaf student uses the bank of words with the interlocutor help, already explained in the
 guide on the introduction text.
- Ask the student to use his/her word bank notebook;
- Talk to the interlocutor how you want that student do the words' selection;
- Together (teacher, interlocutor and the student) settle a color pencil to each part of the speech to paint words that will be learned, used along classes.
- Ask the interlocutor to help the student with the word bank construction;
- The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook. This word bank will be used along the year for consult and to do activities.



Activity 1

- a) In this activity, students will read the two text in order to discuss about the family day and the different dates it is celebrated.
- Read the texts to students and ask them to circle the words they don't know;
- Read the texts a second time, but this time slower and ask students to repeat after you;
- Ask students to read the words they don't know and write them on the board. You can explain to them the words they selected, or ask them to search for them on a dictionary;
- Ask students to answer the questions b and c. They can answer orally, or write it on their notebooks;
- Ask students to read their answers and make comments, or corrections if necessary.
- d) In this activity, students will read the text again to find cognate words.
- Ask students to read the text again and circle the words they think is similar in form to Portuguese;
- Ask students to read the words they circled and write them on the board;
- e) Ask students to search for the words they circled in the last activity. Ask them if they have the same meaning in Portuguese and explain what cognate words are.

Activity 1

a) Read the texts.

In 1993 UNESCO declared May 15th as the International Day of Families. [...] "the United Nations still recognizes the family as the basic unit of society."

With the purpose of examining the role of families in the modern world and promoting more peaceful and inclusive societies. In 2018, The UN's theme for this special day was "Families and Inclusive Societies".

We celebrate Family Day on December 8 in Brazil. The day is a moment to honor and remember the importance of the family (institution). The family helps in the education, culture, moral and ethic formation of a person. Family is not just a mother, father, brother, or sister, but also all those who love, care and protect.

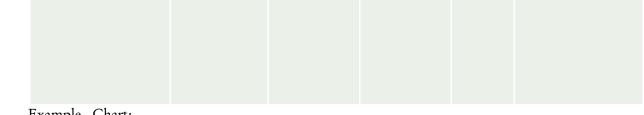
b) Now, write on your notebook:

Curricular Adaptation - Activity 1b

Ask the interlocutor to explain to the deaf student that he/she needs to construct (DRAW) in her/his word bank a chart with the WH questions, the purpose is to give resource to consult in other moments and contribute for his/her independent learning.



WHY	who	WHEN	WHAT	HOW	WHERE
It is the reason something happened.	It is a person.	It is the time.	It is a thing or an action.	It is a number , or the way someth ing is done.	It is a place.
DRAW	DRAW shorturl.at/rQ35 6	DRAW	DRAW	DRAW	DRAW



Example - Chart:

- After that, the interlocutor signals to the deaf student the text, then the student can explain in Brazilian sign Language what he/she understood;
- > The work with the word bank will be continuous: 1) Use Brazilian Sign Language to explain and increase the knowledge about family; 2) separate keywords about family to put in word bank; 3) the student explain what he/she understood in Brazilian sign Language; 4) Now it is time for the deaf student to do and answer the questions in writing.
 - 1. What are the texts about?
 - 2. When is Family Day celebrated in Brazil?
 - 3. In the text, circle the words that are similar in form to Portuguese.
 - 4. Now, using a dictionary, search the words you circled in the last activity and see if its meaning is the same as in Portuguese.



- In this activity, students will practice listening, oral and reading skills.
- Ask students to pay attention to the reading you are going to make and use the words in the box to complete the gaps in the text as you read it;

name big family sisters brother

Jack: Hey, Beth.

Do you have a big or small family?

Beth: I have a big family.

Jack: How many brothers and sisters do you

have?

Beth: I have one brother and two sisters.

And you, how many brothers and sisters

do you have?

Jack: I have one brother, one dog and two cats.

I have a big family too.

Beth: Oh, I have pets too!

I have a bird. Her name is Tina.

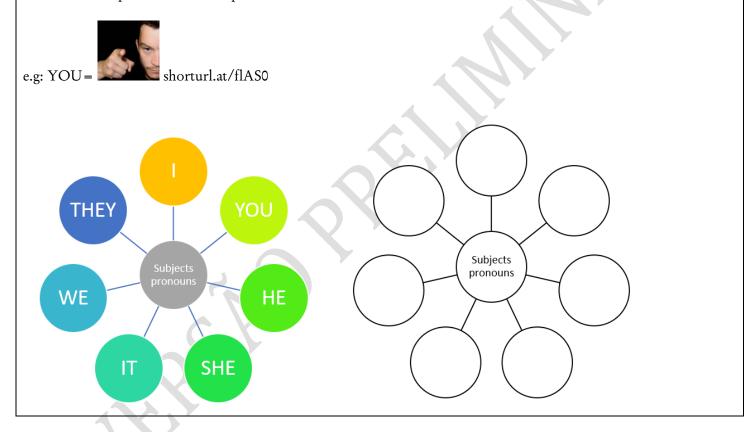
- First, read the text in a natural speed to students;
- Now, read the text again a little slower. You can repeat the sentences where there are gaps if students find difficult to understand the missing words;
- Read the sentences where there are gaps again and ask students to read the words they used to complete it. Write the words on the board;
- Read the text a final time and ask students to repeat after you.
- b) This activity can be done in pairs, or individually. Students will practice oral skills by asking the questions in the balloons to each other.
- Ask student to form pairs, or groups;
- Ask students to ask the questions in the balloon to each other;

Curricular Adaptation - Activity 2a

- ➤ Now it is time to think about relationships in short dialogs.
- After seeing the signal text that the teacher will read, In Brazilian Sign Language the deaf student, with support of the interlocutor and his/her word bank, can notice the relationship between different family members and use the word bank notebook to remember the learned vocabulary.
- Teacher, ask to the interlocutor to work each word of the chat below and verify if the student understood the meaning of the words, after the activity, the deaf student will put the words in the word bank.

name big family sisters brother

- > By the end, fill out the gaps of the text. The interlocutor will be signaling, and the deaf student will choose the correct word to fill out the gaps.
- Add in the word bank the pronouns. Explain to the deaf student that he or she will use it in other moments and it will be used for consult. The deaf student needs to draw someone or something in visual organizer that correspond with the pronouns. He/she can make it as homework and search on internet to find other images as examples to each of the pronouns.



Activity 2

a) Listen to your teacher's reading of the text below. Complete the gaps with the words from the box.

Jack: Hey, Beth.

Do you have a big or small _____?

Beth: I have a big family.

Jack: How many brothers and _____ do you have?

Beth: I have one brother and two sisters.

And you, how many brothers and sisters do you have?

Jack: I don't have sisters. I have one ______, one dog and two cats.

I have a _____ family too.

Beth: Oh, I have pets too!

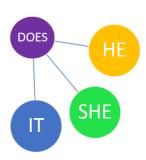
I have a bird. Her ______ is Tina.

Curricular Adaptation - Activity 2b



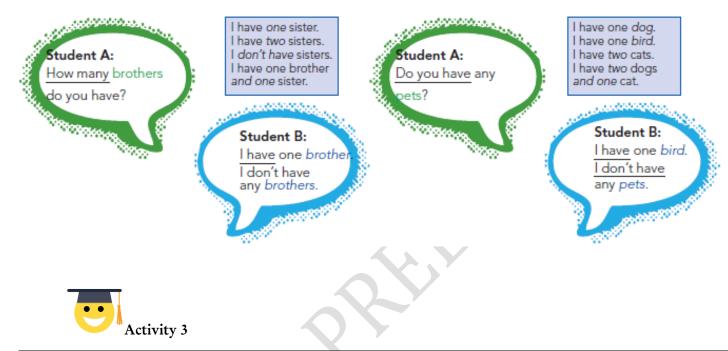
- Pay attention to frames like: How many _____ do you have? Do you have____, I have one ____, I don't have _____. It is important to give more and more examples to the deaf student understand how he/she can use it.
- Ask the interlocutor to explain how we can use these frames to say that we have or do not have something or someone. Look the visual organizer and ask to the interlocutor to do with the deaf student the same thing in the word bank.
- > Return to the word bank and review all the words learned with the deaf student.
- Now, ask the deaf student to use the frames to write about her/his family.
- ➤ If necessary, you can ask the student to make an exercise as homework:
- ➤ I don't = I do not;
- > You don't = you do not;
- ➤ He doesn't = he does not;
- > She doesn't = she does not;
- ➤ It doesn't = it does not:
- \rightarrow We don't = we do not
- \rightarrow They don't = they do not
- > the end, the deaf student can write a text about





his/her family as a model and exchange with a friend.

b) Now, it is your turn! In groups, talk about your family with your colleagues following the model:



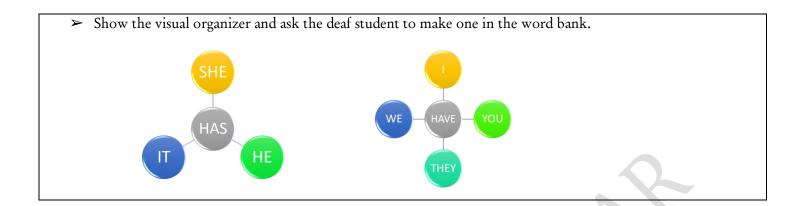
In this activity, students will be able to discuss about family compositions and the role pets can have in it.

- Ask students to observe the picture. At this moment, you can ask questions like: What is this? Have you ever seen a board like this? Do you have a board like this? What do you put on your board?
- Ask students to answer the questions b, c, d and e on their notebooks;
- Ask students to share their answers and make comments, or corrections if necessary.

Curricular Adaptation - Activity 3

➤ Teacher, review the WH in the word bank with the deaf student, ask the interlocutor to help you. First, the questions the student will answer in Brazilian Sign Language. After that, the student will write her/his answers. Don't forget to add new keywords.





Activity 3

a) In the following picture you can see the board Cecília made with pictures of her family. Talk about the pictures with your classmates.



Images from: https://pixabay.com/pt/

- b) Now write on your notebook:
 - 1. How many brothers and sisters does she have?
 - 2. In this picture, you can see she chose pictures of people and animals. Which animals does she have?
 - 3. How many animals does she have on her board?
 - 4. Why did she put her animal pictures on the board?



Activity 4

In this activity, students will contrast the board in the last activity to a family tree. Two different ways to represent our family.

- Ask students to observe the family tree;
- Read the information in the family tree to students and show them how it is structured;
- Ask students to answer the questions b, c, d and orally, or writing on their notebooks;
- Ask students to read their answers and write them on the board. You can make comments or corrections if necessary.

Curricular Adaptation - Activity 4

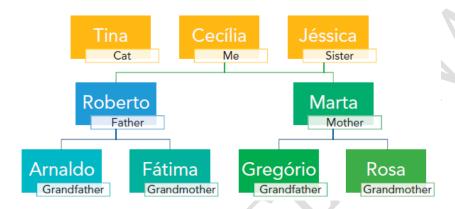
- Now it is time to think about relationships in a family tree.
- In brazilian sign language, the deaf student will, with support of interlocutor and his/her word bank, notice the relationship between different family members and use the word bank notebook to remember the vocabulary.
- > By the end, ask the interlocutor to argue the deaf student, in Brazilian sign language, about his/her family and



with the work bank write the answers.

Activity 4

a) Observe the way for someone represents his/her family:



- b) Is this way of showing our family different from that one in the previous exercise? Why?
- c) What kind of information do you find in this family tree?
- d) How many brothers/sisters does Cecília have?
- e) Which pets does Cecília have?



In this activity, students will practice what they learned in the last activities in order to make their own family trees and a chart.

a) Ask students to make their own family trees using the one in the last activity as a model. It can be on their notebooks, or on a paper sheet.

- b) This activity can be done in small or big groups.
- Ask students to ask the question (Who lives with you?) to each other and complete the char with their answers;
- Ask them to register every team member's answer on the chart.
- c) Ask students to complete the second chart the same way they did on the last activity, but this time with the questions: Do you have pets? What are their names?
- d) Still in groups. In this activity, students will make a chart with the information they registered on their charts in the last activity.
- Ask students to use the information they registered on the chart about pets to make a chart like the example;
- Ask students to show their charts;
- Ask students to glue the chart they made on the wall so everyone can see it.

Curricular Adaptation - Activity 5

- 7
- > The deaf student will apply his/her learning to construct his/her own family tree. Now is time of consulting the word bank to fill the table;
- Review the words about family and ask the interlocutor to intermediate the dialogue with a group and provide the inclusion of the deaf student;
- ➤ Go back to <u>Curricular Adaptation Activity 2b</u> and review the frames to explain what do you have or not. Add in the word bank the new words about pets. By the end, fill the table and make the chart with the help of the interlocutor.

Activity 5

- a) Build your own family tree using the model in activity 4. You can also indicate pets if you have any.
- b) In small groups, ask the following question to your friends and put an "X" on the chart based on your friends' answers.

Question: Who lives with you?

Answer: I live with my *Mother*, *father*, *brother* and *grandmother*.

	Friend's name	Mother	Father	Brother	Sister	Grandma	Grampa
İ							

c) In small groups, ask a friend if he/she has pets and complete the table.

Question: Do you have pets?

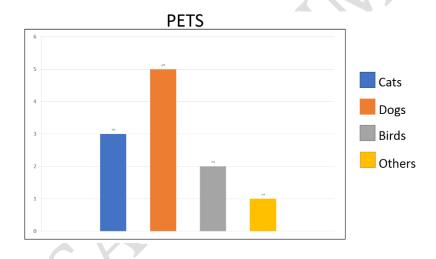
Answer: Yes, I do. I have two dogs.

No, *I don't*.

Question: What are their names?

Friend's name	Pets yes/no	Number of pets	Species	Name(s) of the pet(s)

d) Make a chart showing the number of pets from the last activity. Which pet is more common? Example:





In this activity, students will write a text to present their families and practice vocabulary, writing, reading and oral skills.

- a) In this activity, it is important to show students the structure of the text. You can point the use of the verb to be.
- Read the text to students in a natural speed;
- Read the text a second time and ask students to repeat after you;

- Ask students what the text is about;
- b) This activity is supposed to be done individually.
- Ask students to write a text introducing their families;
- Ask students to use the text as an example. It doesn't have to be exactly like the example, since family compositions are not always the same.
- c) Ask students to read their texts to the class.

Curricular Adaptation - Activity 6

- Ask the interlocutor to help you. Explore the text and using the words that are already in the word bank, ask the deaf student to signal what he or she understood about the text and the picture;
- The deaf student will identify the words he/she needs help from the interlocutor; He/she will put the new words in the word bank;
- > By the end, the deaf student will write a text about his/her family.

Activity 6

a) Read the following text:



Image from: https://pixabay.com/pt/

I am Pedro.

I want to introduce my family to you.

Carlos is my father.

Catarina is my mother.

Carlos and Catarina are my parents.

Sara is my sister and Bruno is my little brother.

My family is very happy.

Image from: https://pixabay.com/pt/

- b) In your notebook, write a text about your family. You can follow Pedro's example.
- c) Now, introduce your family to your friends using your notes.



Activity 7

In this activity, students will be able to expand vocabulary about animals.

- Ask students to draw a line matching each picture to the name of the animal in it;
- Read every animal name to students and ask them to repeat after you;
- Point to each picture and ask students the name of the animal they matched to it. Make comments, or corrections if necessary.

Curricular Adaptation - Activity 7

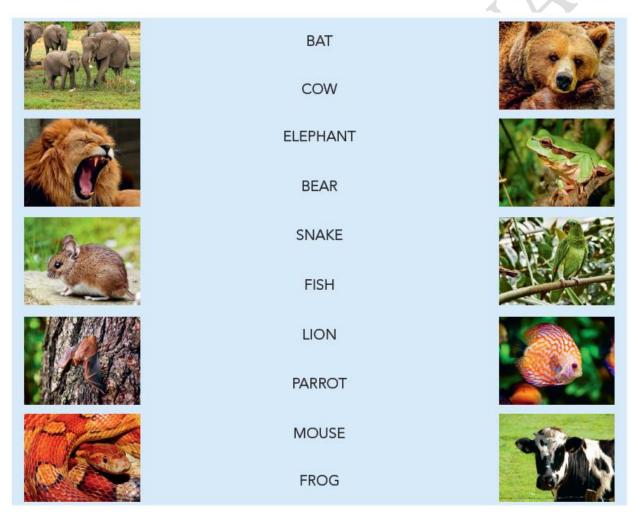
- > Explore the pictures and the new vocabulary.
- > The deaf student needs to review the WH questions (How and Where). Ask the interlocutor to



- help the student with the word bank construction about animals.
- The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook.
- Pay attention to the chart and, after constructing the word bank, rethink about previous knowledge. Look at the sentence frames and ask the student to think about simple present. Consult the word bank to remember the words he/she needs to train.

Activity 7

a) Match the name of each animal to its picture?



Images from: https://pixabay.com/pt/



In this activity, students will be able to practice what they have learned in the last activities in a game.

- Ask students to pair with a friend;
- On slips of paper, ask students to write sentences describing animals like the example;
- Ask students to cut the sentences in words;
- Ask students to put all the pieces of paper in a bag;
- Ask students to shuffle the words and then try to recreate them;
- Ask students to read their answers and write them on the board. You can make comments, or corrections if necessary.

Curricular Adaptation - Activity 8



- This activity, the deaf student will do in sign language with the interlocutor's help and will add in the word bank.
- ➤ It's time to practice the sentence frames, so ask to the student to write some sentences with simple present. Use the word bank notebook to create the sentences about the characteristic each animal has in the chart in activity 1. Follow the example below:

Lizards have scales.

Parrots have feathers.

Activity 8

- a) In pairs, write simple sentences, by following the model: (Write 10 examples).
 - Example:

Parrots fly.

Fish swim.

- b) Student A writes the first 5 sentences.
- c) Student B writes the second 5 sentences.
- d) Then cut the words and add them to a bag.
- e) Finally, sort and recreate the sentences with the correct matches.



In this activity, students will be able to expand vocabulary about animals, animal coverings, habitat, food and movement. They will also use simple present to describe how animals live, feed and move.

- a) In this activity students will expand vocabulary about animals, and animal coverings.
- Ask students to match each animal to its type of covering;
- Read all the information in the chart to students:
- Point to each animal picture and ask students the type of covering it has. Make comments, or corrections if necessary.

- b) This activity is supposed to be done individually.
- Ask students to use the information from the last activity to make sentences like the example, showing the type of covering of each animal;
- Ask students to read their answers and write them on the board. Make comments and corrections if necessary.
- c) On their notebooks or a sheet of paper, ask students to choose an animal to draw and write a sentence using simple present to tell where the animal lives. Then, ask students to show their drawings and read the sentences they made.

Curricular Adaptation - Activity 9

Now, it is time to practice the sentence frames, so ask to the student to write some sentences using simple present. Use the word bank to create the sentences about the animals' covering.



Activity 9

a) Complete the chart matching the animal to its type of covering.



Images from: https://pixabay.com/pt/

b) Now, write in your notebook the characteristic of each animal from the chart (Activity 7c). Follow the example:

Lizards have scales.

Parrots have feathers.

c) Draw and write where each animal live. Look at the model. You can use information from the chart in activity 8c.



Giraffes live in savannahs.

Image from: https://pixabay.com/pt/



Activity 10

This activity can be done in pairs, or small groups.

- Ask students to make a chart like the example on their notebooks, or on a paper sheet;
- Ask students to choose an animal (it can be one from the chart in Activity 7a, or 8a) and make a drawing on the first column of the chart;
- Ask students to complete the next four columns writing how this animal moves, feed, is covered and where it lives;
- Ask students to complete the last column writing sentences in the simple present describing the animal;
- Ask students to do the same thing to other animals;

Ask students to show and read the charts they made.

Activity 10

a) Now, in pairs, make a chart like the example.

Animal Drawning	Movement (Fly, swim, jump, Slither) How do animals move?	Food (Meat, fruits, seeds) What do animals eat?	Covering (Fur, scales, feathers) What covers animal bodies?	Habitat (Jungle, forest, savannah) Where do animals live?	Sentence
Parrots	Fly	Fruits	Feathers	Jungle	Parrots fly and eat fruits. Parrots have feathers. Parrots live in the jungle.

b) Now, use the information in the chart to make sentences in your notebook. Follow the example:

Parrots **fly** and eat **fruit**. Parrots have **feathers**. Parrots live in the **jungle**.



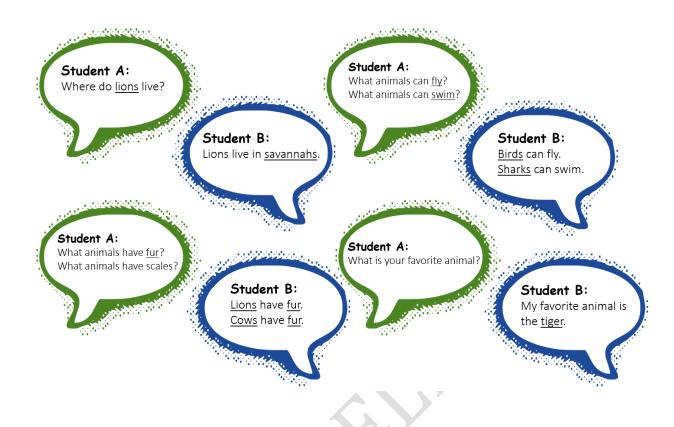
- a) This activity can be done in pairs, or groups. Students will practice oral skills by asking the questions in the balloons to each other.
- Ask student to form pairs, or groups;
- Ask students to ask the questions in the balloon to each other;
- b) In this activity students will discuss about habitats.
- Read the text to students and ask them to circle the words they don't know;
- Ask students to read the words they circled and write them on the board. Explain the meaning of the words to students, or ask them to search for them on a dictionary;
- Make a second reading and ask students to repeat after you;
- Ask questions like: What is the text about? What are habitats? Is there only one type of habitat?
- c) Ask students to answer the question and read it to the class.
- d) This activity is supposed to be done individually.
- Show students the visual organizer;
- Ask students go back to the text and complete the visual organizer with the types of habitats;
- e) Make the same visual organizer on the board an ask students to read what theirs. Make comments, corrections if necessary;

Curricular Adaptation - Activity 11

- In this activity, the main strategy is the word bank notebook: a) ask the interlocutor to read the text in sign language; b) analyze the words that the deaf student knows; c) construct the meaning of necessary words to understand the text; d) add new words in the word bank notebook;). Finally, match the text with the animal.
- > The deaf student, in-group, choose an animal of their choice, recording what they have already learned (USE THE WORD BANK) and researching more about the animal in video or Power point.

Activity 11

a) In pairs, talk with your partner using the discussion cards about animal characteristics.



b) Read the text.



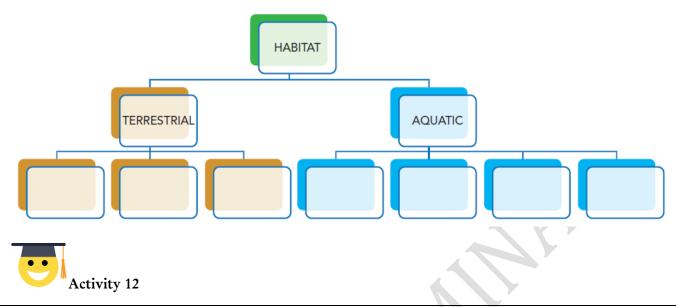
Images from: https://pixabay.com/pt/

Habitats

A habitat is the place where an animal or plant usually lives. The two main habitats are ter-restrial (on land) and aquatic (in water). Terrestrial habitats are tropical forests, deserts and moun-tains. Aquatic habitats can be rivers, lakes, oceans, and seas. Some plants and animals, like fish, live only in the water. Others, like lions, live only on land.

Many animals that live in cold habitats have long, thick fur.

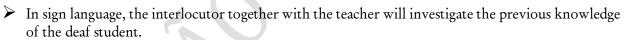
- c) Write on your notebook. What is the text about?
- d) Complete the visual organizer with the types of habitat according to the text:



In this activity, students will identify different types of habitats and animals who live in it.

- a) This activity can be done individually or in pairs.
- Ask students read the texts in the boxes and match it to the pictures according to its definition;
- Read each text to the students and ask them to repeat after you. At the end of each reading, ask students the picture they matched to it;
- b) Ask students to complete the chart with the information found in the texts from the last activity. At the end, ask students to read their answers and write them on the board.

Curricular Adaptation - Activity 12

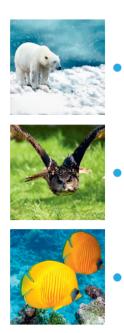




- First, the participation of the deaf student with the group will be in sign language.
- The interlocutor explains and ask to the student to signal what he/he understood in sign language.
- The text **Habitats** will be explored with the word bank and the interlocutor helps.
- In sign language, the interlocutor together with the teacher will investigate the previous knowledge of deaf student.
- Ask the interlocutor to help the student with the word bank construction. The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook.
- Finally, the deaf student will signal what he/she understood and will fill out the organizer with the types of habitat according to the text.

Activity 12

a) Match each description to each image:



- Some animals fly in the air. They have wings. Wings let animals fly. Wings come in many shapes and sizes. Birds have feathers. Feathers help birds fly and keep them warm and dry.
- 2. Aquatic animals are those who live in the water. Some aquatic animals live in fresh water and others live in salt water. Both can breathe under the water. Some of them have scales.
- 3. Animals in cold places have special body parts to stay warm. Penguins have special feathers that keep them dry and warm. Bears have fur.

b) Complete the table with some characteristics of each kind of animal and its habitats:

Animals of the air	Aquatic animals	Animals in cold places



Activity 13

In this activity, students will reflect about the similarities and differences between flying animals.

• Ask students to observe the pictures. You can ask questions like: What animals are these? What do they have in common?

- Ask students to answer the questions b, c and d;
- Ask students to read their answers and write them on the board. You can make comments, or corrections if necessary.

Curricular Adaptation - Activity 13

The participation of deaf student will be in sign language. It is necessary to go back and consult the WH Questions and explore the vocabulary.



Activity 13

a) Take a look at the pictures. Which animals are these? What do they have in common? Name them.



- b) How do these animals move in the air?
- c) What are the differences among them?
- d) Which part of its body helps it flies?



Activity 14

In this activity, students will be able to practice what they learned about animals' characteristics in a game with their friends.

- Ask students to make groups;
- Read the instructions of the game to students;

• Write the name of an animal on the board and use it to exemplify the game.

Curricular Adaptation - Activity 14

The deaf student will write a sentence about characteristics of an animal, and explain in sign language with the help of interlocutor. Consult the student's word bank to help in this activity.



Activity 14

- a) Guessing Game:
- 1. In groups. Write the name of an animal on a slip of paper, giving it one or two characteristics;
- 2. Put the papers in a bag, or box;
- 3. Each student will pick up a slip of paper and give it to their friends without looking;
- 4. The group will give tips to that student and he/she will try to guess the animal.

Use the key vocabulary to make sentences like the examples:

This animal is fast. It has scales and swims.

This animal lives in the water/ in the forest/in the savannah.



Activity 15

In this activity, students will reflect about pets and wild animals, their characteristics, habits and temperament. They will also identify animals native from other countries.

- a) Read the text to students and ask them to repeat after you. Ask them if they know what the text is about. You can ask questions like: Who is Mishka? Do you know where is this animal native from? Are tigers pet animals? Why?
- b) This activity can be done individually or in pairs.
- Ask students to make a research and complete the chart. They can use books or the internet.
- Ask students to read their charts when it is complete and share their findings with their friends.
- c) In this activity, students will discuss about which characteristics make animals be or not good pets.
- Ask students to choose animals and say sentences telling why those animals are, or aren't, good pets.

Curricular Adaptation - Activity 15

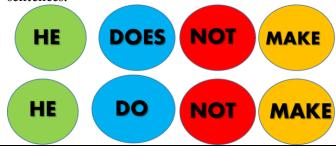
The deaf student can do this activity with other students, but do not forget to consult and add new words to the word bank. The review is what will guarantee the appropriation of sentences frames,



vocabulary and reader competence.

In this activity, the deaf student will register on his/her notebook using the word bank notebook to write what makes some animals better pets than others and will register on the notebook using "Make or does not make". For this discussion, he will think about the following items: temperament, size or needs of the animal, responsibilities to take care of a pet, habitats and foods.

➤ It's important to return to the word bank, review the simple present, and reflect about negative and affirmative sentences.



HE MAKES
SHE MAKES
IT MAKES
I MAKE
WE MAKE
YOU MAKE

Activity 15

a) Look at the picture, this is Mishka, it is someone's pet, but it needs to be rescued.



Image from: https://pixabay.com/pt/

MISHKA (SIBERIAN/BENGAL)

"Initially, she was thought to be a male; her name was Gus and she was brought to us when previous owners learned she was actually a female" b) In pairs, research animals from other countries like South Africa, Alaska, Canada, Australia. After that, fill in the chart considering the animal and country.

Country	Pet	Not Pet	Temperament	Size	Food	habitat
Russia		Siberian Tiger	Fierce Lonely	Male: 3.5 meters long, 1.2 meters high and 300 pounds	Carnivore: antelopes, elk, wild boar, reindeer and deer., etc.	Coniferous forests like the taigas
South Africa						
Canada						
Australia	ب					
Alaska	8					

c) Discuss with your partner why some animals make better pets than others and write on your notebook using "Make or don't make". For this discussion think about the following items: temperament, size or needs of the animal, responsibilities for taking care of them, habitats and food. Example: Dogs make good pets because they are loyal.

Lions don't make good pets because they are wild.



In this activity, students will put everything they studied this unit in practice to make a diorama.

- Ask students to follow the diorama instructions and prepare one to be presented;
- Tell students that they have to make brochure of the animal they chose in order to help them during the presentation;
- Stablish a date for the diorama to be presented;

Curricular Adaptation - Activity 16

> Teacher, ask to deaf student to use the word bank notebook to consult the words and sentence frames to do the final product and think about animal protection.



Activity 16

FINAL PRODUCT

- a) Imagine you are a veterinarian and you are attending a conference for animal protection.
 - Create a brochure, draw your animal, label the parts of the animal giving information about it, its characteristics and habitat.
 - Write simple sentences describing where the animal lives, what it eats and how it moves.
 - Finally, prepare a Diorama, that is a very realistic three-dimensional artistic presentation. Follow the instructions below. Then present to your friends and expose at your school.

DIORAMA:



4th Grade Science Fair Animal Dioramas CA Frost Elementary School March 22, 2016 17. By Steven Depolo. In: https://www.flickr.com/photos/stevendepolo/26670260972

Instructions to prepare a Diorama:

- 1. Choose an animal;
- 2. Make a model in clay;
- 3. In a shoe box, create its habitat:
- 4. Present it and say what the animal needs to in order to survive.



TEACHER'S GUIDE What Scientists do - 7° ano EFAF - 1° Volume – Lesson 1

This Volume has activities to be developed during the first two months of the school year. Besides the Student's Learning Guide with directions in each activity (remember you can add or adjust the activities according to the needs of the group), you will find in the box below explanations about the approach / methodology as well as the skills / abilities needed to be developed by students aligned to Currículo Paulista and Base Nacional Comum Curricular. You will also find Adaptação Curricular para o estudante Surdo which brings important suggestions that will help you while preparing/adapting your lessons.

Adaptação Curricular para o estudante Surdo



Olá, professor! Este material traz sugestões de **adaptações curriculares** para o desenvolvimento das atividades para os alunos Surdos.

As adaptações estão identificadas em caixas de texto com títulos azuis e um ícone criado para este material que representa as identidades surdas, pois neste universo, temos estudantes que são seres individuais e compartilham da Língua de Sinais para se comunicarem e também adquirir uma segunda língua, neste caso, a Língua Inglesa.

Quando pensamos em adaptação curricular é necessário ter em mente que são ajustes realizados no plano de aula quanto ao objetivo, metodologia e avaliação. Ao preparar a aula, precisa-se de uma intencionalidade do professor para a turma e outra para o estudante com deficiência.

Diante disso, vamos refletir sobre um possível caminho a percorrer quando nos referimos ao ensino de língua estrangeira para estudantes Surdos:

- O Peça ao estudante que providencie um caderno para ser utilizado como banco de palavras.
- Converse com o interlocutor sobre a função deste caderno. Durante as aulas, o interlocutor, orientado pelo professor, auxiliará o estudante na construção do conceito (significado e significante) de cada vocábulo em língua estrangeira, sendo registrado no banco de palavras, que ao longo do ano será utilizado como fonte de consulta para a realização de atividades.
- O Defina qual será o vocabulário enfatizado durante a aula. Separe o vocabulário por classe gramatical, a princípio inicie com **substantivos e verbos** e com o passar do tempo inclua as demais de acordo com a sua intencionalidade, **pronomes**, **adjetivos**, **advérbios e numerais**, (Cabe pontuar que em Libras usa-se poucas conjunções, preposições e artigos, pois estão incorporados às palavras que se referem).
- O Ao longo da aula **defina com o estudante e o interlocutor** uma cor para a classe gramatical que estará em estudo, pois será utilizada no decorrer das aulas subsequentes.
- O estudante deverá pintar a palavra, o interlocutor fará a construção em libras do significado do vocábulo e só então a palavra nova irá para o banco de **palavras do estudante**.
- O segredo não é pintar muitas palavras ou todas de determinada classe gramatical em um único dia, mas a qualidade da discussão e construção do significado, para isso, utilize recursos visuais, vídeos, imagens e ou simulações de cenas teatrais com a participação dos estudantes ouvintes promovendo o engajamento do

estudante surdo. Estimamos que se o estudante apropriar-se de cinco (5) palavras em uma aula, ao longo de um bimestre, dezesseis (16) aulas, serão oitenta palavras (80), que ao longo do ano se tornarão duzentas e quarenta (240). Depois que ele apropriar-se deste movimento, o céu será o limite. Esta estratégia pode ser utilizada com a turma toda!

- Quando a palavra já estudada aparecer em aulas posteriores, não deverá ser pintada, mas consultada no banco de palavras e neste momento é hora de verificar se houve a apropriação do vocabulário.
- Por fim, COMEMORE com seu estudante cada conquista! Eleve a autoestima dele construindo laços de afetividade. Desta forma, o aprender será prazeroso e permanente, pois o que toca a emoção, negativamente ou positivamente é perpetuado.

Acesse o link abaixo para entender um pouco mais: https://youtu.be/ZXFJ-QarZPo

By the end of these activities, you will be better able to:

Culture/Content/Cognition (Learning Outcomes)

- Recognize what scientists do.
- Observe and compare science in action.

• Use english language strutures to describe scientists. • Identify the abiotic and biotic components in an ecosystem. Communication Language of learning: Language for Learning: Language through Learning (Functions & Structures) (Incidental & Revisited (Recycled) (Key Vocabulary) • Science is _____ Language During the Lesson) Science / Scientist Scientists Field, tools, lab Science After making , scientist _____ experiments abiotic, biotic Scientists use measure for • Scientists wear Ecosystem • Scientists can Abiotic: nonliving Biotic: living Botanist, ethologist, geographer, zoologist, phycologist, ichthyologist, biologist, omitologist, ecologist, geneticist, oceanographer, hydrologist, antropologist

Instruments for Assessment

(how you will measure if outcomes met)

- If you successfully interact with partners/group;
- If you successfully relate and describe scientists' fields of study;
- If you successfully identify the abiotic and biotic components in an ecosystem;
- If you successfully make a video presenting a type of scientist.



The template above contains some concepts taken from Content and Language Integrated Learning – CLIL. It is an approach or method, which integrates the teaching of content from the curriculum with the teaching of a non-native language. CLIL sometimes is referred to '4 Cs' as components:

Culture - The role of culture, understanding ourselves and other cultures is an important part of the CLIL approach. We want to develop learners who have positive attitudes and who become aware of the responsibilities of global as well as local citizenship.

Content - CLIL develops cross-curricular links among different subjects. Teachers need to analyse content for its language demands and to present content in an understandable way.

Cognition - CLIL promotes cognitive or thinking skills, which challenge learners. These skills include reasoning, creative thinking and evaluating. Teachers need to analyse thinking processes for their language demands and to teach learners the language they need to express their thoughts and ideas.

Communication - Learners have to produce subject language in both oral and written forms. Students need to be encouraged to participate in meaningful interaction in the classroom.

There are three parts on Student's Learning Guide:

- 1. "Culture/Content/Cognition (Learning Outcomes)" indicates teaching aims that will be developed by students. In the cognitive process students will develop aims to integrate culture, content and communication¹.
- 2. "Communication" follow the idea from Michael Halliday(1976) that identifies three major simultaneous relationships between language and learning.
- Language OF learning uses language coming from the content areas such as science or social studies. It involves the type of discourse used by experts such as mathematicians, historians, and scientists. This can be modeled, collaboratively constructed, and finally used independently through a gradual release of responsibility sequence (Fisher and Frey, 2013; Gibbons, 2009). This includes vocabulary.
- Language FOR learning identifies the purpose for using the language. These are language functions such as speech acts used in comparing, summarizing, describing concepts and processes. They can be introduced in the form of sentence frames (i.e., It is ... in.... / If ..., then,...) (Kinsella, 2013; Shafer Willner, 2013).
- Language THROUGH learning is developed on demand, within the learning task. This type of language is supported within dialogic, academic conversations because it is recycled, practiced, and becomes more precise the more it is used (Zwiers, 2014).
- 3. "Instruments for Assessment" this part, suggests a different focus of assessment on areas of subject content and on communication skills, cognitive skills and practical skills. Teachers need to put learners at the centre of the process and to find out what standards are achievable when they study

¹ The text was adapted from BENTLEY, K. The TKT Course CLIL Module. Cambridge University Press, 2010.

subject content in non-native language². It is important to make sure your objectives, learning activities, and assessment indicators are aligned. You assess the learning objectives, not the activities.

A INTERFACE ENTRE A LÍNGUA INGLESA E OUTRAS ÁREAS DO CONHECIMENTO

Base Nacional Comum Curricular - Currículo Paulista - Língua Inglesa Habilidades

(EF07LI01) Interagir em situações de intercambio oral para realizar as atividades em sala de aula, de forma respeitosa e colaborativa, trocando ideias e engajando-se em brincadeiras e jogos.

(EF07LI03) Mobilizar conhecimentos prévios para compreender texto oral.

(EF07LI06) Antecipar o sentido global de textos em língua inglesa por inferências, com base em leitura rápida, observando títulos, primeiras e ultimas frases de parágrafos e palavra-chave repetidas.

(EF07LI07) Identificar a(s) informação(ões)-chave de partes de um texto em língua inglesa(parágrafos).

(EF07LI08) Relacionar partes de um texto(parágrafos) para construir seu sentido global.

(EF07LI10) Escolher, em ambientes virtuais, textos em língua inglesa, de fontes confiáveis, para estudos/ pesquisas

(EF07LI21) Analisar o alcance da língua inglesa e os seus contextos de uso no mundo globalizado.

Base Nacional Comum Curricular - Currículo Paulista - Ciências Habilidades

(EF05CI14) Comunicar por meio da tecnologia a importância das ações sustentáveis para a manutenção do equilíbrio ambiental na comunidade em que vive, como um modo de intervir na saúde coletiva.



- At this moment, the deaf student uses the bank of words with the interlocutor help, already explained in the guide on the introduction text.
- Ask the student to use his/her word bank notebook;
- Talk to the interlocutor how you want that student do the words' selection;
- Together (teacher, interlocutor and the student) settle a color pencil to each part of the speech to paint words that will be learned, used along classes.
- Ask the interlocutor to help the student with the word bank construction;
- The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook. This word bank will be used along the year for consult and to do activities.

² The explanation is part of the "Theoretical Framework - English for STEAM, initially prepared by Barbara Noel, EL Specialist for the Curricular Action 'A Interface entre a Língua Inglesa e outras Áreas do Conhecimento para o empoderamento do Jovem Cientista'.



KWL is a useful tool to be used in the beginning, during and after a lesson or unit. Write one on the board just like the example on the student's guide.

- Elicit from students what they know about Energy;
- With the students' answers, fill the first and the second column on the board;
- Explain to students that in this unit they will learn about science and scientists;
- By the end of the activities, ask students to come back to this KWL chart and fill the third column with what they have learned about the topic. The information students will give to you are very important and can be part of a recovery plan, according to their needs.

Curricular Adaptation - Activity 1

- Teacher, ask the interlocutor to signal what the deaf student remember about science. The interlocutor can point the vocabulary that the student will mention and together they will use the dictionary to register the first word of the word bank;
- After, ask the interlocutor to signal what the deaf student wants to know. At this moment the interlocutor can use only Brazilian Sign Language.;
- Now, the student can see the pictures and to signal about what he / she is seen; with the interlocutor to construct the meaning of word and to note in word bank.

ACTIVITY 1



a) What do you know about science? Fill out the KWL chart about science.

	KWL Chart - Science	
What I know	What I want to know	What I have learned



This activity can be done in pairs or individually.

- Ask students to read every description in the first column and then complete the second one with the required information;
- Tell students to search the words they don't know on a dictionary;
- Write the questions and information requested on the board;
- Read every part of the chart to students and ask them to repeat after you;
- Ask students to read their answers and write them on the board.

Curricular Adaptation - Activity 2

- 7
- > The first step is to apply what it was explained on the introduction text, the deaf student uses the bank of words with the interlocutor help.
- > The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook.
- > Tell the student to explain in sign language what he/she understood about Science. It can be interesting to make a video of the student signaling specially if he/she isn't proficient in Brazilian sign language. You can save the videos and make a portfolio for him to see the progress.
- Finally, ask the student to complete the sentences with the information about science.

ACTIVITY 2

a) Look at the slides below and complete the sentences with information about:

		e i
	Brade III	

What scientists do.

Scientists try to learn how the world works; Scientists make observations and look for interesting patterns; Scientists use experiments to try to answer questions and solve problems;

Scientists learn things through research



There are many types of scientists who study everything from:
Medicine/doctor;

T	here	are	scientis	ts wh	o stud	y	

Rocks;	
Weather;	
Planets and stars;	
Animals;	
Plants;	
And much more!	
Have you ever wondered	Scientists ask questions like
How many animals there are in different places? Why animals live in different places? How animals work and live together?	
	Federica and
Ecologists are scientists who try to answer these questions!	Ecologists are
What is ecology?	Ecology is
Ecology is the study of the relationship between	
organisms and their environment	
Ecologists work all over the world in many	Ecologists are
types of	0
habitats.	
Who are ecologists?	
Ecologists are curious about the world around	
them	
and work hard to learn new things.	
Do you ever ask questions about living things?	
Well,	
**	1

you are an ecologist!

• Ecologists are real people, just like you and me!

Instituto Oceanográfico, São Paulo, Brasil.

- Many scientists are interested in studying the ocean.
- There are many labs in São Paulo, where scientists work hard.
- Scientists diving and snorkeling to learn about the

plants and animals that live on the coral reef.

In São Paulo's Instituto Oceanográfico you can find

Working as a scientist: Observations.

• To ask good questions and learn about coral reefs,

ecologists observe animals in the wild;

• When scientists make observations, they watch plants and animals to see how they interact.





\circ .		
Scientists		
ociciitists		

Working in a Lab:

- After making observations, scientists can bring animals back to the lab to study them;
- They can make more observations and study animals

more closely in a controlled environment.





Norking in a Lab: Experiments.



Scientists design experiments to answer their questions about different plants and animals;

• They test these ideas to see if they can explain the

patterns they observed.

Working in the water.

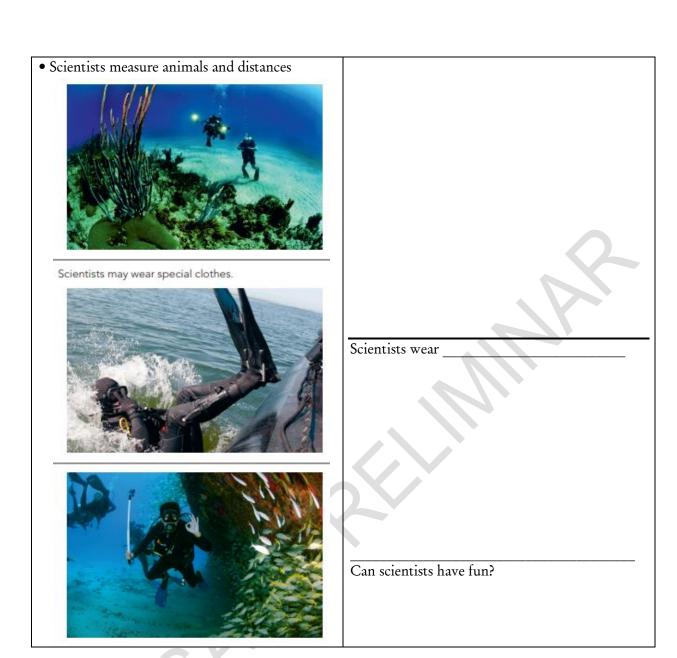
- Scientists use scientific tools;
- They can use special cameras under water;
- They can dig with hand-made tools to see what is in

the sand;

• •	1 .	
After	observing,	scientist

Scientists design experiments to	

Scientists use tools like





- a) For this activity:
 - Ask students to read the text and circle the words they don't know;
 - Elicit from students if they know what the text is about. Ask if they know what an ecosystem is;
 - Read the text to students and ask them to repeat after you;
 - Ask students to complete the chart giving the information being requested in every line;
 - Ask students their answers and write them on the board.
- b) This activity can be done in pairs. Students will learn about the many types of scientists and the things they research.
 - Ask students to relate every scientist to its field of science found in the second chart;
 - Ask students to compare their answers with a colleague;
 - Write on the board the name of the scientists from the activity;
 - Ask students to read their answers and write them on the board;
 - Read every answer to students and ask them to repeat after you.

Curricular Adaptation - Activity 3



- a) For this activity:
 - Ask the students to read the text and circle the words they don't know;
 - > Tell the interlocutor to explain the meaning of each word in Brazilian sing language and add them to the word bank notebook;
 - Tell the interlocutor to provide the interaction of the deaf student with the class.
- b) This activity can be done in pairs.
 - > The interlocutor needs to explain the meaning to the student in sign language. It's important to use images, videos or dramatize a scene as an example for the deaf student to appropriate the new vocabulary. After that, the student registers it in the word bank notebook;
 - Tell the interlocutor to provide the interaction of the deaf student with the class.

ACTIVITY 3

a) Read the text and find out:

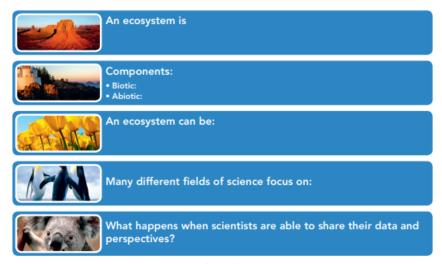
What is an ecosystem?

Ecosystems are the interactions of the biotic components (living things such as people, plants, animals and microorganisms) and abiotic components (non-living things such as soil, water and air) in a geographic area and the natural cycles that sustain those components. An ecosystem can be large, like the ocean, or small, like the holdfast of a kelp plant. There are many different fields of science that focus on different aspects of ecosystems.

When scientists in multiple fields are able to share their data and perspectives, a larger view of an ecosystem is produced.

c) Complete the chart with information from the text:

An ecosystem



Images from: pixabay.com

c) Relate the scientists below to their field of science. After you finish, share your answers with a partner. Follow the example: Botanists study plants.

Scientists
a) Botanist – plants
b) Ethologist –
c) Geographer –
d) Ichthyologist –
e) Marine biologist –
f) Microbiologist –
g) Ornithologist –
h) Phycologist –
i) Ecologist –
j) Geneticist –
k) Geologist –
I) Malacologist –
m) Meteorologist –
n) Oceanographer –
o) Paleontologist –
p) Zoologist –

fish
animals and their behaviors
the history of the Earth and the materials of which it's made
animal behavior
how traits are inherited
molluscs, i.e., clams and snails
the physical ocean
birds
physical, cultural and biological features of the Earth's surface
weather and climate
plants
fossils
microscopic plants and animals
the way living things interact with their environment
algae
ocean plants and animals



ACTIVITY 4

- This activity should be done individually so the students can express their personal idea.
 - Ask students to answer the question. They can go back to Activity 1 and remember the scientists and their fields of research;
 - Ask students to read their answers.
- The first part of this activity should be done individually and second part in pairs.
 - Ask students to unscramble the words in order to put the sentences in the right order;
 - Ask students to read their answers and write them on the board. Make corrections when necessary;
 - Now, ask students to pair with a colleague;
 - Ask them to use the sentences to talk about every scientist.
- c) For this activity, ask students to use the role cards found in Activity 2e.
- Ask students to choose a science field;

- Ask them to search the science field they chose in the role cards and write the questions related to that field in the balloon;
- Ask students to research and answer the questions pertained to their scientist's field;
- Ask students to read the information they found to the class.
 - d) For this activity, tell students to continue researching about the scientist they chose in the previous activities.
 - Ask students to research the equipment their scientists use to work and write on the lines provided;
 - Ask students to read and share their answers to the class.
 - e) This activity can be done in pairs or individually.
 - Read the first and the second role cards to the students and ask if they noticed anything different between them;
 - Show students that in the first role card there is a short description of the scientist's field of science, the same type of description is missing in the other role cards;
 - Ask students to write a short description to every field of science using the information they researched so far in the last activities;
 - Ask students to read their answers and make corrections if necessary.

Curricular Adaptation - Activity 4



- a) This activity should be done individually
- > Tell the interlocutor to go back to activity 1 and elicit in sign language from deaf student what he/she remembers about the scientists and their fields of research. Ask the deaf student to read his/ her answers.
- b) The first part of this activity should be done individually and the second part in pairs.
- Ask student to read the words and circle what he/she does not know in order to build meaning of it with the help of the interlocutor;
- Ask student to signal what he/she understood;
- Now, ask student to share with a colleague her/his answer;
- Ask him/her to use the sentences to write sentences about every scientist and share with a partner.
- c) For this activity, ask students to read the role cards found in Activity 2e.
- Ask interlocutor to signal to the student what he/she needs to make: 1) review the word bank notebook about the vocabulary of science; 2) Show the new vocabulary about WH questions and ask student to make a draw representing each WH as a model. This chart will support him/her to do other activities. It is important to put the chart in the word bank notebook.

WHY	wнo	WHEN	WHAT	ноw	WHERE	
It is the reason something happened.	It is a person.	It is the time.	It is a thing or an action.	It is a number, or the way something is done.	It is a place.	
DRAW	DRAW shorturl.at/rQ356	DRAW	DRAW	DRAW	DRAW	

d) Tell interlocutor to review the vocabulary learnt until here and ask student to use it to do the activity;

ACTIVITY 4

a) Unscramble the sentences below and check the right order with your teacher. After that, get together with a partner and use the sentences to talk about what each scientist study

1)					
the way	living things	An ecologist	their environmer	studies nt.	interact with
2)					
studies	and	animals	A zoologist	behavior.	their
3)					
algae.		A phycolog	gist	studies	
4)					
the	ocea	n. Aı	n oceanogra _l	oher studie	es
5)					
plants		studies		A botanist	
6)					
the physical	studies	structure A		cesses the l	Earth and
		g	eologist of		
7)					1000 1000
distribution	A hydrolog	the movem		tudies wate	r. quality of
8)					

b) Did you like the fields of science presented in the last activity? Which fields of science would you like to study?

c) Now, research and write on your notebook the necessary tools for your role.

For example:

- ✓ a **botanist** may use a ruler, hand lens, botany field guide, tweezers and collection bag or jar.
- ✓ a hydrologist may use a Secchi disk, water monitoring kit or probe, and so on.
- d) Read the roles of each type of scientist and match them to the ones in the box below.

Oceanographer – Antropologist – Zoologist – Hydrologist – Phycologist – Geologist – Botanist

Role Cards

Ecologist	Describe the biotic components of the ecosystem. Study how the biotic components of the ecosystem are organized. Study how the biotic components of the ecosystem interact. Study how the biotic components interact with the abiotic components.
	 Study the kinds of animals in the ecosystem. Study how the animals interact with the biotic components. Study how animals interact with the abiotic components. study animals physical and behavioral adaptations.
	Describe the diversity and location of algae in the ecosystem. Study the colors and sizes of algae. Study what the algae attach to in the ecosystem. Study how organisms use the algae. Study evidences of sunlight in the ecosystem.

 Describe the biotic and abiotic components of the ocean ecosystem. Observe if the biotic and abiotic components of the ocean ecosystem are constant or unconstant on a daily, weekly or monthly bases. Study which of those components determine how many and what types of organisms the ocean can support.
 Describe the diversity and location of plants in the ecosystem. Describe the main producers in the ecosystem. Study the needs of the producers. Study the role producers play.
 Describe the general geology of the ecosystem. Observe evidences of major geologic events (earthquakes, volcanic eruptions, mountain building or eroding, or others). Study how the water shape the surface of the ecosystems. Describe the rocks and soil, i.e., color, texture or hardness. Study the impact the soil has on the biological organisms that live on or in it.
 Describe any water or evidence of water in the ecosystem. Based on a visual survey, study why areas in the ecosystem seem to receive more water than other areas. Study the role of rain or other precipitation in the ecosystem. Describe water runoff and drainage in this ecosystem. Study the quality of water (past or present) to be in the ecosystem and why.
Describe any signs of human influences on the ecosystem and describe them as positive or negative. Study the differences of the ecosystems today compared to three hundred years ago. Study actions people can take to make human influences on the ecosystem more positive.



ACTIVITY 5

For this activity, ask students to make groups of four. They can also do it individually if they feel comfortable to. Students are going to create a fictional scientist character and then make a video presenting themselves as their characters. They need to describe the science field, the routine, the equipment and curiosities about the scientist they chose.

- Ask students to choose a scientist to create the character;
- Ask students to make a video of their characters presenting themselves and their professions;
- Stablish a date for the students to present their videos;

Curricular Adaptation - Activity 3

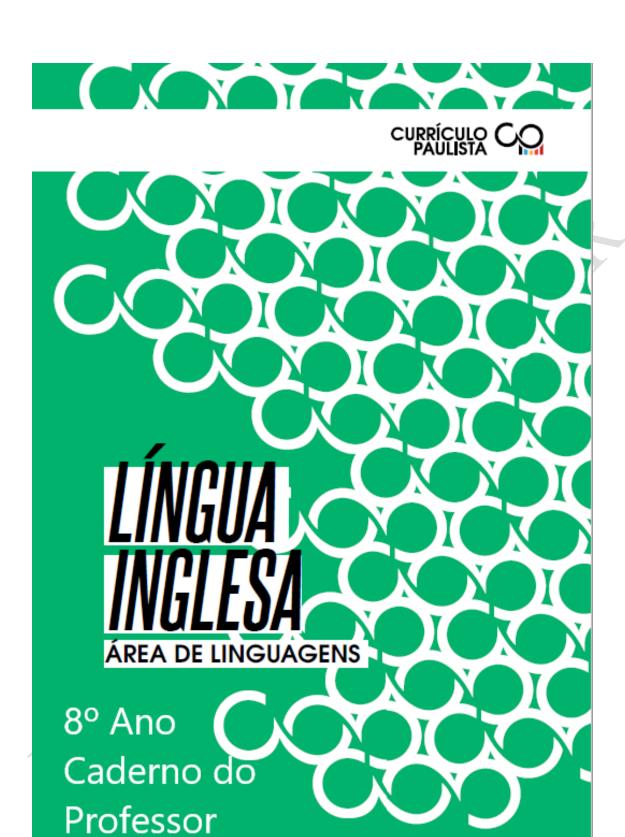


- Ask interlocutor to provide the interaction with the class;
- > Tell deaf student to participate using sign language in the video and write the caption of his/her part in English;
- > Tell deaf student to use the word bank to do the caption of the video.

ACTIVITY 5

a) Create a character about the scientific area you have chosen. Talk about the things you would like to study as a scientist and present it in a video format. Talk about your routine, the lab you work, the projects you are working with and so on. You can use the following text as an example.

Hello, my name is Jeniffer. I am an ecologyst. I study the way living things interact with non-living things in their environment. I work in many types of habitats. I observe plants and animals to see how they interact.



TEACHER'S GUIDE Water - 8° ano EFAF - 1° Volume

This Volume has activities to be developed during the first two months of the school year. Besides the Student's Learning Guide with directions in each activity (remember you can add or adjust the activities according to the needs of the group), you will find in the box below explanations about the approach / methodology as well as the skills / abilities needed to be developed by students aligned to Currículo Paulista and Base Nacional Comum Curricular. You will also find Adaptação Curricular para o estudante Surdo which brings important suggestions that will help you while preparing/adapting your lessons.

Adaptação Curricular para o estudante Surdo



Olá, professor! Este material traz sugestões de **adaptações curriculares** para o desenvolvimento das atividades para os alunos Surdos.

As adaptações estão identificadas em caixas de texto com títulos azuis e um ícone criado para este material que representa as identidades surdas, pois neste universo, temos estudantes que são seres individuais e compartilham da Língua de Sinais para se comunicarem e também adquirir uma segunda língua, neste caso, a Língua Inglesa.

Quando pensamos em adaptação curricular é necessário ter em mente que são ajustes realizados no plano de aula quanto ao objetivo, metodologia e avaliação. Ao preparar a aula, precisa-se de uma intencionalidade do professor para a turma e outra para o estudante com deficiência.

Diante disso, vamos refletir sobre um possível caminho a percorrer quando nos referimos ao ensino de língua estrangeira para estudantes Surdos:

- O Peça ao estudante que providencie um caderno para ser utilizado como banco de palavras.
- O Converse com o **interlocutor** sobre a função deste caderno. Durante as aulas, o interlocutor, orientado pelo professor, auxiliará o estudante na construção do conceito (significado e significante) de cada vocábulo em língua estrangeira, sendo registrado no banco de palavras, que ao longo do ano será utilizado como fonte de consulta para a realização de atividades.
- O Defina qual será o vocabulário enfatizado durante a aula. Separe o vocabulário por classe gramatical, a princípio inicie com substantivos e verbos e com o passar do tempo inclua as demais de acordo com a sua intencionalidade, pronomes, adjetivos, advérbios e numerais, (Cabe pontuar que em Libras usa-se poucas conjunções, preposições e artigos, pois estão incorporados às palavras que se referem).
- Ao longo da aula **defina com o estudante e o interlocutor** uma cor para a classe gramatical que estará em estudo, pois será utilizada no decorrer das aulas subsequentes.
- O estudante deverá pintar a palavra, o interlocutor fará a construção em libras do significado do vocábulo e só então a palavra nova irá para o banco de **palavras do estudante.**
- O segredo não é pintar muitas palavras ou todas de determinada classe gramatical em um único dia, mas a qualidade da discussão e construção do significado, para isso, utilize recursos visuais, vídeos, imagens e ou simulações de cenas teatrais com a participação dos estudantes ouvintes promovendo o engajamento do estudante surdo. Estimamos que se o estudante apropriar-se de cinco (5) palavras em uma aula, ao longo de um bimestre, dezesseis (16) aulas, serão oitenta palavras (80), que ao longo do ano se tornarão duzentas e quarenta (240). Depois que ele apropriar-se deste movimento, o céu será o limite. Esta estratégia pode ser utilizada com a turma toda!

- Quando a palavra já estudada aparecer em aulas posteriores, não deverá ser pintada, mas consultada no banco de palavras e neste momento é hora de verificar se houve a apropriação do vocabulário.
- Por fim, COMEMORE com seu estudante cada conquista! Eleve a autoestima dele construindo laços de afetividade. Desta forma, o aprender será prazeroso e permanente, pois o que toca a emoção, negativamente ou positivamente é perpetuado.

Acesse o link abaixo para entender um pouco mais:

https://youtu.be/ZXFJ-QarZPo

STUDENT'S LEARNING GUIDE

By the end of the lesson(s), you will be better able to:

Culture/Content/Cognition (Learning Outcomes)

- Recognize how we use fresh water;
- Use vocabulary related to sources and uses of water;
- Use informational texts and infographics as sources of data for a report about sources
- of water:
- Summarize the main idea of informational texts about water;
- Identify cognates and root words;
- Identify the suffixes in words related to water;
- Identify the treatment processes of water;
- Identify different sources and types of water.

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Language of learning:

(Key Vocabulary)

- Water, water supply, ground water, salt water, fresh water, surface water
- Rivers, lakes, swamps, oceans, ice
- Home, town, country, world
- Condensation
- Conservation, watershed, well purification, sediment, filtration
- Flow
- Irrigation
- Pollution
- Agriculture, Population,
- sewage, waste, toxic

Language for Learning:

(Functions & Structures)

- Sources: rivers, lakes,
- Types of water: ground water, salt

water, fresh water.
comes from .

Compare:

- This ___ is similar to/ different from because
- We use it for_____
- We can use to
- The gets dirty because
- We can use to
- The ____ gets dirty because_

Language through Learning

(Incidental & Revisited (Recycled)

Language During the Lesson)

- Gallon
- Billion
- percent
- litre
- militer
- Water cycle
- liquid
- vapor

 Access, supply, quality, desalination. 	We can	

Instruments for Assessment

(how you will measure if outcomes met)

If your interac with partners/groups;

- If you successfully identify sources of water;
- If you successfully relate words which have relationship with water and places we use fresh water;
- If you successfully express yourself orally about water usage and conservation;
- If you successfully ask/answer questions about "Water on Earth";
- If you successfully summarize a text about "Water on Earth";
- If you successfully create a presentintion to explain how people obtain fresh water;
- If you successfully do and present the experiment in Activity 16.

Adapted from a Lesson Plan Template from Arizona State University (2019)



The template above contains some concepts taken from Content and Language Integrated Learning - CLIL. It is an approach or method, which integrates the teaching of content from the curriculum with the teaching of a non-native language. CLIL sometimes is referred to '4 Cs' as components:

Culture - The role of culture, understanding ourselves and other cultures is an important part of the CLIL approach. We want to develop learners who have positive attitudes and who become aware of the responsibilities of global as well as local citizenship.

Content - CLIL develops cross-curricular links among different subjects. Teachers need to analyse content for its language demands and to present content in an understandable way.

Cognition - CLIL promotes cognitive or thinking skills, which challenge learners. These skills include reasoning, creative thinking and evaluating. Teachers need to analyse thinking processes for their language demands and to teach learners the language they need to express their thoughts and ideas.

Communication - Learners have to produce subject language in both oral and written forms. Students need to be encouraged to participate in meaningful interaction in the classroom.

There are three parts on Student's Learning Guide:

- 1. "Culture/Content/Cognition (Learning Outcomes)" indicates teaching aims that will be developed by students. In the cognitive process students will develop aims to integrate culture, content and communication¹.
- 2. "Communication" follow the idea from Michael Halliday(1976) that identifies three major simultaneous relationships between language and learning.

¹ The text was adapted from BENTLEY, K. The TKT Course CLIL Module. Cambridge University Press, 2010.

- Language OF learning uses language coming from the content areas such as science or social studies. It involves the type of discourse used by experts such as mathematicians, historians, and scientists. This can be modeled, collaboratively constructed, and finally used independently through a gradual release of responsibility sequence (Fisher and Frey, 2013; Gibbons, 2009). This includes vocabulary.
- Language FOR learning identifies the purpose for using the language. These are language functions such as speech acts used in comparing, summarizing, describing concepts and processes. They can be introduced in the form of sentence frames (i.e., It is ... in.... / If ..., then,...) (Kinsella, 2013; Shafer Willner, 2013).
- Language THROUGH learning is developed on demand, within the learning task. This type of language is supported within dialogic, academic conversations because it is recycled, practiced, and becomes more precise the more it is used (Zwiers, 2014).
- 3. "Instruments for Assessment" this part, suggests a different focus of assessment on areas of subject content and on communication skills, cognitive skills and practical skills. Teachers need to put learners at the centre of the process and to find out what standards are achievable when they study subject content in non-native language². It is important to make sure your objectives, learning activities, and assessment indicators are aligned. You assess the learning objectives, not the activities.

A INTERFACE ENTRE A LÍNGUA INGLESA E OUTRAS ÁREAS DO CONHECIMENTO

² The explanation is part of the "Theoretical Framework - English for STEAM, initially prepared by Barbara Noel, EL Specialist for the Curricular Action 'A Interface entre a Língua Inglesa e outras Áreas do Conhecimento para o empoderamento do Jovem Cientista'.

Base Nacional Comum Curricular - Currículo Paulista - Língua Inglesa Habilidades

(EF08LI01) Fazer uso da língua inglesa para resolver mal-entendidos, emitir opiniões e esclarecer informações por meio de paráfrases ou justificativas.

(EF08LI03) Construir o sentido global de textos orais, relacionando suas partes, o assunto principal e informações relevantes.

(EF08LI06) Apreciar textos narrativos em língua inglesa (contos, romances, entre outros, em versão original ou simplificada), como forma de valorizar o patrimônio cultural produzido em língua inglesa.

(EF08LI09) Avaliar a própria produção escrita e a de colegas, com base no contexto de comunicação (finalidade e adequação ao público, conteúdo a ser comunicado, organização textual, legibilidade, estrutura de frases).

(EF08LI11) Produzir textos (comentários em fóruns, relatos pessoais, mensagens instantâneas, *tweets*, reportagens, histórias de ficção, blogues, entre outros), com o uso de estratégias de escrita (planejamento, produção de rascunho, revisão e edição final), apontando sonhos e projetos para o futuro (pessoal, da família, da comunidade ou do planeta). (EF08LI13) Reconhecer sufixos e prefixos comuns utilizados na formação de palavras em língua inglesa.

(EF08LI17) Empregar, de modo inteligível, os pronomes relativos (who, which, that, whose) para construir períodos compostos por subordinação.

(EF08LI19) Investigar de que forma expressões, gestos e comportamentos são interpretados em função de aspectos culturais.

Base Nacional Comum Curricular - Currículo Paulista - Ciências Habilidades

(EF05CI14) Comunicar por meio da tecnologia a importância das ações sustentáveis para a manutenção do equilíbrio ambiental na comunidade em que vive, como um modo de intervir na saúde coletiva.



- At this moment, the deaf student uses the bank of words with the interlocutor help, already explained in the guide on the introduction text.
- Ask the student to use his/her word bank notebook;
- Talk to the interlocutor how you want that student do the words' selection;
- Together (teacher, interlocutor and the student) settle a color pencil to each part of the speech to paint words that will be learned, used along classes.
- Ask the interlocutor to help the student with the word bank construction;
- The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook. This word bank will be used along the year for consult and to do activities.



Warm up

This activity can be done in pairs or individually.

- Elicit from students what they know about water usage in our planet;
- Ask if they know how much of Earth's water is drinkable;

Curricular Adaptation - Activity 1

Ask to the interlocutor to show the image of the earth globe and give others questions about the lesson's theme like this: The planet's surface is covered in water. Where can we see water? What kind of water can we use? After that, the interlocutor can promote the interaction with the hearing students in Brazilian Sign Language.

ACTIVITY 1

a) Fill the first and second columns of the KWL Chart about the water on Earth

	KWL Chart – Science	
What I know	What I want to know	What I have learned



ACTIVITY 2

- a) In this activity, students need to match each description to the correct picture.
 - First, let students try to do the exercise by themselves. If necessary, give them dictionaries so they can research the words they don't know;
 - Correct the activity with students. Read together each description and ask to which picture they related them;
 - Ask students if they know what each picture represents. They may give answers like: river, ice, lake, ocean, well and swamp;
- b) This activity can be done in pair or small groups.
 - Ask students to make sentences relating the pictures on the last activity as sources of water.
 - Ask each pair/group to read one of the sentences they wrote.

Curricular Adaptation - Activity 2

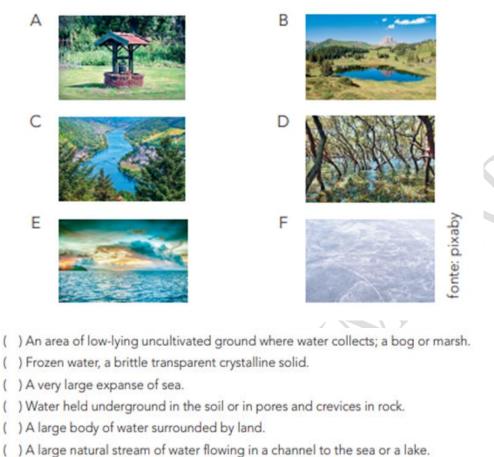


- Teacher, at this moment, the deaf student uses the bank of words with the interlocutor help, already explained in the guide on the introduction text.
- ➤ Ask the student to use his/her word bank;
- > Tell the interlocutor how you want that student to do the words selection;
- > Together (teacher, interlocutor and student) settle a color pencil for each part of the speech to paint words that will be learned and used along classes.
- Ask the interlocutor to help the student with the word bank construction;
- The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank. This word bank will be used along the year to consult and to do activities.
- ➤ Use the Brazilian Sign Language to help the deaf student match each image with its meaning and to promote the interaction with the hearing students.
- ➤ Pay attention on frames given as model, *Ice* is a source of *water*.
- ➤ If you judge necessary, you can ask the deaf student to construct a TO BE verb organizer in the word bank notebook to consult later like the model:



ACTIVITY 2

a) Water is distributed through different sources. Match each image with its definition



b) In pairs, write and talk to you partner about the sources of water as in the model:

Model: The ice is a source of water.



ACTIVITY 3

- Ask students to complete the mind map with the sources of water they learned about in Activity 2a;
- Read each word to the students and ask them to repeat.

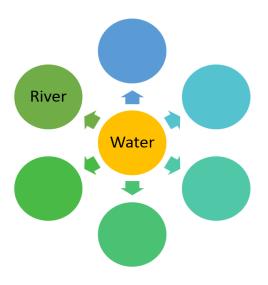
Curricular Adaptation - Activity 3



Now, it is time to go back to the word bank notebook for consult and make the activity.

ACTIVITY 3

a) Look at the following mind map with sources of water. Relate them to the images on the previous activity and complete it.





This activity can be done in pairs, or individually.

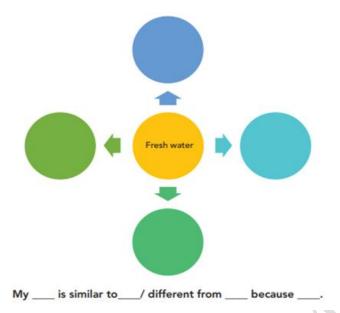
- Ask students to complete the mind map with the places where they use water;
- After that, ask them to compare their mind maps to see if they have the same answers;
- Ask students to use the example in order to declare if their answers were similar or different from their friends.

Curricular Adaptation - Activity 4

Show to the deaf student that **he** or **she** will use the frame similar as **My** ____ is similar to___/ different from ___ because ___ in others situations, so it is necessary to understand how it works. Add new words in the word bank notebook

ACTIVITY 4

a) There is a large amount of water on the planet, but only 3% of that is fresh water. 97% is found in the oceans. Let's brainstorm the places where people use fresh water and write them on the mind map. After that compare with your friends and find similarities.





Before starting this exercise, glue each question on the walls of the classroom. One on each corner.

- Ask students to walk to the corner with the question they know how to answer;
- Go to each corner and ask the students the questions, let everyone answer;
- Ask students who answered the same question to sit down and make posters with the answers they gave;
- Glue their posters on the wall.

Curricular Adaptation - Activity 5

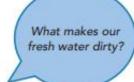


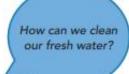
The 4 corner activity can make the difference on relationship, so the interlocutor will use the Brazilian Sign Language to integrate the students and promote the socio-emotional competence learning. When the students do conversation activities, the interlocutor can teach some signs to the hearing students in order to improve the interaction with the deaf student and exercise the empathy.

ACTIVITY 5

- a) We are going to do a 4 corner activity. You will see four questions on the wall and your teacher is going to ask each one of them.
- 1. Go to the corner that you know how to answer the question.
- 2. After doing this activity, in groups, reflect about the questions and make a poster.











ACTIVITY 6

In this activity, students will learn about the water usage in our planet and identify cognate words.

- Ask students to read the infographic;
- Ask students to circle the cognate words they found during the reading;
- Ask students the words they found and write them on the board. Discuss with them the similarities these words have with Portuguese;
- Read the infographic to students and ask them to repeat after you.

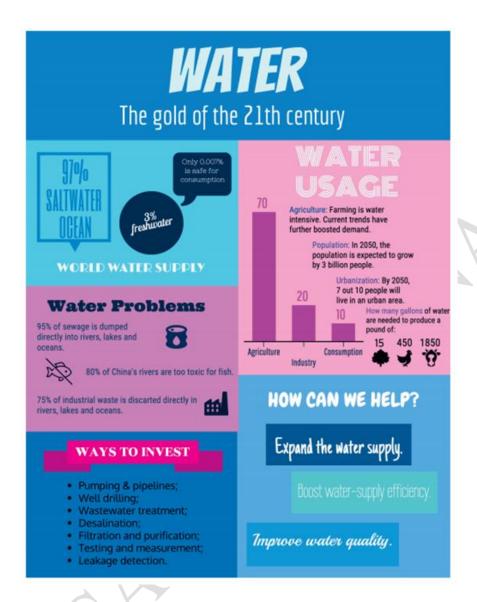
Curricular Adaptation - Activity 6



Working with the words that he /she knows. If the student does not have proficiency in Portuguese language, do not work cognates words, only search to known words.

ACTIVITY 6

a) Read the infographic and circle the cognate words.



b) Now, complete the chart with words, from the infographic, written with suffixes:

Root words	Suffixes
Direct	- ly



- Discuss with students the importance of suffixes and prefixes both in English and Portuguese language;
- Ask students to complete the chart with the words they found in the infographic separating the ones built with suffixes or prefixes;
- Ask students to read their answers and make a big chart on the board;
- Read every word in the chart and ask students to repeat after you.

Curricular Adaptation - Activity 7



- To explain the concept of suffixes and prefixes you can use images, because the deaf student is visual and it is interesting to put into word bank notebook too. Example:
- > You can ask the student to make others examples.

New vocabulary	Prefixes	Root word	Suffixes
Saltwater Esta Foto de Autor Desconhecido está licenciado em CC BY-NC-	Salt Esta Foto de Autor Desconhecido está licenciado em CC BY-NC	Water Esta Foto de Autor Desconheido está licenciado em C. BY-SA	
Watershed Westershed Watershed	Water Esta Foto de Autor Desconhecido está licenciado em CC BY-SA	Shed Esta Foto de Autor Desconhecido está licenciado em CC.BV-SA	

ACTIVITY 7

a) Complete the definitions of different types of water and sources with the words in the box.

river - lake - oceans - aquifers - ground water - salt water - fresh water - river

Ais a watercourse, usually fresh water, that flows by gravity toward an ocean, a lake, a sea, or another
2)are large amounts of salt water that covers almost three quarters of the Earth's surface, is divided by continents and large archipelagos.
3) Ais a natural depression on Earth's surface that permanently contains a variable amount of water.
4) In geology is consideredall that water that occupies all the empty spaces of a geological formation, the so-called Ground water is formed by surplus rainwater.
5) around the world has a salinity close to 3,5%, which means that for every liter of seawater there are 35 grams of dissolved salts, most of which are sodium chloride. Seawater has no uniform salinity around the globe.
6) Water is an abundant renewable natural resource that occupies approximately 70% of our planet's surface. However, 97% of this water is salty and therefore unfit for consumption. Less than 3% of the planet's, of which 2.5% is trapped in glaciers. Of the remaining 0.5% of water in the world, most are trapped in ground water aquifers, making human access difficult.



- Ask students to complete the sentences with the right words from the box;
- Read each sentence and ask students the words they used to complete them;
- Ask students if they know the difference between saltwater and freshwater;
- Read the complete sentences again and ask students to repeat after you.

Curricular Adaptation - Activity 8



- > Separate the keywords that are necessary to the deaf student understand the text and work with the word bank notebook;
- > Go back to the chart of curricular adaptation about suffixes and prefixes and ask the student to explain in sign language or construct with him/her the significant again.

ACTIVITY 8



https://pixabay.com/pt/images/search

a) Work with a partner. You are going to make a flash card of the following words: rivers, lakes,

oceans, aquifers, ground water, salt water and fresh water to ask about ...

For example:

<u>Lake</u> is a source of <u>ground water</u> Ground water comes from the rain.

- 1. Play odds and evens to see who will start;
- 2. Each player choose a card that is on the table, answer the source and origin (come from), after that the player return the card to the game and the other player goes on. The card that appears twice must be removed from the table.
- 3. Go ahead until all cards were explored.
- b) Write the sentences that you elaborated with the flashcards on your notebook



This activity can be done in small or big groups.

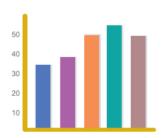
- Ask students to make flash cards writing all the sources of water they studied so far;
- Ask students to follow the instructions of the game and write on their notebooks the answers every player give during the game;
- Ask students to read the sentences they made during the game to the whole class;

Curricular Adaptation - Activity 9



- ➤ In this activity, the deaf student can make the sentences and the construction of the cards with other students. He/she can return to the word bank notebook in order to consult and add new words.
- ➤ It's very important that the interlocutor explain in Brazilian Sign Language and to give time to the student sign what he / she understood. The deaf student will participate of the game in sign language.

ACTIVITY 9



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- a) Work in groups. Now, you are going to make a chart related to the following questions about the information on the Infographic (Activity 6). After that you will present it to the class.
- 1. What is the percentage of salt water on Earth?
- 2. What is the percentage of fresh water on Earth?
- 3. What is the percentage supply of water to agriculture?
- 4. What is the percentage supply of water to Industry?
- 5. What is the percentage supply of Personal consumption?
- 6. What is the roughly percentage of sewage in the developing world is dumped directly into rivers, lakes and coastal waters?
- 7. What is the percentage in the China's rivers that are toxic?
- 8. What is the percentage of industrial waste discarded directly into rivers, lakes and coastal waters?
- b) Present your chart to the class and compare it to your friends?

Follow the example: The percentage of _____ on Earth is _____. The percentage of _____ is ____.



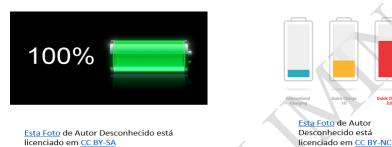
This activity can be done in small or big groups.

- Ask student to go back to Activity 5 in order to gather all the information in the infographic and make a graph with them;
- Tell students that the graph must have all the information asked in the questions;
- Ask each group to present their graph;
- Ask students to compare the information every group gathered to see if they are the same or different.

Curricular Adaptation - Activity 10



- > First, you need to explain the concept of percentage. Comparing with the battery of a cellular;
- > Secondly, answer the questions using the word bank notebook and the Brazilian Sign Language.



ACTIVITY 10

a) You have learned how important water is to life on Earth. Read the following text and write on slips of paper two words that you already know and two words that you've never seen.

Glue the slips of paper on the Word Wall in the classroom and search the meaning of the words you don't know on a dictionary

Earth is well known as the "water planet". That's because three-fourths of our planet's surface is covered by water. Every year, more and more people are born. They cause dirt to get into Earth's water and use it for many things. For all there reasons,

fresh water became the most precious

resource for living in our planet.



HOW TO SAVE WATER

- · Take short showers;
- · Water the plants and flowers in the evening;
- Store rainwater for plants and house cleaning;
- · Pay atention for leakings;
- Turn off the water when you brush your teeth;
- Don't forget to turn off the water when you stop using it.



- b) On your notebook, answer the questions according to the text.
- 1. Why is Earth called the water planet?
- 2. What is the most precious resource for living on Earth?
- 3. What do you do at your home to save water?



Before starting this activity, prepare a word wall in the classroom so the students can glue the words from this activity.

- Ask students to read the text and circle/write the words they don't know;
- Read the first text with the students and discuss the importance of freshwater for all living things in the planet;
- Read the second text and discuss with students the actions we can do to save water at home, at school and at work;
- Ask students the words from the text they don't know, explain them and then glue the words on the word wall.
- Read the text again and ask students to repeat after you.

Curricular Adaptation - Activity 11



- Ask the deaf student to: a) read the text; b) search the words that he/she already studied on word bank notebook; c) signal what he/she understood.
- > The interlocutor can interpret the text for the student.
- Ask the deaf student to write on slips of paper two words that he/she already know and two words that he/she has never seen. Glue the slips of paper on the Word Wall in the classroom.

ACTIVITY 11

a) In a Summary Outline you identify main ideas and important words of a text. In groups, your teacher will give you one of the following texts. Read the text and make the summary outline on your notebook.



There are three states of matter in Only a little amount of the Earth's water is fresh water and easy to find. Most of the our planet: gas, liquid and solid. The water is a substante capable of fresh water is in mountains glaciers and in changing into these three states. Vapor polar ice, which can't be easily used. is water in it's gas state. The water in At home, we use fresh water for many it's liquid state is the one we drink and things, like cooking, cleanning, watering we see falling as rain. In it's solid state, plants, drinking and etc. It is also used at we call it ice. labors and industries for the production of The water is always changing it's many products. state as it moves all around the planet. Although there is a lot of water in the This movement is called "Water cycle". planet, people are born every day around the globe, so it is predictable that at some point we all may struggle for water. 83% 17% Agriculture and Power Generation Home & Industry

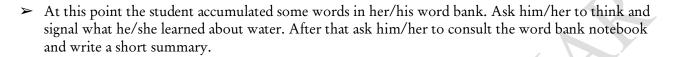
- b) Now that you and all the other groups finished the summary, you are going to be divided into four new groups. Each group will have one team member from each of the teams. Each member of the group is responsible for teaching the rest of the group what he/she has learned from his/her team assignment.
- c) Finally, you and your group will answer the following questions:

Questions	Answers
How do we use fresh water?	
In what state is found most of the fresh water?	
How can we clean our fresh water?	
What can we do to conserve water?	



- Ask students to go back to the text in the previous exercise and identify the keywords;
- Ask students to use the keywords to write a short summary on their notebooks. If necessary, write an example on the board so the students can follow;
- Ask students to read their summaries;

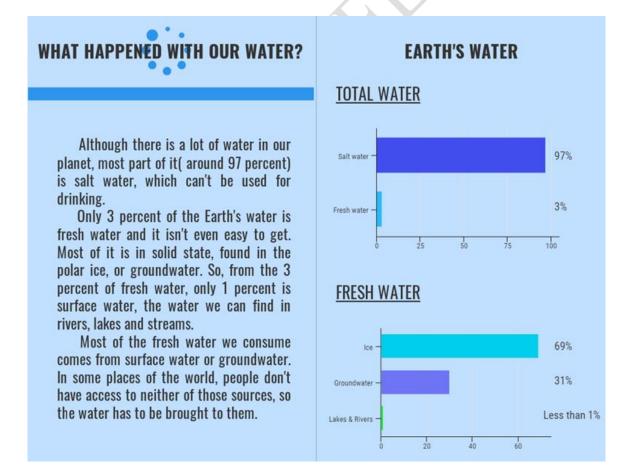
Curricular Adaptation - Activity 12





ACTIVITY 12

- a) Your teacher is going to read an article about water. Write down the key words in your notebook.
- b) Now, you are going to read the article your teacher has read and make a mind map, like the one in Activity 3a, around the word "Earth's water".



c) Now, present and compare it to your friends



- a) This activity can be done in small or big groups.
 - Divide the class so you have an even number of groups;
 - Give the texts to the groups in order to have the same number of groups with text 1 and the same with text 2;
 - Ask students to write a short summary of the text they received;
- b) For this activity, rearrange the groups so each group have equal members who have worked with text 1 and 2.
 - Ask students to share the information they collected from each text in order to make a collaborative and complete final text;
- c) For this activity you can keep the initial formation of groups, or the second one.
 - Ask students to answer the questions in the chart;
 - Ask students to present their answers.

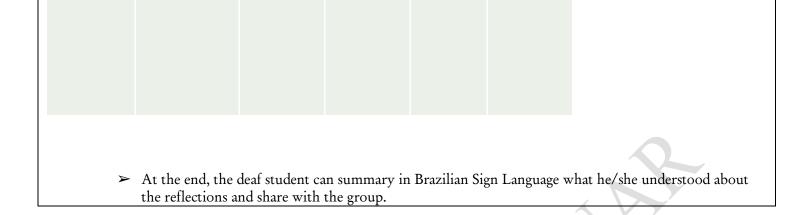
Curricular Adaptation - Activity 13



- At this moment, the deaf student uses the bank of words with the interlocutor help, already explained in the guide on the introduction text.
- Ask the interlocutor to explain to the deaf student that he/she needs to construct (DRAW) in her/his word bank a chart with the WH questions, the purpose is to give resources to consult in other moments and contribute for his/her independence learning.

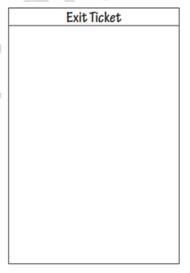
Example - Chart:

WHY	WHO	WHEN	WHAT	HOW	WHERE
It is the reason something happened.	It is a person.	It is the time.	It is a thing or an action.	It is a number, or the way something is done.	It is a place.
DRAW	DRAW shorturl.at/rQ356	DRAW	DRAW	DRAW	DRAW



ACTIVITY 13

a) You are going to receive an Exit Ticket like the one you see here. Write on it what you learned so far about water.



- b) Discuss with your friends about it
- c) Glue your ticket on the Exit ticket wall in the classroom.



- a) This activity can be done individually or in pairs.
 - Ask students to pay attention to the reading you are going to make of the text in Activity 13b;
 - Ask students to write on their notebooks the keywords as they listen to the reading;
 - Read the text a second time and ask students to repeat after you;
 - Ask students to read the words they selected as keywords and write them on the board;
 - Ask students what they think the text is about and discuss about it.
- b) This activity can be done individually.
 - Ask students to read the text again in order to find words to complete a mind map about Earth's water;
 - Ask students to make a mind map on their notebooks. They can use the one in Activity 3 as an example, but the central word this time must be Earth's water;
- c) This activity can be done in pairs or small groups.
 - Ask students to compare the mind maps they created to their colleagues';
 - Ask students to verify the different words they chose and add those they judge correct to their own mind map;
 - Ask students to present their mind maps to the class.

Curricular Adaptation - Activity 13

- The interlocutor will signal the text to the deaf student, after that, the deaf student will read the text using the word bank to solve doubts and to try understand it. Do not forget to add new words in the word bank. Finally, the deaf student will make a mind map about it and add new words in the word bank notebook.
- ➤ Ask the student to show to his/her friends the mind map.

ACTIVITY 14

a) Listen to the reading your teacher is going to make of the text "What happened with our Water". You will reconstruct what you hear through a Dictogloss activity.

Instructions:

- 1. In pairs. Listen, but don't write anything.
- 2. Write down what you can remember in the first column.
- 3. Ask your partner what he/she remember and complete the second column.
- 4. Compare the first and the second column and then write a final version in the third column.

1st column	2nd column	3rd column

b) Now, on your notebook, use your notes to rewrite the text. It doesn't need to be exact, but as close as possible to the original text you heard (and read a while back).



ACTIVITY 15

- a) This activity can be used as an assessment to all the content students have studied. Before starting, glue an exit ticket poster on the wall, so the students can glue their tickets.
 - Ask students to write an exit ticket, which is a summary of everything they have learned so far about water (you can print the exit ticket, or ask them to make one like the model);
- b) This activity can be done in pairs or small groups.
 - Ask students to compare their exit tickets and discuss about what each one wrote;
 - Ask students to revise their exit tickets.
- c) Ask students to glue their exit tickets on the poster.

Curricular Adaptation - Activity 15

Make a review about the water theme, ask the student to use the student's word bank to think about what he/she will discuss with his/her friends.

ACTIVITY 15

a) In groups. Based on all the texts you read so far, answer the following questions using a data table:

Data Table

Guiding Question	Answer #1	Answer #2	Answer #3
How do we use fresh water?			
What makes our fresh water dirty?			
How can we clean our fresh water?			
What can we do to conserve water?			



ACTIVITY 16

- a) This activity can be done in pairs. It is a dictogloss activity where the students are going to reconstruct a text based on the reading you are going to make.
 - Ask students to pay attention to your reading of the text in Activity 13b. The students shouldn't write anything at this moment;
 - Now, ask students to write the information they remember in the first column of the chart;
 - Ask students to compare the things they remember with their pairs;
 - Ask students to write in the second column what their partners wrote;
 - Ask students to compare the first and second columns in order to write in the third column only the different information they gathered.
- b) Individually, ask students to open their notebooks. Now, they are going to reconstruct the text.
 - Ask students to rewrite the text using the information they gathered on the third column of the last exercise;
 - Tell students that their texts don't have to be exactly like the original;
 - Ask students to read their texts to the class.

Curricular Adaptation - Activity 16



- Ask the interlocutor to signal the text that you will read and all the instructions about the dictogloss activity. The deaf student will add new words on the word bank notebook.
- Finally, the deaf student will rewrite the text using the word bank. Teacher, this exercise is necessary to the student, because it promote a moment to go back and rethink his/her learning.

ACTIVITY 16

- a) As you could see in this Unit, fresh water is essential for life on Earth. The fresh water we use at home goes through a filtration process so it becomes drinkable. But did you know you can build your own water filter? In groups, get prepared for the activity. You will need:
- One plastic bottle;
- Small stones:

- Cotton or coffee filters;
- Clean sand;
- Activated charcoal;
- One drinking glass;
- Water;
- Gardening dirt.
- b) Now, follow the instructions to make the water filter.
- 1. Cut off the botton of the plastic bottle;
- 2. Put the bottle upside down in the drinking glass;
- 3. For the first layer of the filter, place the cotton so you have a two-inches layer;
- 4. Add the activated charcoal (1inch/2,54 cm);
- 5. Add the small stones (2 inches);
- 6. Add the clean sand (4 inches);
- 7. For the final layer, use the small stones again (3 inches);
- 8. Now, you have your own water filter!
- c) It's time to test your water filter. Mix some gardening dirt in a glass of water and pour it in the filter. Now, watch the water drip into the glass. DON'T DRINK IT, compare the result with a glass of water from a faucet.
- d) Did your water filter work? Share your results. You can use the following text as an example:

Our experiment	(worked/didn't work)	
The water that drippe	d from the filter clean. (was/wasn't)	
As you can see, it	like the water from the faucet. (looks/doesn't look)	
The experiment	a success. (was/wasn't)	

TEACHER'S GUIDE

Engaging in energy - 9° ano EFAF - 1° Volume

This Volume has activities to be developed during the first two months of the school year. Besides the Student's Learning Guide with directions in each activity (remember you can add or adjust the activities according to the needs of the group), you will find in the box below explanations about the approach / methodology as well as the skills / abilities needed to be developed by students aligned to Currículo Paulista and Base Nacional Comum Curricular. You will also find Adaptação Curricular para o estudante Surdo which brings important suggestions that will help you while preparing/adapting your lessons.

Adaptação Curricular para o estudante Surdo

Olá, professor! Este material traz sugestões de **adaptações curriculares** para o desenvolvimento das atividades para os alunos Surdos.

As adaptações estão identificadas em caixas de texto com títulos azuis e um ícone criado para este material que representa as identidades surdas, pois neste universo, temos estudantes que são seres individuais e compartilham da Língua de Sinais para se comunicarem e também adquirir uma segunda língua, neste caso, a Língua Inglesa.

Quando pensamos em adaptação curricular é necessário ter em mente que são ajustes realizados no plano de aula quanto ao objetivo, metodologia e avaliação. Ao preparar a aula, precisa-se de uma intencionalidade do professor para a turma e outra para o estudante com deficiência.

Diante disso, vamos refletir sobre um possível caminho a percorrer quando nos referimos ao ensino de língua estrangeira para estudantes Surdos:

- Peça ao estudante que providencie um caderno para ser utilizado como banco de palavras.
- Onverse com o interlocutor sobre a função deste caderno. Durante as aulas, o interlocutor, orientado pelo professor, auxiliará o estudante na construção do conceito (significado e significante) de cada vocábulo em língua estrangeira, sendo registrado no banco de palavras, que ao longo do ano será utilizado como fonte de consulta para a realização de atividades.
- O Defina qual será o vocabulário enfatizado durante a aula. Separe o vocabulário por classe gramatical, a princípio inicie com **substantivos e verbos** e com o passar do tempo inclua as demais de acordo com a sua intencionalidade, **pronomes, adjetivos, advérbios e numerais,** (Cabe pontuar que em Libras usa-se poucas conjunções, preposições e artigos, pois estão incorporados às palavras que se referem).
- Ao longo da aula **defina com o estudante e o interlocutor** uma cor para a classe gramatical que estará em estudo, pois será utilizada no decorrer das aulas subsequentes.
- O estudante deverá pintar a palavra, o interlocutor fará a construção em libras do significado do vocábulo e só então a palavra nova irá para o banco de **palavras do estudante.**
- O segredo não é pintar muitas palavras ou todas de determinada classe gramatical em um único dia, mas a qualidade da discussão e construção do significado, para isso, utilize recursos visuais, vídeos, imagens e ou simulações de cenas teatrais com a participação dos estudantes ouvintes promovendo o engajamento do

estudante surdo. Estimamos que se o estudante apropriar-se de cinco (5) palavras em uma aula, ao longo de um bimestre, dezesseis (16) aulas, serão oitenta palavras (80), que ao longo do ano se tornarão duzentas e quarenta (240). Depois que ele apropriar-se deste movimento, o céu será o limite. Esta estratégia pode ser utilizada com a turma toda!

- Quando a palavra já estudada aparecer em aulas posteriores, não deverá ser pintada, mas consultada no banco de palavras e neste momento é hora de verificar se houve a apropriação do vocabulário.
- Por fim, COMEMORE com seu estudante cada conquista! Eleve a autoestima dele construindo laços de afetividade. Desta forma, o aprender será prazeroso e permanente, pois o que toca a emoção, negativamente ou positivamente é perpetuado.

Acesse o link abaixo para entender um pouco mais: https://youtu.be/ZXFJ-QarZPo

By the end of the lesson(s), you will be better able to:

Culture/Content/Cognition (Learning Outcomes)

- Classify renewable and non-renewable energy sources;
- Define energy and related words;
- Classify energy and related words:
- Compare benefits and disadvantages of different kinds of energy.
- Identify the origin of fossil fuels and indicate the main points of its importance;
- Compare pros and cons to an argument based on local or global consumption of energy;
- Produce oral conversations using sentence frames;
- Make predictions, observations and inferences before, during and after their experiments and designs are made;
- Produce a lab report on the new design for using renewable energy;
- Create a design orally and in writing using simple sentences and the future tense.

Communication Language of learning: Language for Learning: Language through Learning (Key Vocabulary) (Functions & Structures) (Incidental & Revisited (Recycled) Language During the Lesson) Energy A is an example of but B is an example of Renewable Do/Does Non-Renewable I will Earth We will _____. Natural Gas, Coal, Oil, Wood, power Wind, Water, Fuel, Fossil Fuels It will ____. Earth \underline{A} uses ____ energy, but B Solar, Windmill, Turbine, Wheels world Pro / Con uses energy. because

- Greenhouse Gases
- Climate Change
- Environment
- Argument
- Pipeline
- Straws, pins, paper, stick, meter, distance, second, estimate, actual
- Weight

- A benefit of burning wood is
- A disadvantage of burning wood is
- Local loggers benefit because
- Local citizens are harmed because
- more than.
- -er than/ -est.
- The went faster than .
- The turbine spins <u>faster</u> with heavier objects. It spins <u>more</u> slowly with lighter objects.
- If the weight is heavy, then the turbine will move more quickly

- teenagers
- youngsters
- Should
- Gated community
- Industry

Instruments for Assessment

(how you will measure if outcomes met)

If you successfully define and classify renewable and non-renewable energy sources.

If you put yourself critically about renewable and non-renewable energy.

If you successfully classify energy and words related.

If you successfully compare benefits and disadvantages of different kinds of energy.

Adapted from a Lesson Plan Template from Arizona State University (2019)



The template above contains some concepts taken from **Content and Language Integrated Learning – CLIL**. It is an approach or method, which integrates the teaching of content from the curriculum with the teaching of a non-native language. CLIL sometimes is referred to '4 Cs' as components:

Culture - The role of culture, understanding ourselves and other cultures is an important part of the CLIL approach. We want to develop learners who have positive attitudes and who become aware of the responsibilities of global as well as local citizenship.

Content - CLIL develops cross-curricular links among different subjects. Teachers need to analyse content for its language demands and to present content in an understandable way.

Cognition - CLIL promotes cognitive or thinking skills, which challenge learners. These skills include reasoning, creative thinking and evaluating. Teachers need to analyse thinking processes for their language demands and to teach learners the language they need to express their thoughts and ideas.

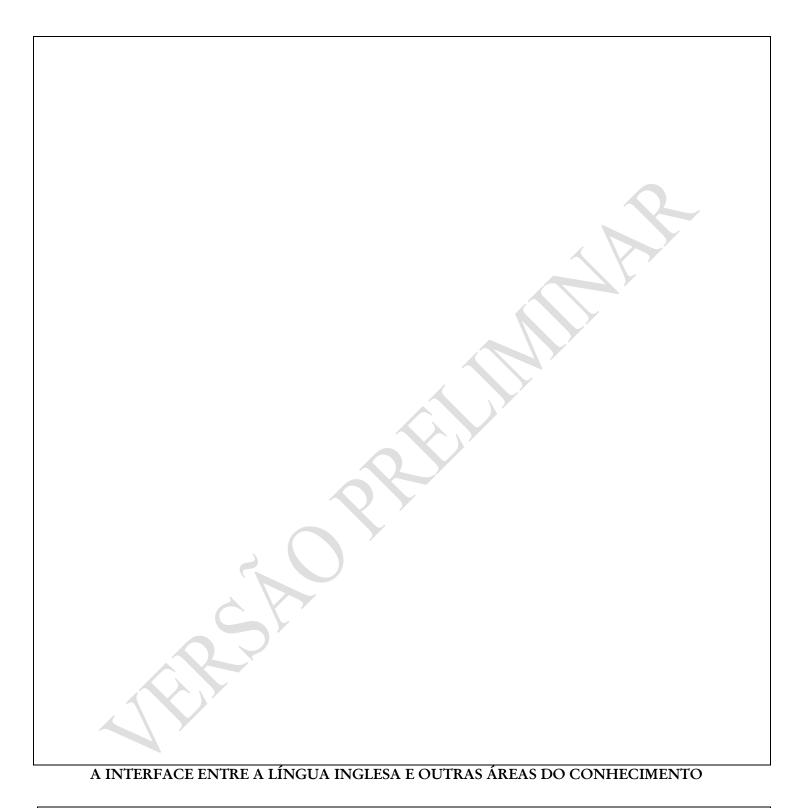
Communication - Learners have to produce subject language in both oral and written forms. Students need to be encouraged to participate in meaningful interaction in the classroom.

There are three parts on Student's Learning Guide:

- 1. "Culture/Content/Cognition (Learning Outcomes)" indicates teaching aims that will be developed by students. In the cognitive process students will develop aims to integrate culture, content and communication¹.
- 2. "Communication" follow the idea from Michael Halliday(1976) that identifies three major simultaneous relationships between language and learning.
- Language OF learning uses language coming from the content areas such as science or social studies. It involves the type of discourse used by experts such as mathematicians, historians, and scientists. This can be modeled, collaboratively constructed, and finally used independently through a gradual release of responsibility sequence (Fisher and Frey, 2013; Gibbons, 2009). This includes vocabulary.
- Language FOR learning identifies the purpose for using the language. These are language functions such as speech acts used in comparing, summarizing, describing concepts and processes. They can be introduced in the form of sentence frames (i.e., It is ... in.... / If ..., then,...) (Kinsella, 2013; Shafer Willner, 2013).
- Language THROUGH learning is developed on demand, within the learning task. This type of language is supported within dialogic, academic conversations because it is recycled, practiced, and becomes more precise the more it is used (Zwiers, 2014).
- 3. "Instruments for Assessment" this part, suggests a different focus of assessment on areas of subject content and on communication skills, cognitive skills and practical skills. Teachers need to put learners at the centre of the process and to find out what standards are achievable when they study subject content in non-native language². It is important to make sure your objectives, learning activities, and assessment indicators are aligned. You assess the learning objectives, not the activities.

¹ The text was adapted from BENTLEY, K. The TKT Course CLIL Module. Cambridge University Press, 2010.

² The explanation is part of the "Theoretical Framework - English for STEAM, initially prepared by Barbara Noel, EL Specialist for the Curricular Action 'A Interface entre a Língua Inglesa e outras Áreas do Conhecimento para o empoderamento do Jovem Cientista'.



Base Nacional Comum Curricular - Currículo Paulista - Língua Inglesa Habilidades

(EF09LI01) Fazer uso da língua inglesa para expor pontos de vista, argumentos e contra-argumentos, considerando o contexto e os recursos linguísticos voltados para a eficácia da comunicação.

(EF09LI02) Compilar as ideias-chave de textos por meio de tomada de notas.

(EF09LI04) Expor resultados de pesquisa ou estudo com o apoio de recursos, tais como notas, gráficos, tabelas, entre outros, adequando as estratégias de construção do texto oral aos objetivos de comunicação e ao contexto.

(EF09LI10) Propor potenciais argumentos para expor e defender ponto de vista em texto escrito, refletindo sobre o tema proposto e pesquisando dados, evidências e exemplos para sustentar os argumentos, organizando-os em sequência lógica.

(EF09LI12) Produzir textos (infográficos, fóruns de discussão on-line, fotorreportagens, campanhas publicitárias, memes, entre outros) sobre temas de interesse coletivo local ou global, que revelem posicionamento crítico.

(EF09LI14) Utilizar conectores indicadores de adição, condição, oposição, contraste, conclusão e síntese como auxiliares na construção da argumentação e intencionalidade discursiva.

(EF09LI15) Empregar, de modo inteligível, as formas verbais em orações condicionais dos tipos 1 e 2 (If-clauses).

Base Nacional Comum Curricular - Currículo Paulista - Ciências Habilidades

(EF08CI01) Identificar e classificar diferentes fontes, renováveis e não renováveis, e comparar como a energia é utilizada em residências, comunidades ou cidades em relação aos princípios da sustentabilidade.

(EF08CI17*) Discutir e propor o uso da energia de modo confiável, sustentável, moderno e economicamente acessível para todos.

(EF09CI13) Propor iniciativas individuais e coletivas para a solução de problemas ambientais da comunidade e/ou da cidade, com base na análise de ações de consumo consciente e de sustentabilidade bem-sucedidas.

ATTENTION!



- At this moment, the deaf student uses the bank of words with the interlocutor help, already explained in the guide on the introduction text.
- Ask the student to use his/her word bank notebook;
- Talk to the interlocutor how you want that student do the words' selection;
- Together (teacher, interlocutor and the student) settle a color pencil to each part of the speech to paint words that will be learned, used along classes.
- Ask the interlocutor to help the student with the word bank construction;

• The interlocutor needs to explain the meaning to the student in sign language. After that, the student registers it in the word bank notebook. This word bank will be used along the year for consult and to do activities.



Activity 1

By the end of these two months (bimester) it is suggested an "Energy Fair". It is important to establish some directions and do some agreements with the group. The students need to collect data during the Unit 1 that has four lessons, build a portfolio collecting evidences and relevant information based on their learning process.

Warm up

- a) Write a **KWL Chart** on the board. (What I know What I want to know What I have learned)
 - Elicit from students what they know about Energy.
 - With the answer from students fill out the first and the second column on the board. KWL is a useful tool to be used in the beginning, during and after a lesson or unit.
 - Talk to students that in this unit they will learn about renewable and non-renewable energy.
 - By the end of the lesson/unit go back to the last column and let them write what they have learned about the topic. The information that students will give you are very important and can be part of a recovery plan, accordingly to their needs.
- b) Students will write words about the pictures in English. Encourage them to write in English. They can use an online dictionary as well.

Curricular Adaptation - KWL Chart

- 7
- Ask the interlocutor to signal what the deaf student remembers about Energy. The interlocutor can point the vocabulary the student will need and together they will use a dictionary to search the word. Then add to the word bank the first word;
- After that, ask the interlocutor to signal what the deaf student wants to know. At this moment the interlocutor can use only Brazilian sign language.;
- Now, the student will see the pictures and signal about what he / she can see. With the interlocutor's help ask the student to build meaning of the words and to note it on the word bank.

a) Fill out the KWL chart about energy.

KWL Chart				
What I know	What I want to know	What I have learned		

- b) Look at the pictures and, on your notebook, answer the questions about them.
 - 1. What do you see?
 - 2. What do you think about that?
 - 3. What does it make you wonder?



Picture 1 Source: https://pixabay.com/photos/coal-fired-power-plant-coal-energy-3767882/



Picture 2 Spurce:https://www.flickr.com/photos/breakfree2016/2 6988029331



Activity 2

In this activity the students will share and discuss about the words that they wrote in activity 1b.

- Write on the board the word ENERGY to make a mind map, you will write the words that the students dictate to you.
- Do questions for them:

Do you know what energy means?

Do you know the types of energy?

What types of energy can you see around you?

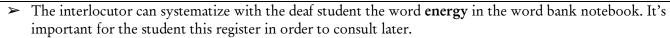
What types of energy do you use in your daily life?

They need to finish the activity understanding the meaning of energy.

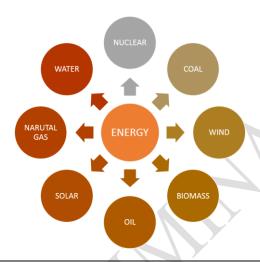
Curricular Adaptation - Activity 2

7

Explain that now is the time to construct with the partners what they thought about Energy in the activity 1b. The interlocutor will signal all the conversation in Brazilian sign language;

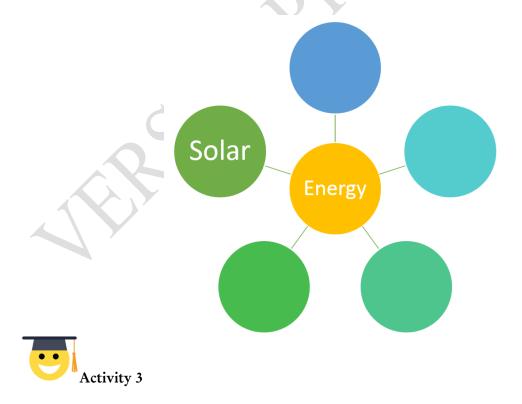


> Show the deaf students some images related to the theme.



- a) In pairs discuss and compare your notes from Activity 1B.
- b) Dictate the words you have already written to your teacher. You can say in Portuguese if you don't know the word in English.
- c) Create a Mind Map with the word Energy, the questions below can help you:

What else do you know about energy? Which types of energy do you use in your daily life?



In this activity the students will fill out the T-Chart sorting the words from the mind-map and the infographic to understand the difference between renewable or nonrenewable energy sources.

Talking time!

This time is important to give STT(Student Talking Time) to practice new words. You can provide cards with the sentences to facilitate students or you can ask them to prepare the cards.

Give them enough time to talk;

Help them with the pronunciation.

Curricular Adaptation - Activity 3

- ➤ In the Activity 3a, the deaf student can go back to Activity 2 and in Brazilian sign language discuss about renewable and non-renewable energy sources, after that the student will fill the chart as a e.g.
- > In the activity 3b, the deaf student can write what he/she signal with the interlocutor about the sources of non-renewable and renewable Energy.
- > The students now will talk and the deaf student will make some phrases as the model:
- e.g: Natural gas is an example of non-renewable energy source, but wind is an example of renewable. Remember to put the new words in the word bank and consult it to make the phrases.
 - a) Fill out the T-Chart below, sort the words from the mind map(activity 2C) according to energy sources:

A - Non-Renewable Energy Sources	B - Renewable Energy Sources
e.g. Natural gas	e.g. Wind
	Y

b) Define the energy source.	
Non-Renewable Energy Source means:	
Renewable Energy Source means:	

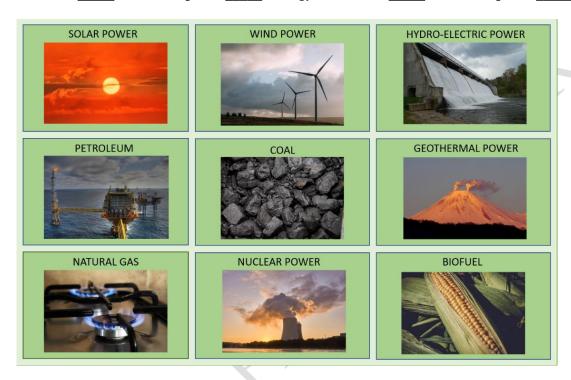
Talking time!

1. Look at the T-Chart and the picture to classify the energy sources. Use the sentence frame and talk to your friend.

<u>Natural gas</u> is an example of <u>non-renewable</u> energy source but, <u>wind</u> is an example of renewable.

Now it is your turn!

" is an example of energy source but is an example of ."





Activity 4

In this activity the students will discuss about the picture based on their thoughts, beliefs and knowledge. You can promote critical reflections that allow them to feel co-responsible for taking care of our planet.

This time you can motivate students to read their answers or discuss in groups to present to the class their reflections.

Curricular Adaptation - Activity 4

- Ask the interlocutor to signal to the student what he/she needs to make: 1) **review** the vocabulary of Energy in the word bank; 2) **Show** the new vocabulary about WH questions and ask to student to make a draw to represent each WH like the model below. This chart will support him/her to do others activities. It is important to put the chart in the word bank notebook.
- Ask to the interlocutor to signal the questions to the deaf student and explain for the group what the deaf student think about the questions above; after that, the deaf student will need more time to write his/her answers.
- > By the end, the deaf student will write a list of relevant topics that will be part of your poster or presentation. Teacher, remember to say to the interlocutor and student to go back to the word bank and

update the list.

WHY	wнo	WHEN	WHAT	HOW	WHERE
It is the reason something happened.	It is a person.	It is the time.	It is a thing or an action.	It is a number , or the way someth ing is done.	It is a place.
DRAW	DRAW shorturl.at/rQ35 6	DRAW	DRAW	DRAW	DRAW

Look at Picture. Why is the girl protesting? Share your ideas with a colleague. After that, answer the

following questions on your notebook.



- a) What does the girl's poster might mean?
- b) What do you think that she wants for the future?



Activity 5

In this activity students will answer the questions based on the previous discussions about energy. It is important to elicit from them ideas around energy saving and energy reduction projects since they will make an energy fair at the end of the unit.

Curricular Adaptation - Activity 5

- Ask the interlocutor to review the word bank notebook with the deaf student to improve her/his vocabulary and knows how to use it.
- ***
- > To extend the content, you can show some videos about the energy theme for the student to improve his/her vocabulary. Use the same methodology explained in the introduction of this guide.

In your notebook, write about energy answering the questions.

- a) Which is the best source of energy: wind power or petroleum?
- b) What type of energy do you use in your daily life? Where does it come from?
- c) Why is it necessary to save energy?
- d) Will it be possible to involve your school in an energy reduction project? How?



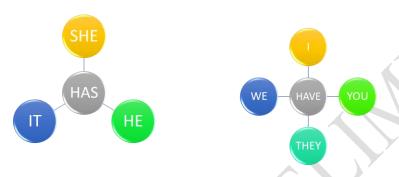
Activity 6

In this activity students will learn where renewable and non-renewable energy are used.

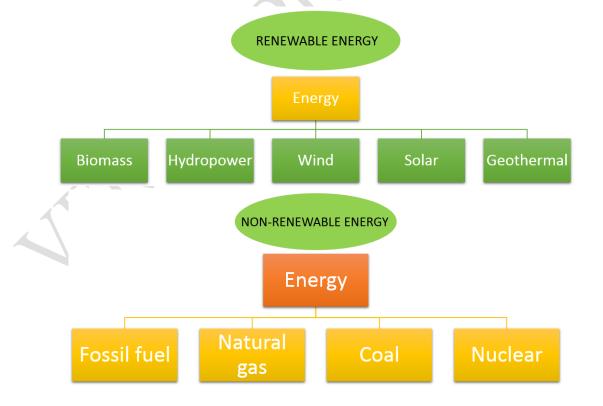
- Ask them to research about the use of different types of energy and complete the sentences. Then tell students share ideas with colleagues, read the sentences and talk about their research.
- Encourage them to speak the learned words in English;
- Work in pairs or groups.

Curricular Adaptation - Activity 6

- Teacher, it's important to repeat the frame with the deaf student. For example: Computed Tomography exams use nuclear energy, but plastic industry uses petroleum energy. It needs to be explained, word by word in sign language, and the words that don't change in another sentence like the model: ______ uses _____ energy but _____ uses _____ energy. Also, explain why and when the verb in the simple present is different for the third person.
- > Show the visual organizer and ask the deaf student to make one in the word bank notebook. Also, ask the deaf student to make another one on his word bank notebook about the uses of verbs.



a) In the first lesson you have learned about renewable and non-renewable energy. After your research complete the sentences. Look at the example:



a)	Computed Tomogra	phy exams use <u>nuclear</u> e	nergy, but <u>plastic</u>	industry uses petroleu	<u>m</u> energy
	uses _	energy but _	uses _	energy.	
	uses _	energy but	uses _	energy.	
	11505	energy hut	11000	enerov	

b) Now read the sentences you wrote to your colleagues and learn more with him/her about renewable and non-renewable energy and write the new information on your notebook.



In this activity the students will play a game to practice the vocabulary. The game can be played in groups with 4 students.

They will make the cards to illustrate the vocabulary using the right measurements, 1,97 by 3,55in (5 x 9 cm).

- Give time to students prepare for the game, making cards, cutting the word;
- Begin the game to students practice the vocabulary, they can play more than twice to change the players.

After the game they need to think about it and recreate other game to practice the vocabulary.

- Have a class available to play the games that they created;
- Emphasize that they need to use the English language.

If necessary you can write on the board words like:

It's my turn.
It's your turn.
You missed the turn.
The winner is
In this group the winner is.....

Curricular Adaptation - Activity 7

- Now the deaf student must be oriented that he/she can research in the word bank notebook 15 words to participate of the game. The interlocutor can help him/her constructing the definitions and pictures. This activity is very important because it is a moment to review the content and vocabulary.
- > It is suggested that the deaf student starts this activity one class before and make something as homework.
- At the end, when the student will write: What did you learn from this game? The teacher can make the assessment about the learning of the deaf student and, with the interlocutor, think about how to make interventions.

P	lav	the	game	١

Snake Game - in pairs or small groups.

You will need to prepare cards: cut pieces of paper to draw or glue images of: energy, renewable, non-renewable, natural gas, coal, oil, wood, wind, water, solar, windmill, turbine, wheels and fuel.

Your teacher is going to give you the sentences and words that you will use to form the body of the snake. Each player will have 45 cards (15 words from the key vocabulary, 15 definitions and 15 pictures).

Start: play odds and evens to see who will start:

- 1. 1st player chooses a card with one word and put it on the table;
- 2. 2nd player chooses the card with the picture drawn and put it beside the word;
- 3. 3rd player has to choose the card with the definition and connect it forming the body of the snake;
- 4. Go ahead until a player make a mistake, whom make a mistake less a turn. The one who finishes without making a mistake is the winner.

After the game activity, think about it and register your reflections on your notebook.

What did you learn from this game?

Can you create a similar game using different rules? Write rules and play with your colleagues.



Activity 8

In this activity the students will discuss the benefits and disadvantages of different types of energy. The texts will give some information to do the activity, they can do research to improve their knowledge.

Curricular Adaptation - Activity 8

Teacher, every time the deaf student needs to read a text, it is important to ask him/her to read and signal what he/she understood; After that, the interlocutor explains the meaning to the student in sign language. So, together they must register it on the word bank notebook. This word bank will be used along the year to consult and to make activities.



a) Let's read the text!

Solar energy has benefits and some limitations

Using solar energy has two main benefits:

- Solar energy systems do not produce air pollutants or carbon dioxide.
- Solar energy systems on buildings have minimal effects on the environment.

Solar energy also has some limitations:

- The amount of sunlight that arrives at the earth's surface is not constant. The amount of sunlight varies depending on location, time of day, season of the year, and weather conditions.
- The amount of sunlight reaching a square foot of the earth's surface is relatively small, so a large surface area is necessary to absorb or collect a useful amount of energy.

Source: https://www.eia.gov/energyexplained/solar/ Accessed on Oct, 1st 2019

Natural gas exploration, drilling, and production affects the environment

When geologists explore for natural gas deposits on land, they may disturb vegetation and soil with their vehicles. Drilling a natural gas well on land may require clearing and leveling an area around the well site. Well drilling activities produce air pollution and may disturb people, wildlife, and water resources. Laying pipelines that transport natural gas from wells usually requires clearing land to bury the pipe. Natural gas production can also produce large volumes of contaminated water. This water requires proper handling, storage, and treatment so that it does not pollute land and other waters. Natural gas wells and pipelines often have engines to run equipment and compressors, which produce air pollutants and noise.

Source: https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php Accessed on Oct, 1st 2019

Use of renewable energy is growing

Renewable energy sources include biomass, geothermal energy, hydropower, solar energy, and wind energy. They are called renewable energy sources because they are naturally replenished. Day after day, the sun shines, the wind blows, and the rivers flow. We use renewable energy sources mainly to make electricity.

Source: https://www.eia.gov/energyexplained/what-is-energy/sources-of-energy.php Accessed on Oct, 1st 2019

b) Fill out the chart according to your reading and research. Which are the benefits and disadvantages of different types of energy?

RENEWABLE

Energy source	Benefits	Disadvantages
e.g. Geothermal	It does not harm the environment.	It can give rise to earthquakes.
Solar		
Wind		

NON-RENEWABLE

Energy source	Benefits	Disadvantages
e.g. Nuclear energy	It does not contribute to global warming.	It can cause large-scale catastrophic accidents.
Natural gas		
Coal		



Activity 9

In this activity the students will share what they learned. They will research in groups and present to the classroom, make posters and publicize at school. One class can present to another.

- Give opportunity they talk about the benefits and disadvantages, so they will improve their vocabulary;
- Encourage them to use the vocabulary that they learned.

Curricular Adaptation - Activity 9



- Ask the deaf student to use the word bank notebook to consult the words and sentence frames to make the final product.
 - a) Now in groups, prepare a presentation to show what you have learned so far. Think about possible interventions to involve the school community to save energy. Your group can do a dramatization, a parody, powerpoint presentation or a poster.



Activity 10

In this activity the students will recognize the source of fossil fuel (petroleum).

- Explore the infographic to students understand the process of natural formation.
- Encourage students to think critically about petroleum use. (non-renewable energy)

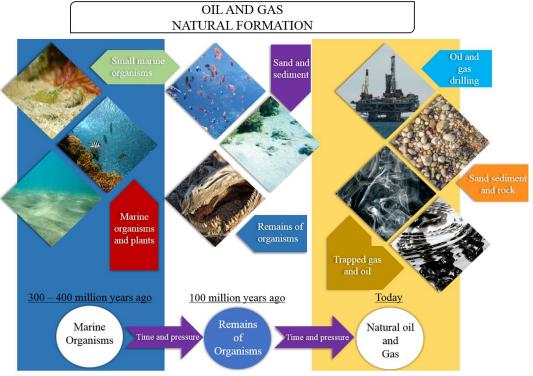
Make a talk about the use of non-renewable energy.

Curricular Adaptation - Activity 10



- Ask the deaf student to build meaning, it is important to show a video that explaining the content about the theme. The images are better fixed in his/her mind and the words have more significance.
- > After that, explore the questions and answers in sign language and add new words to the word bank notebook.

Look at the picture and search on books, on the internet or ask your Science teacher to answer the questions.



- a) How fossil fuels are formed?
- b) What is the importance of fossil fuels to the world?

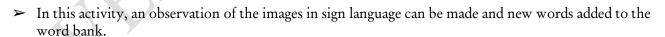


Activity 11

In this activity the students will compare the energy consumption in the USA and in Brazil, to think about the behavior of energy consumption. They will recognize the importance to use renewable energy, but they will see if these countries use the sustainable energy.

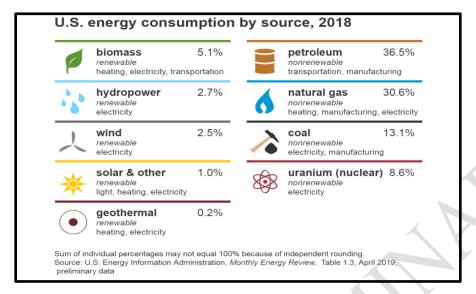
Give opportunity the students think and write about the pros and cons of using a source of energy and use the learned vocabulary.

Curricular Adaptation - Activity 11 and 12

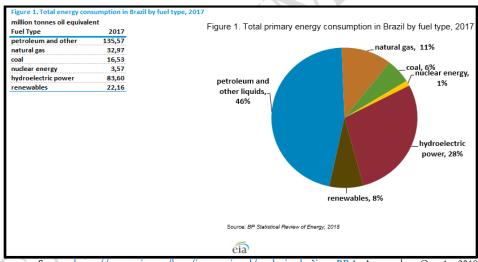




a) Look at the information about energy consumption in the USA and in Brazil.



Source: https://www.eia.gov/energyexplained/what-is-energy/sources-of-energy.phpAccessed on Oct, 1st 2019



Source: https://www.eia.gov/beta/international/analysis.php?iso=BRA Accessed on Oct, 1st 2019

b) Based on the information found in the previous images, make a comparative graphic about the energy consumption in Brazil and the USA.



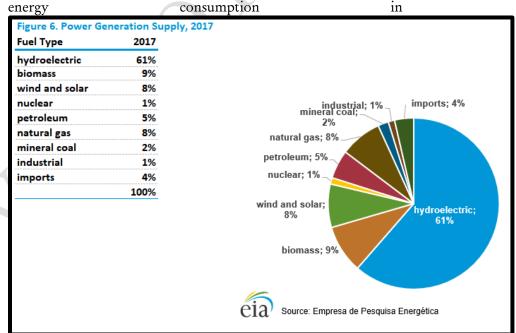
In this activity the students will practice conversation, using the learned vocabulary.

- Read the text with students.
- Give enough time to students practice the vocabulary.
 - a) Read the text and graphics and take notes considering:

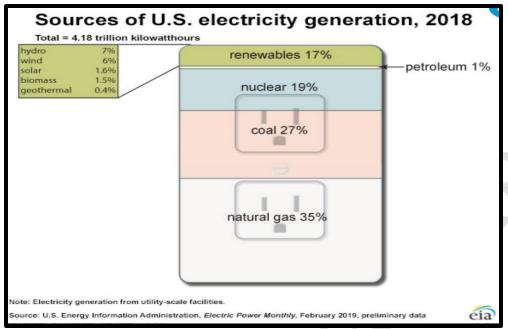
			ENERGY	USAGE	
PRO	S/CONS	LOCAL PERSPECT BAL PERSF		COMPARISON	PREDICTION

Overview Brazilian's data

- In 2017, Brazil produced 3.36 million barrels per day (b/d) of petroleum and other liquids, making it the ninth-largest producer in. the world and the third-largest in the Americas behind the United States and Canada.
- In 2017, Brazil was the eighth-largest energy consumer in the world and the third-largest energy consumer in the Americas, behind the United States and Canada.
- Total primary energy consumption in Brazil has grown by 28% in the past decade because of economic growth. Petroleum and other liquids represented about 46% of Brazil's domestic energy
 consumption
 2017.



https://www.eia.gov/beta/international/analysis.php?iso=BRA



https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php Accessed on Oct, 1st 2019

b) Go back to your notes and fill out the language framing below. Follow the model to talk to your colleague, explain the benefits and disadvantages of: biomass, wind and solar, petroleum, natural gas, etc.

Language framing - Energy usage	
e.g. A benefit of cutting down trees is to help local business.	
A disadvantage of cutting down trees is that we will have less oxygen.	
Pros /Cons	
A benefit of using biomass is	
A disadvantage of using biomass is	
Local / Global perspectives	
Local loggers benefit because	
Local citizens are harmed because	
Comparison	
e.g. In 2017, Brazil was the eighth-largest energy consumer in the world.	
Biomass is more than	
because .	
because Nuclear energy is morethan	because
	_
Petroleum isthan	
because	
becauseHydroelectric power consumption is than	•
Prediction	
e.g. The greenhouse effect will be minimized if energy consumption is conscious.	
Wind and solar consumption will	
Natural gas will	



This is the last lesson of these two months, you need to analyse the learning process of your students., recover any necessary content and prepare a presentation that will be the culmination of activities. Students will share their learning with other classes and the whole school.

This activity is an experiment they will build a car that runs with the blow of the mouth, to see an example watch the video (https://www.youtube.com/watch?v=2Uwwls7iOng) and elicit students to build theirs.

• before the experiment tell students the importance of the observation of every activity step. Explain each step of the "Lab Report" and the importance of the registers.

do a car race to see the winners, tell students that they need to fill out their "Lab Report".

Curricular Adaptation - Activity 13



- ➤ In this activity, an exploration of a video in sign language can be made and new words added to the word bank.
- ➤ The interaction with the classmates is important, you can promote that.

About the car movement. Did it work? Why did (did not) your car work? Did it work as you predicted? What happened during the experiment? First, Second, Third, How can you improve your car? Concluding, I observed that My prediction about the experiment was I learned that

- a) Hands on. Let's do an experiment! Have you ever seen a car moved by air? Can you imagine how does it work? Watch the video and see a car competition https://www.youtube.com/watch?v=2U wwls7iOng.
- b) In groups build a car that runs with the blow of the mouth. You can use your creativity. What is it necessary to make an experiment? Observations, predictions, plan and make.
- c) Do the race! Each car represents a team. Which car will be the winner? During the race complete the a "Lab Report" (like the example) based on your observation.

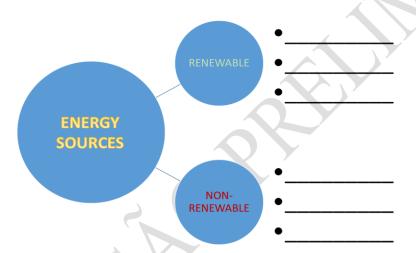
- Give students the chance of speaking in English as much as they can.
- Go back over the last lessons and stimulate students to find out renewable and non-renewable sources of energy in order to fill out the organiser.
- Instruct students to research about gated communities or industries that use renewable energy, the reasons they decided to use it, the benefits and disadvantages of using it, and any other important information.

Remember how important it is to develop oracy like the other axes of our curriculum.

Curricular Adaptation - Activity 14



- Teacher, the deaf student already knows some vocabulary about energy. Now it is time for him/her to use what was learned and make this activity consulting the word bank made along of the classes.
- ➤ The interaction with the classmates is important, you can promote that.
 - a) Discuss with your colleague and complete the visual organizer about energy sources with examples.



b) After filling in the visual organizer, compare it with a colleague and answer the question:

Do you know any gated community or industry that uses renewable energy? If not, research about it, and write on your notebook your impressions.



Activity 15

Students will make a checklist of things that they have to investigate to see if their presentation has enough information to be shown. Each part of the presentation needs to have specific components that it is possible to check through the "Checklist for Reporting the Results".

- A Research Question. (suggested by your teacher) for his topic you can suggest or elicit students to choose a question that shows the biggest importance of energy in the school or community, something that makes sense to the group.
- To the other topics, if the lessons were done, you will have enough information to instruct students to follow.

During the last classes, you could study and learn more about energy source, its consumption, compare and contrast the benefits and disadvantages of different kinds of energy. Now, it's time to go back to your notes and get prepared to the *Energy Fair*. In groups, analyse your data, and plan what is possible to do. Remember that the main point of the exhibition are the arguments about the importance of *Energy in our lives*.

Look at the presentation Checklist for Reporting the Results and analyse if any adjusts are needed.

Each part of your presentation must have the following components:

- 1 POINT: A Research Question. (suggested by your teacher)
- 1 POINT: A Prediction.
- 2 POINTS: A Plan in simple sentences with the future tense.
- 2 POINT: A Design that was sketched and modified.
- 1 POINT: Data that describe observations made during classes.
- 1 POINT: Data that shows measurements.
- 1 POINT: Conclusions that say what happened using simple sentences in the past tense.
- 1 POINT: A conclusion showing the use of comparatives or superlatives.
- 10 POINTS = 100%

If you have 100% of the checklist ready you can go ahead and start preparing the presentation. Discuss with your colleagues and decide what will be necessary for it.



Activity 16

Now it is time to invite the whole school to visit "Energy Fair". After the presentation prepare a feedback to the students. Analyse with them the progress they have reached.

Presenting "Energy Fair"

It is time to share your studying with colleagues of all school. Do your presentation in the Energy Fair.

This is part of Activity 7.

power or ability to make something work, change or be active.

RENEWABLE

to make like new; restore.	NATURAL GAS
a mixture of gases found on earth. They are burned as cooking and heating fuel.	COAL
a hard black substance that is found in the earth and burned as fuel.	NON-RENEWABLE ENERGY
to a natural resource that is not replaceable.	OIL
a liquid found beneath the earth's surface used for fuel or lubrication; petroleum.	WOOD
material lying under the bark that makes up the trunk and branches of a tree.	WIND
air that moves naturally over the surface of the earth	RENEWABLE ENERGY
any form of energy that is naturally replenished within a human lifetime, such as solar energy or wind power.	SOLAR ENERGY
any form of energy that is produced using radiant energy from the sun.	WATER
a clear liquid that has no taste or odor. It takes the form of rain, rivers, oceans, and lakes and is a requirement for most forms of life.	WINDMILL
a machine that uses energy from the wind to turn a large wheel.	TURBINE
an engine moved by a fluid that pushes against blades (like water, steam, or air)	WHEELS

	FUEL
anything that is burned as a source of energy	ENERGY
	*