

TEACHING SCIENCE IN CLIL: A SAMPLE LESSON PLAN FOR THE NON-LINGUISTIC AREAS

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The present paper offers a two-session lesson proposal aimed at a CLIL teaching-learning methodology, nowadays at the forefront of the FL teaching and learning experience. The theoretical background and the practical aspects underpinning this lesson plan stem from two models, namely Katherine Barnhouse's proposal for lesson planning and the so-called SIOP model. The lesson proposal presented in this article is intended for a group of 1st year CSE Science students. It deals with the two following thematic contents: the digestive system and the digestive process.

INTRODUCTION

This paper offers a lesson proposal aimed at a *Content and Language Integrated Learning* context (henceforth, *CLIL*). It consists of two sessions designed on the basis of the 1st year CSE standards of a non-linguistic subject, i.e. Science. Thus, the aim will be to combine the teaching of the foreign language with the presentation of non-linguistic contents. This is precisely what the *CLIL* methodology advocates.

This groundbreaking teaching practice originates in an endeavour to make the acquisition of the L2 as meaningful a process as possible. As Tejada Molina *et al.* (2005: 200) point out, the students no longer focus on language learning exclusively, but rather, the foreign language "(...) is used as the medium of instruction; as the vehicle through which subject matter content is

learned". Therefore, language learning in this methodology presents itself as "(...) a by-product of such a focus on meaning."

The overall structure of this lesson plan follows the ELT planning model proposed by K. Barnhouse (1991) and the so-called *Sheltered Instruction Observation Protocol* model (henceforth, *SIOP*), devised by Echevarría, Vogt and Short (2007). The former model is basically ELT-oriented, while the latter was specifically proposed for bilingual education contexts.

Due to the fact that they are both models of bilingual education, it is not surprising that many of the methodological aspects of the *SIOP* model are essentially the same as those inspiring the *CLIL* methodology. *SIOP* is based on the assumption that language acquisition is enhanced through the meaningful use and interaction required by the study of content in

the second language (Echevarría *et al.* 2007: 16). As Echevarría *et al.* (2007: 17) point out, “*through the study of content, students interact in English with meaningful material that is relevant to their schooling*”. This is partly due to the fact that the four L2 macro-skills (listening, speaking, reading and writing) are at the core of the non-linguistic teaching-learning situation. The development of the students’ L2 skills, however, should always take account of the students’ L1 background. This means that the students’ L1 is not completely forgotten, as the teacher should always feel free to resort to it if needed.

Having presented the main theoretical issues underlying the design of our two teaching-learning sessions, now a brief account of the overall structure of this lesson plan shall be offered. The components forming part of this lesson proposal are based to a large extent upon Barnhouse’s (1991) ELT planning model and the SIOP Lesson Plan Templates (Echevarría *et al.*, 2007). Our planning is structured around the following components:

1. *The teaching context.* This section provides a brief account of the institutional, physical and time constraints affecting the reality of our teaching-learning situation.
2. *Recent work.* In this section, attention will be paid to the knowledge that students have acquired in previous lessons.
3. *Standards.* This has to do with the extent to which our lesson contemplates the learning requirements set out by the Spanish educational system.
4. *Objectives.* It offers and account of the content objectives and language objectives, as found in these two sessions.
5. *Procedures.* It contains a general account of the main SIOP features contemplated in this lesson, as well as the sequence of activities that integrate the two teaching sessions. Activities appear described in detail following K. Barnhouse’s (1991) model.
6. *Reflections.* The aim in this section is to reflect to what extent the teaching-learning process has fulfilled the teacher’s

expectations when planning the lesson.

The lesson planning process followed in our lesson proposal is in turn inspired by the most relevant principles of lesson preparation put forward by the SIOP model of bilingual education (Echevarría *et al.*, 2007):

1. *Content and language objectives clearly defined, displayed and reviewed with students.* At the beginning of our two lessons, students will be made aware of the contents and linguistic exponents they are supposed to have learnt by the end of the two sessions. For this purpose, the objectives will be presented in a student-friendly language.
2. *Content concepts appropriate for age and educational background.* SIOP aims to bridge the gap between the students’ previous knowledge and the contents to be learnt during the lesson.
3. *Supplementary materials used to a high degree.* The use of supplementary materials helps to make learning more contextualized. The two sessions developed in this lesson plan make use of the following supplementary materials: adapted texts, pictures, visuals, multimedia, and hands-on manipulatives.
4. *Adaptation of content to all levels of student proficiency.* One of the hallmarks of SIOP is its concern with the adaptation of curricular materials to the students’ learning needs and styles. This feature is reflected in our lesson plan by means of graphic organizers, adapted texts, outlines and jigsaw text reading.
5. *Meaningful activities that integrate concepts with language practice opportunities.* Learning is conceived of as a global process that takes into account not only the students’ development of the four L2 macro-skills, but also the learning of non-linguistic contents.

LESSON PLAN

The teaching context

These two lessons will be taught at an Andalusian secondary school. It is an urban

school located in a lower-middle class neighbourhood, which is not far from the city centre. Most of the students attending this high school belong to a lower-middle or middle class background. Allowing for some variation, the academic environment found in this school is good in general.

One year ago, this school joined the regional government's initiative to foster the development of the students' communicative competence in at least one foreign language, namely *The Plurilingualism Promotion Plan*. The CLIL rationale underlying this initiative makes the learning of foreign languages a meaningful process whereby the foreign language is no longer an end in itself exclusively, but mainly a means to an end. That end is nothing more than the learning of the non-linguistic curriculum through the foreign language(s). In addition to its CLIL methodological orientation, this school is also an ICT high school. This implies that each classroom contains at least one computer for every two students.

As pointed out in the introduction, these two lessons have been designed on the basis of a non-linguistic subject (i.e. Science). Furthermore, our planning process has been aimed at a group of secondary students in the first year of C.S.E. The contents to be covered in the two sessions have to do with the physiology of the human body, particularly with the human digestive system.

As far as the learners are concerned, first of all it should be stated that this group consists of twenty secondary students in the first year of C.S.E. The students have been exposed to a CLIL methodology for two years, which means that their competence in the foreign language is not good enough yet to follow a lesson fully taught in English. Therefore, in order to make understanding easier, it is highly advisable to adapt any written text to the students' level of proficiency, to make lessons as visually attractive as possible, and to resort to the students' L1 when necessary.

Regarding physical conditions, the classroom is more than adequate for the implementation of a CLIL methodology, in the sense that it is

spacious, tables and chairs are movable (favouring group-work), and the light conditions are perfect. The only shortcoming of the classroom (or rather, of the entire school) lies in its acoustic conditions. The school is located in a street with heavy traffic all day long, which means that the students' concentration and attention may easily waver while in class.

Concerning the number of teaching periods, 1st CSE students have three science lessons per week (Monday: 09.30-10.30, Tuesday: 10.30-11.30, Friday: 13.30-14.30). The time span between Tuesday and Friday lessons is considerable; thus, an element of revision should be included at the beginning of Friday's lesson. The students are generally enthusiastic, and tend to tune in very quickly; yet, they tend to feel tired in the class taking place on Fridays.

Recent work

As far as recent work is concerned, in previous lessons, students have dealt with the energetic components of food, and have reflected on the paramount importance of having a healthy diet.

Standards

This lesson plan is consonant with the following official goals (Spanish Decree 148/2002):

General Objectives of C.S.E.

- To understand and produce contextualized oral and written messages in, at least, one foreign language.
- To know and understand the key points of how the body works and the implications some acts and personal behaviours have on individual and collective health.

General Objectives of Foreign Language

- To listen to a foreign language and learn its structures as an intercultural vehicle.
- To acquire basic linguistic structures to allow proper communication.
- To transmit ideas, feelings or needs to different people in Spanish and other languages.
- To read and understand as a tool for

expressing ideas, feelings, needs and realities.

- To improve the communication ability through written texts: orthographic correctness, sense and style of the text.
- To use a foreign language as a tool for learning non-linguistic contents.

General Objectives of Science (1st cycle in C.S.E.)

- To encourage students to improve their identification and problem-solving skills, as well as their ability to reflect on any kind of process involving a series of steps.
- Students should be able to apply their (scientific) knowledge about the human body to their own lives, making their lifestyles as healthy as possible.
- To understand and express simple scientific messages of a descriptive and explanatory kind.
- Students should realize that Science requires a great deal of collaboration among those involved in it. Thus, it is a matter of the utmost importance that they learn to work cooperatively.
- Students should learn both the anatomy and physiology of the major taxonomic groups before moving on to the detailed and scientific study of the human being.
- To become more aware of the great importance of Science in a wide range of issues affecting our daily life, such as food, culture, transport, housing...

Objectives

Content objectives

-Students will be able to (henceforth, SWBAT):

- Identify the different parts (organs) that integrate the human digestive system.
- Learn how the human digestive system works, i.e. the step-by-step process.
- Establish associations between different digestive organs and their right position in the human body.

Language objectives

-SWBAT:

- Apply the present simple to the description of a step-by-step process.
- Become familiar with the semantic field of digestion.
- Read and understand a written text dealing with human digestion.
- Cooperate with other students to successfully complete a task about the parts of the human digestive system.
- Listen and understand a short and simple explanation in the foreign language, provided that it is accompanied by visual support.
- Arrange a jumbled descriptive text in the right order.
- Fill in the blanks of an incomplete textual diagram/outline providing an overview of the contents covered in the two lessons.

Supplementary Materials

- Hands-on activities
- Visuals.
- Multimedia (powerpoint)
- Adapted texts.

Key Vocabulary

The semantic field of digestion (words highlighted in bold type in the texts handed out to students):

Nouns: mouth, liver, stomach...

Verbs: digest, absorb, pass through...

Procedures

SIOP features observed in the two lessons

Preparation ☒ Adaptation of Content ☒ Links to Background ☒ Links to Past Learning ☒ Strategies Incorporated	Scaffolding ☐ Modeling ☒ Guided practice ☐ Independent practice ☒ Comprehensible Input	Grouping options ☒ Whole class ☒ Small groups ☒ Partners ☒ Independent
Integration of processes ☒ Reading ☒ Writing ☒ Speaking ☒ Listening	Application ☒ Hands-on ☒ Meaningful ☒ Linked to Objectives ☒ Promotes engagement	Assessment ☒ Individual ☐ Group ☒ Written ☐ Oral

Lesson sequence

SESSION 1

1	Activity	Warm-up -The teacher will show students the content and language objectives of this lesson. -Students will get together in four groups of five students each, and will pool all their ideas together. Afterwards, the teacher will write some of the students' ideas on the board.
	Grouping¹	Ss ↔ Ss
	Objective	-To link student's prior knowledge to the content aspect to be covered in today's lesson (SIOP: link to background knowledge). -To raise expectations.
	Materials	-Printed hand-out. (see appendix 1.1.) -Blackboard.
	Language	Speaking. Writing. Reading.
	Problems?	-The students' reluctance to speak in English when working in groups. -The topic may be unknown to some students.
	Time	10'

2	Activity	Previous knowledge. The teacher will show students a numbered diagram of the digestive system. Then, students will make guesses about the number each organ corresponds to.
	Grouping	T ↔ Ss
	Objective	-To check the student's prior knowledge about the topic. (SIOP: link to past learning) -To trigger the students' visual learning abilities.
	Materials	-Computer (Powerpoint presentation; see appendix 1.2.) -Blackboard (optional)
	Language	Speaking
	Problems?	-The topic may be unknown to students. -The diagram may not be enlightening enough.
	Time	5'

3	Activity	Reading: the organs involved in digestion. Firstly, students will listen to the teacher's reading of the text without looking at it. Then, the teacher will give each student a copy of the written text. Once students have read the text silently, the teacher will go through the text again, this time clarifying any comprehension difficulties (if necessary, in the students' L1)
	Grouping	T→Ss S T↔Ss
	Objective	-To provide students with the contents relevant to the topic of today's lesson. -To read and understand a written text. (SIOP: to make input comprehensible)
	Materials	-Handout (see appendix 1.3) -Blackboard (if necessary)
	Language	Listening Reading Vocabulary Grammar
	Problems?	-The students' unfamiliarity with the key vocabulary needed for this lesson.
	Time	15'

4	Activity	Confirming expectations. The teacher will display the diagram (1.2.) again, so that students can check if their previous guesses were right.
	Grouping	T↔Ss
	Objective	-To confirm expectations. (SIOP: meaningful application)
	Materials	-Computer (Powerpoint presentation; see appendix 1.2) -Blackboard (optional)
	Language	Speaking.
	Time	2'

5	Activity	Comprehension questions. In pairs, students answer several comprehension questions. Even though the activity may be carried out orally, the teacher should ask students to write their questions down in their notebooks. Then, the teacher will check the students' answers on the board.
	Grouping	S↔S T↔Ss
	Objective	-To check if the students have understood the text they have just read.
	Materials	-To check if the students have understood the text they have just read. -Handout (see appendix 1.4.) -Notebook. -Blackboard.
	Language	Speaking Writing Vocabulary
	Problems?	-The students' overuse of their L1 when discussing the questions. -There may well be some students who work better on their own.
	Time	10'

6	Activity	Sorting the digestive system -The teacher will pin on the wall five wallcharts featuring the silhouette of five human bodies. -The teacher will divide the class into five groups of four students each. Each group will be given two small boxes. The first one will contain cardboard cut-outs of the seven major organs playing a role in digestion: the mouth, the oesophagus, the liver, the stomach, the pancreas, the small intestine and the large intestine. The second box will contain labels with the name of each organ. -Each group will have to: first of all, arrange the pictures in the right order, and then, match each label with the right organ. -Finally, students will stick the organs and the labels onto the wallcharts. -The group getting most items right in the time allotted will win.
	Grouping	Ss ↔ Ss
	Objective	-To "anchor" the knowledge students have acquired in this lesson. -To adapt the lesson to those students who have a kinaesthetically-oriented intelligence. (SIOP: It's meaningful and promotes the students' engagement)
	Materials	-5 wallcharts (see appendix 1.5.) -Sellotape/blue tack. -2 small boxes. -Cardboard cut-outs of the organs. -Labels with the name of each organ.
	Language	Speaking Reading
	Problems?	-Disruptive behaviour may easily appear if the activity has not been carefully prepared. -High competitiveness on the part of the students.
	Time	14'

SESSION 2

1	Activity	Warm-up (revision) To start off this lesson, the teacher will ask students what they can remember from the previous lesson. He/She will also tell students what they are supposed to learn in this lesson.
	Grouping	T ↔ Ss
	Objective	-To revise previous knowledge. -To link previous knowledge to new knowledge. (SIOP: Links to past learning)
	Materials	-Computer (Powerpoint used to revise the previous lesson and to present the objectives of this lesson; see appendix 2.1.1.)
	Language	Speaking Reading
	Problems?	-Students who did not attend the last lesson may feel lost.
	Time	5'

2	Activity	Presentation of new content The teacher will explain the distinction between mechanical digestion and chemical digestion.
	Grouping	T → Ss
	Objective	-To present new contents.
	Materials	-Computer (Powerpoint) (see appendix 2.1.2.)
	Language	Reading. Listening.
	Problems?	-Students who did not attend the last lesson may feel lost.
	Time	7'

3	Activity	<p>Jigsaw reading</p> <ul style="list-style-type: none"> -In this task, the students will learn all the steps involved in the digestive process. -The teacher will arrange the class in five circular groups. -He/she will divide students into five groups of four students each. Then, he/she will assign each group a number, ranging from 1 to 5 (hence, group 1, group 2, group 3, group 4, group 5). -Next, the teacher will give each group a piece of paper containing one of the five steps involved in the digestive process. -The teacher will give students some time to get familiar with the information they have been provided with. -Afterwards, each team should explain to the other teams what their piece of paper was about. Allow students to walk around the classroom if they want. -Ask students to arrange the steps in the right order. Teams should eventually sit in terms of the position of the step they were originally assigned (for instance, the team representing "step 1" will sit first; then, "step 2" ...). -It should be pointed out that the teacher will be monitoring the students' work throughout the activity.
	Grouping	Ss ↔ Ss
	Objective	<ul style="list-style-type: none"> -To encourage students to work cooperatively. -To be able to arrange a jumbled text (in this case, a series of steps) in the right order. <p>(SIOP: meaningful application and hands-on task)</p>
	Materials	<ul style="list-style-type: none"> -Five pieces of paper (see appendix 2.1.3, and 2.1.3.1.) -Blackboard (optional).
	Language	Reading, Speaking, Vocabulary Grammar (cohesive devices)
	Problems?	-Students may get out of control, if unused to this kind of activity.
	Time	13'

4	Activity	<p>Final reading</p> <ul style="list-style-type: none"> -The teacher will give each student a final and complete version of text 2.1. (comprising 2.1.1., 2.1.2., 2.1.3.) -The teacher will go through the text with the students, clarifying any comprehension difficulties (if necessary, in the students' L1) -The explanation will be accompanied by a visual representation of the digestive process (powerpoint)
	Grouping	T ↔ Ss
	Objective	<ul style="list-style-type: none"> -To check students' understanding of the digestive process (providing explanations in the L1, when necessary). -To link a verbal explanation to a visual representation (thus, making the text more accessible to those students whose intelligence is more visually-oriented) <p>(SIOP: comprehensible input, adaptation of content).</p>
	Materials	<ul style="list-style-type: none"> -Printed handout (see appendix 2.1.) -Computer (Powerpoint: see appendix 2.1.3.2.) -Blackboard (optional)
	Language	Reading, Listening,
	Problems?	-Comprehension problems posed by unknown vocabulary.
	Time	12'

5	Activity	Incomplete diagram -The teacher will give each student a copy of an incomplete textual diagram/outline about the contents covered in the two lessons. -In pairs, students will fill in the gaps with the appropriate concept. -Finally, the teacher will check the students' answers on the board.
	Grouping	S ↔ S T ↔ Ss
	Objective	-To clarify and "anchor" the contents covered in the two lessons in a visual and simple way.
	Materials	-Printed handout (see appendix 2.2.) -Blackboard.
	Language	Reading Speaking.
	Problems?	-Students may not fully remember the contents covered in the two lessons
	Time	8'

6	Activity	Fill in the blanks (assessment) -To assess the extent to which students have acquired the concepts covered in these two lessons, the teacher will hand each student a "fill in the blanks" exercise. -The teacher should warn students that not all the gaps have to do with nouns; there may also be some verb gaps. -Once students have completed the exercise individually, the teacher will collect their exercises, and will mark them as part of the assessment process.
	Grouping	S
	Objective	-This will help the student to self-assess what he/she has learnt in the two lessons. (SIOP: Individual assessment)
	Materials	-Printed handout (see appendix 2.3.)
	Language	Reading. Writing.
	Problems?	-Some students may not have learnt what they were supposed to learn.
	Time	10'

Reflections

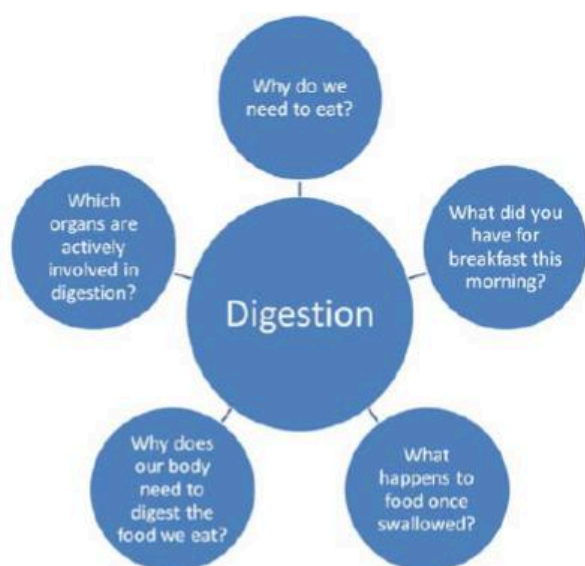
To be completed after teaching.

APPENDICES

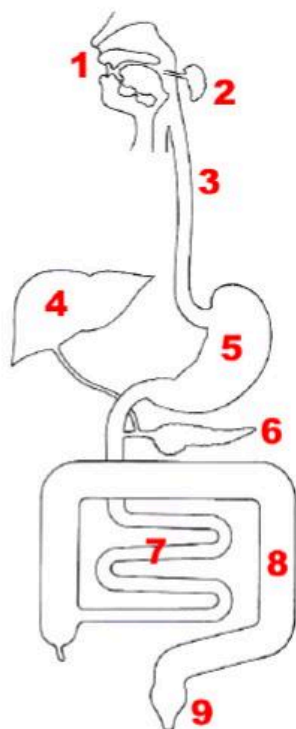
APPENDIX 1 (SESSION 1)

1.1. Warm-up

Arrange yourselves in four groups of five students each and discuss the following questions in English. We will share our conclusions later. You can jot down your thoughts if you wish.



1.2. Previous knowledge

1.3. Reading²: the organs involved in digestion

As you all know, our body needs fuel to keep working. This energy is obtained thanks to the food we eat. However, for food to be transformed into fuel, our body needs to **digest** it. In this first lesson you will learn about the **organs** involved in digestion.

Digestion happens in the alimentary canal, in other words, the **digestive system**. This is the group of organs that we use to **digest** food, to **absorb** nutrients and to **expel** undigested waste.

The first organ that takes part in this process is the **mouth**, in which we can find the **tongue**, the **teeth** and three pairs of **salivary glands**. Once the food is ground, it goes down the **oesophagus**, that is, the tube that connects the mouth to the **stomach**. As a result of the joint action of the **stomach**, the **liver** and the **pancreas**, the food is further processed.

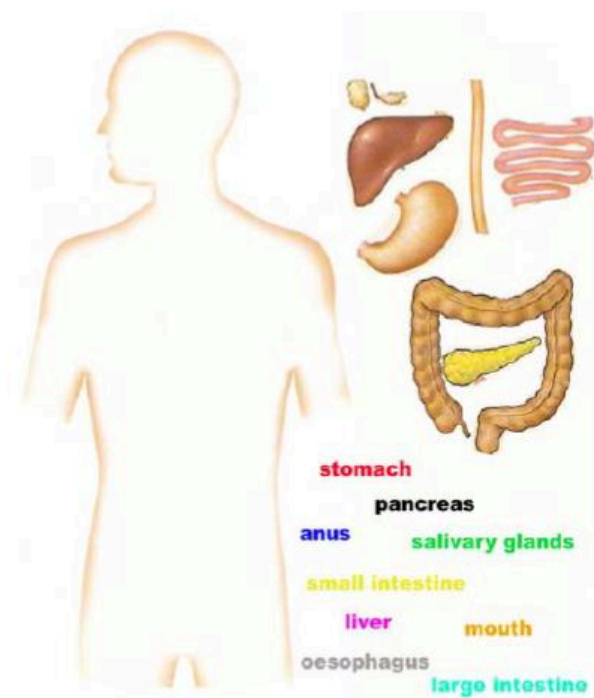
Afterwards, the food passes through the **small intestine** and then to the **large** one. Finally, the body gets rid of its waste through the **anus**.

1.4. Comprehension questions

In pairs, answer the following comprehension questions:

1. Why do we need to eat?
2. What is the process by means of which our body transforms the food we eat into nutrients?
3. Where does digestion take place?
4. What are the three functions of the digestive system?
5. What are the organs involved in digestion?
6. What can we find in the mouth?
7. Where is the oesophagus located?
8. Where does our body dispose of its waste?

1.5. Sorting the digestive system



(Adapted from Chappell & Clark de Garcés, 2008: 6)

APPENDIX 2 (SESSION 2)

2.1. Reading³

2.1.1. Warm-up (revision)

As you may all remember from the previous lesson, for our body to keep working, it needs to **process** the food we eat. This physiological procedure is called **digestion**. In the last session, we found out that there are up to **seven organs** involved in digestion. Can you remember any of these organs? I'm sure you can: the **mouth**, the **oesophagus**, the **stomach**, the **liver**, the **pancreas**, the **small intestine** and the **large intestine**.

2.1.2. Presentation of new content

In today's lesson, we will further expand on the topic of digestion, but this time, concentrating on the **process** as such. Therefore, today you will learn the **function** played by each organ in breaking down the food we eat.

Before moving on to a detailed description of the digestive process, it is important to state that digestion can be of two different kinds:

- **Mechanical digestion:** It physically **moves** our **food** through our body. First we chew and swallow our food, and then **muscles** inside our body move it through the oesophagus, stomach, and intestines.
- **Chemical digestion:** Inside our stomach, **digestive juices** break food down into **nutrients** that our **body** can absorb.

2.1.3. Jigsaw reading

Digestion starts in the **mouth**, which is made up of the **teeth**, the **tongue**, and the **salivary glands**. The **teeth** are used to chew food and the **salivary glands** produce **saliva**, which is mixed together with the food thanks to the tongue.

From the mouth, food moves down the **oesophagus**, and enters the stomach.

The **stomach** is a bag-shaped organ where the food is mixed with the **gastric juices**. These juices help to dissolve the food. There are two other organs which also produce **gastric juices**; i.e. the pancreas (**pancreatic juices**) and the liver (**bile**).

Right afterwards, the food passes to the **small intestine**, where the nutrients are absorbed by the blood.

The substances that are not useful for our body pass from the **small intestine** to the **large intestine**. Finally, bodily waste is expelled through the anus as excrement.

2.1.3.1. Pieces of paper

Digestion starts in the **mouth**, which is made up of the **teeth**, the **tongue**, and the **salivary glands**. The **teeth** are used to chew food and the **salivary glands** produce **saliva**, which is mixed together with the food thanks to the tongue.

From the mouth, food moves down the **oesophagus**, and enters the stomach.

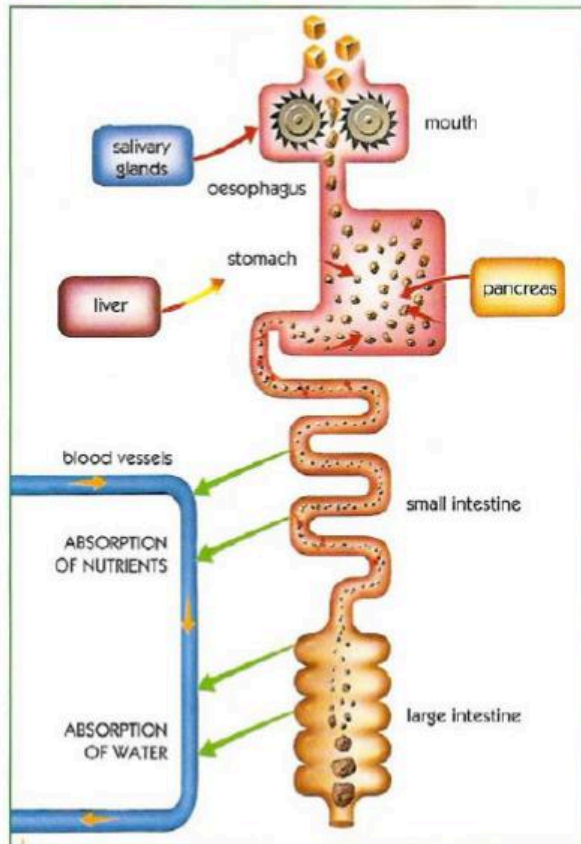
The **stomach** is a bag-shaped organ where the food is mixed with the **gastric juices**. These juices help to dissolve our food. There are two other organs which also produce **gastric juices**, the pancreas (**pancreatic juices**) and the liver (**bile**).

Right afterwards, the food passes to the small intestine, where the nutrients **are absorbed by the blood**.

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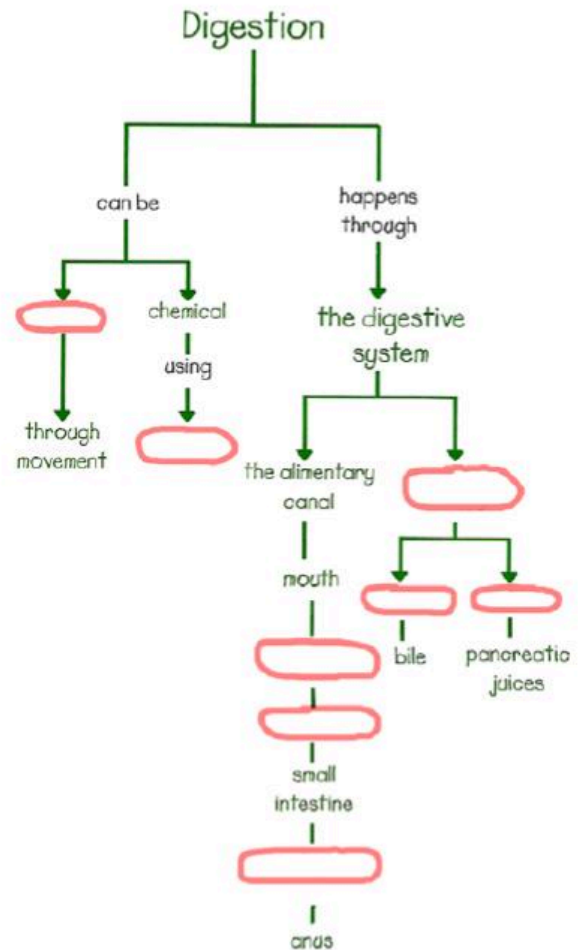
2.1.3.2. Stages of the digestive process

STAGES OF THE DIGESTIVE PROCESS



(Taken from Chappell & Clark de Garcés, 2008: 9)

2.2. Incomplete diagram



(Adapted from Chappell & Clark de Garcés 2008: 10)

2.3. Fill in the blanks

- The digestive system consists of the _____, the oesophagus, the _____, the small intestine, the _____ intestine and the anus.
- Nutrients are _____ into our bloodstream in the _____.
- The digestive system is the group of organs that we use to _____ food, to _____ nutrients, and to _____ the undigested waste.

4. The pancreas produces
_____ and the liver segregates
_____.

5. Inside our stomach, digestive juices
_____ our food into
_____ that our body can
_____.

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Notes

- ¹ Each abbreviation corresponds to a specific grouping pattern:
 Ss↔Ss: Group-work (students work in groups)
 S↔S: Pair-work (students work in twos)
 T↔Ss: Active communication between teacher and students. The teacher elicits the students' participation, and the students participate.
 T→Ss: Whole-class teaching (the teacher explains something to students and students simply listen to the teacher)
 S: Individual work (students work on their own)
- ² The thematic contents underlying this text have been inspired by Fraser & Gilchrist (1998) and Chappell & Clark de Garcés (2008).
- ³ The thematic contents underlying this second text have been inspired by Fraser & Gilchrist (1998) and Chappell & Clark de Garcés (2008).

REFERENCES

- Barnhouse Purgason, K. 1991. "Planning Lessons and Units". *Teaching English as a Second or Foreign Language*. Ed. M. Celce-Murcia. Boston, MA: Heinle & Heinle. 419-431.
- Chappell, J. and S. Clark de Garcés. 2008. *World 6: Natural, Social and Cultural Environment*. Barcelona: Vicens Vives.
- Decreto 148/2002, de 14 de mayo, por el que se modifica el Decreto 106/1992, de 9 de junio, por el que se establecen las enseñanzas correspondientes a la Educación Secundaria Obligatoria en Andalucía (BOJA nº75 de 27 de junio 2002).
- Echevarría, J., M.E. Vogt and D.J. Short. 2007. *Making Content Comprehensible for English Learners: The SIOP Model*. Boston, Mass: Allyn and Bacon.
- Fraser, A. and I. Gilchrist. 1998. *Starting Science: Book Two*. Oxford: Oxford University Press.
- Tejada Molina, G., M. L. Pérez Cañado and G. Luque Agulló. 2005. "Current approaches and teaching methods". *TEFL in Secondary Education*. Eds. N. McLaren, D. Madrid & A. Bueno. Granada: Editorial Universidad de Granada. 156-209.