The Shape of a CLIL Sequence

Bolzano

November 11th, 2021

Phil Ball

1. Why is it important for CLIL teachers to think about the sequential aspect of their teaching?

2. What do we mean by a (didactic) sequence?

3. Can we identify the stages of a sequence?

4. Can we identify the types of activities that predominate at these stages?

5. Can we identify the types of language that predominate at these stages?

Q: What is a classroom ‘activity’?

A: Whatever it is, it never exists in isolation.

Something <u>precedes</u> an activity, and something <u>succeeds</u> it

Not necessarily linear…..

But new topics always exploit previous knowledge…..

….even with VYL (very young learners)

…..in fact that is the only way we can teach VYL

Everything is sequential

Why is it important to think about sequences?

- Every learning 'unit' has stages. This might seem obvious, but in CLIL, where learners are faced with the extra challenge of the L2, it's important to know how these stages will differ in their demands.

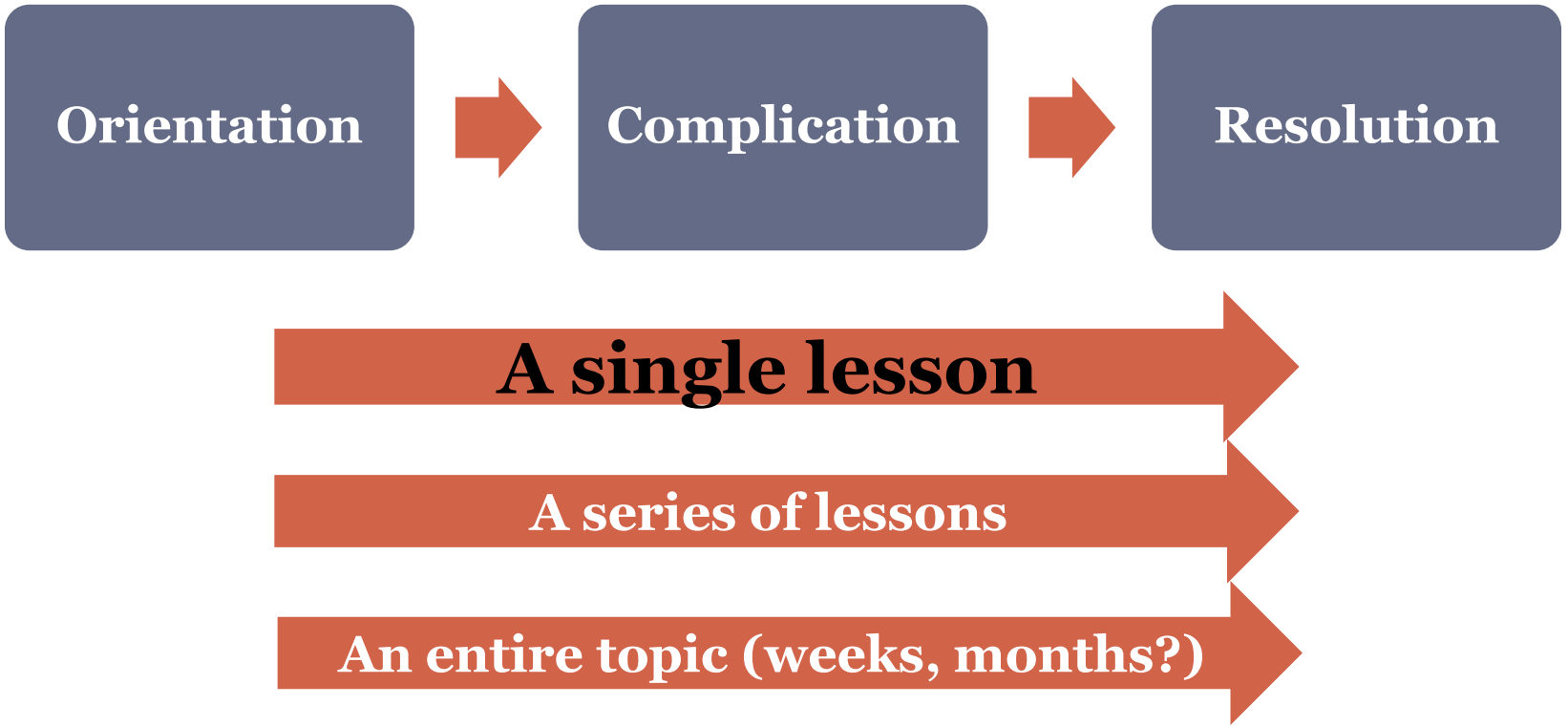
- True of primary, secondary and tertiary education.

An educational ‘event’

(3 Stages/Phases)

This is clearly ‘linear’

An educational ‘event’



Sequential stages (3 main 'moves')

Synthesis, re-cap, revision

Quiz, test, exam,
group presentation

'Events' typical of resolving content: (resolution stage)

Why sequence theory helps us to plan effective CLIL teaching

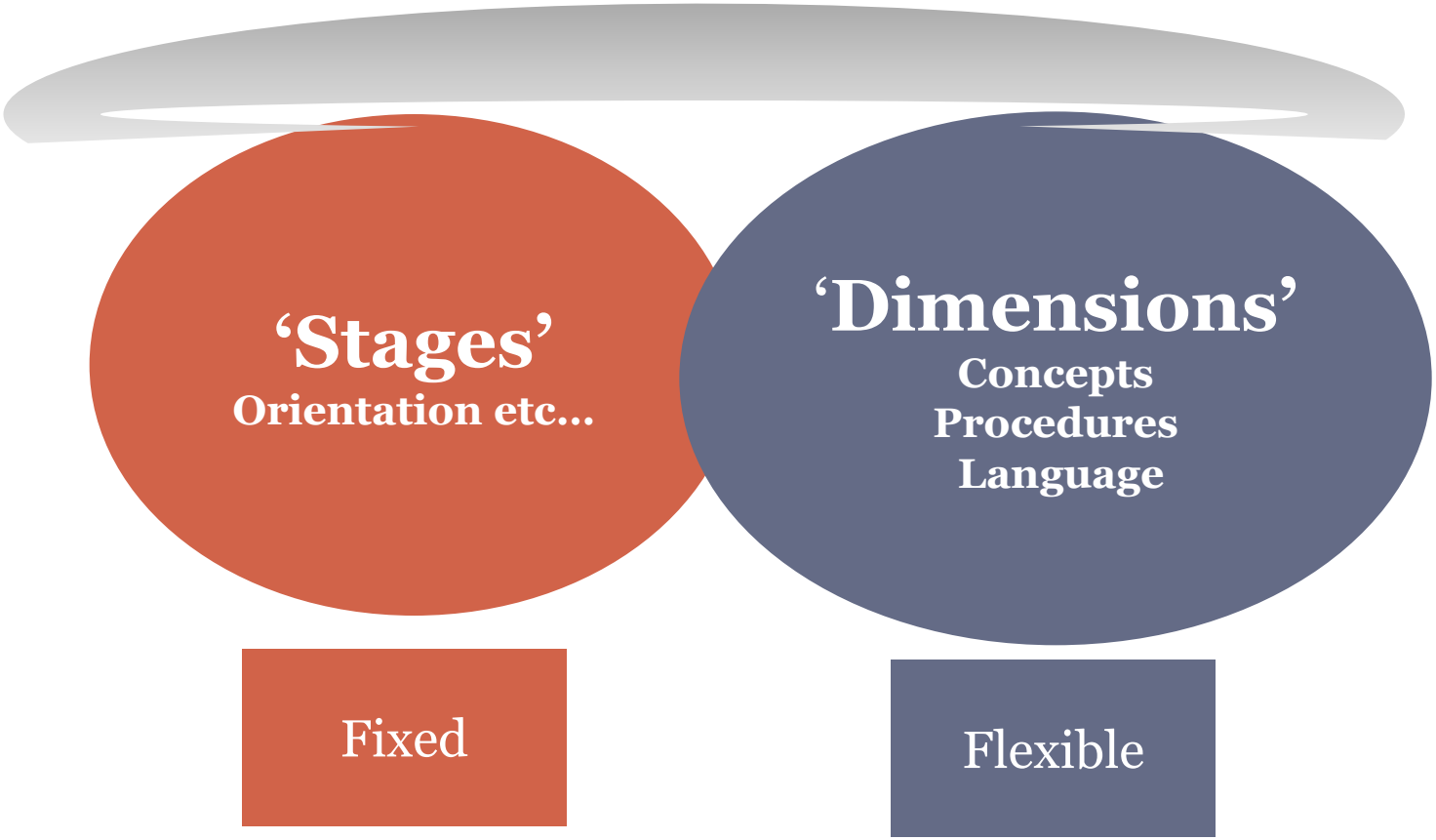
What happens in these stages/phases?

…in terms of the types of knowledge expected to be taught/learned?
(Concepts)

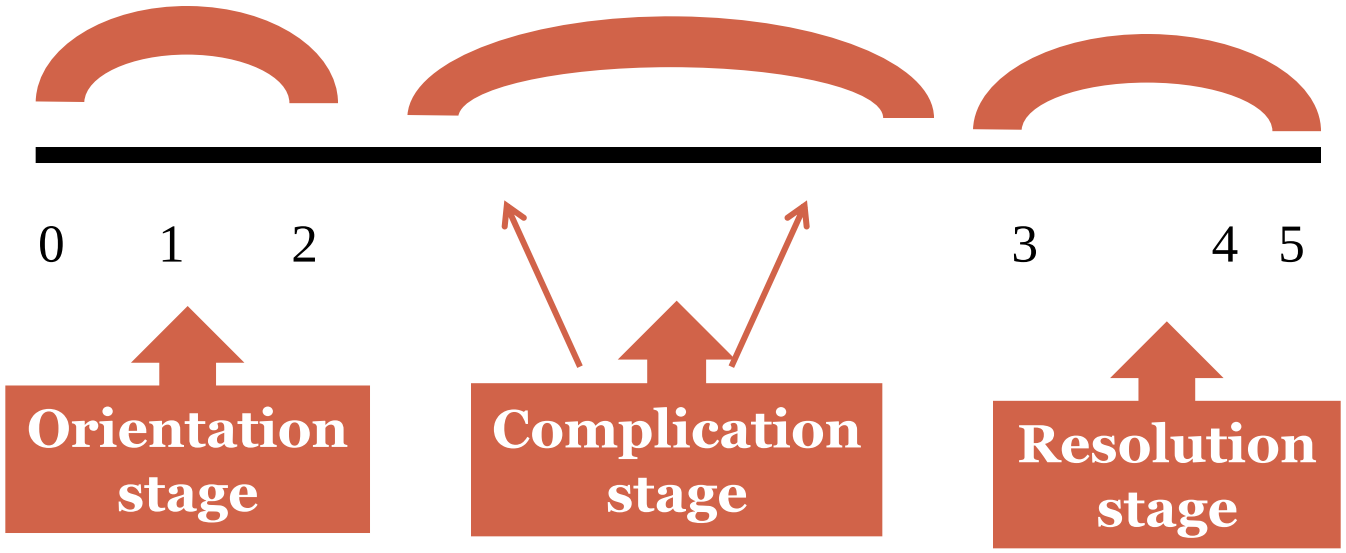
…in terms of the types of activities?
(Procedures)

…in terms of the language that accompanies the learning?
(Language)

Two overlapping notions

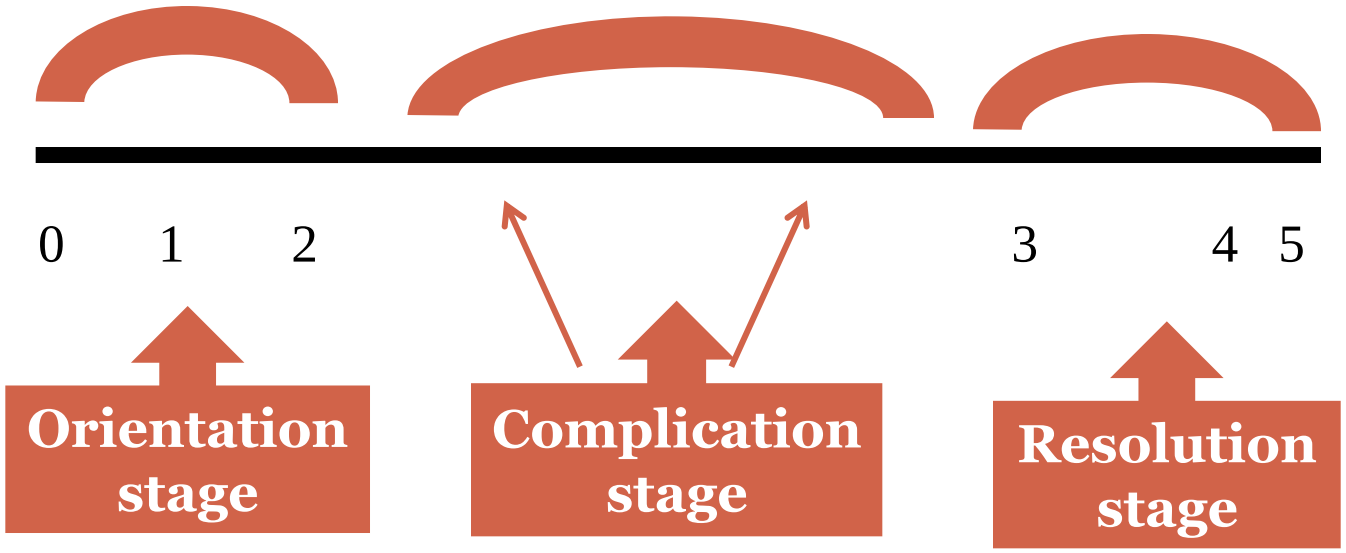


For example: A sequence of 3 weeks/12 hours classtime = one topic



0-1. Establishing pre-knowledge/warmers/stimulating interest
1-2. Introductory
2-3. Main conceptual content
3-4. Concluding the main conceptual content. Synthesis. Checklists.
4-5. Assessment activity(ies).
5. Feedback/self-assessment (reflection)

But this could be a single class too!



0. Establishing pre-knowledge/warmers/stimulating interest
1. Introductory
2. Main conceptual content
3. Concluding the main conceptual content. Synthesis. Checklists.
4. Assessment activity(ies).
5. Feedback/self-assessment (reflection)

Let’s take the ‘orientation’ stage

DBH 1

SUBJECT PROJECTS 1

ENGlish

Unit 3

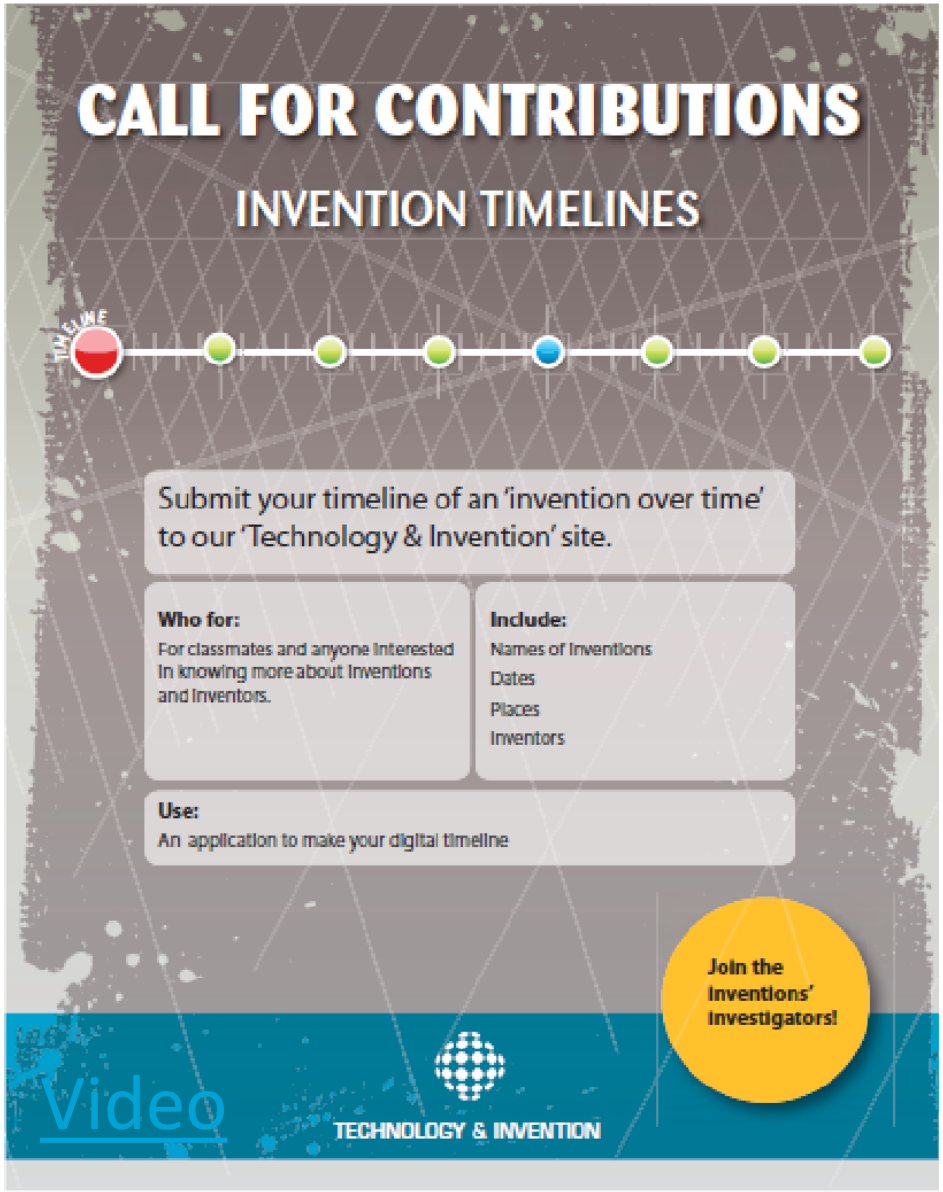
The world of inventions

What do we need to learn?

How will we do it?

For *whom*?

Using....language?



https://www.ekigunea.eus/dbh/eu/edukia/dbh1/english/eng-1-3/U/7?lang=en

Inventions: 'Orientation' (Stage 0-1)

1 Introductory activity INVENTIONS AND GADGETS

Humans invent things. It's what makes us special. We invent 'inventions' and 'gadgets'.

1. Watch the video clip and write down as many 'gadgets' as you can remember.

2. Share your list with a partner.

3. Which pair spotted the most gadgets?

'Light' conceptual emphasis

'Light' (fun) procedure

https://www.youtube.com/watch?v=2g_3ovCnbd4

Inventions Activity (stage 1-2)

Passive (common in Tech discourse)

'Temporal' language

Function

Hypothesis

Here is a famous invention or gadget, the 'corkscrew'. This is how we could talk about it.

This gadget is called a 'corkscrew'

It was invented in 1795.

It is used for taking corks out of wine bottles.

It works by screwing into the _____ and helping us to pull it out of the bottle.

Without corkscrews, it would be very difficult to pull out the cork.

Some indication of the **language** that will be needed for the eventual task

Inventions Activity (2)

5. Here are two very famous gadgets. Talk to a partner and answer the questions about them below.

a) What is each one called, in English?

b) When was it invented?

c) What are these gadgets used for?

d) How do they work?

e) Without these gadgets, what problems would we have?

Now they use the previous scaffolds to practise the type of discourse that will eventually be needed in the Final Task

Simple overview of the sequence concept

Simple visual to support concept and procedure

The examples use technically correct subject discourse (CALP) and make it *salient* by repetition

3 Exploring activity TIMELINE OF AN INVENTION: THE WHEEL

Sometimes we don't know who made an invention. For example the wheel; we don't know exactly who invented the first wheels or even where and when they were first used.
But it is interesting to see how wheels have developed over time.

1. Look at how wheels have developed over time.

2. Match the descriptions of the different inventions with the pictures above.

	a) Wire spokes were invented in England in the 19th century by Sir George Caley.
	b) The plank wheel with three planks of wood attached by wooden cross pieces was invented around 3000 B.C. by the Sumerians in Mesopotamia.
	c) The modern pneumatic tyre was invented in 1888 in Scotland by John Dunlop.
	d) Spoked wheels were first used in Mesopotamia around 2000 B.C.
	e) The earliest wheels were made from solid wood before 3500 B.C. in Asia.

3. We can use a timeline to represent developments over time.
Make a scale on the line to represent the dates as accurately as possible.
Add the different inventions with the name and date of each.

4. Compare your timeline to your classmates'. Which one is the clearest and why?

Simple scaffolds for orientation stage

Open 'safe' activity (procedural emphasis)

Further scaffolds to support simple discussion

4 Exploring activity THE BEST INVENTIONS: YOUR LIST

What do you think are the best inventions?

1. Look around your classroom. What inventions can you see that help your teacher to teach and that help you to learn? Give some examples.

The pen in my hand. I use it for writing.

The radiator under the window. It keeps us warm in winter, so we can come to school.

2. Now think of the whole world, and the whole of history.
Work with a partner and make a list of your 'top ten' inventions of all time.

1)
2)
3)
4)
5)
6)
7)
8)
9)
10)

0 1 2

Orientation stage

3. Work with another pair. Share your list with them. Do

4. Explain why you have made your other choices.

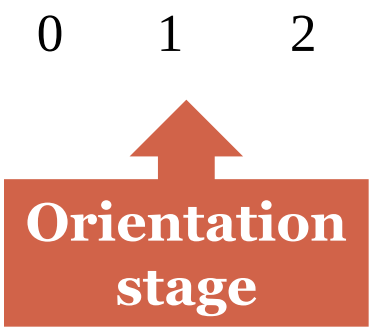
The X is very important/is the most important invention of all time because…

Without X it is very difficult to…

X helps you to…

Let’s look again! What was the ‘shape’ of that sequence?

It represented the ‘orientation’ stage



1 Introductory activity INVENTIONS AND GADGETS

Humans invent things. It's what makes us special. We invent 'inventions' and 'gadgets'.

1. Watch the video clip and write down as many 'gadgets' as you can remember.

2. Share your list with a partner.

3. Which pair spotted the most gadgets?

4. Here is a famous invention or gadget, the 'corkscrew'. This is how we could talk about it.

This gadget is called a 'corkscrew'

It was invented in 1795.

It is used for taking corks out of wine bottles.

It works by screwing into the _____ and helping us to pull it out of the bottle.

Without corkscrews, it would be very difficult to pull out the cork.

5. Here are two very famous gadgets. Talk to a partner and answer the questions about them below.

a) What is each one called, in English?
b) When was it invented?
c) What are these gadgets used for?
d) How do they work?
e) Without these gadgets, what problems would we have?

First taste of the 'starter' =

Concept involvement + language indicators

3 Exploring activity TIMELINE OF AN INVENTION: THE WHEEL

Sometimes we don't know who made an invention. For example the wheel; we don't know exactly who invented the first wheels or even where and when they were first used.
But it is interesting to see how wheels have developed over time.

1. Look at how wheels have developed over time.

2. Match the descriptions of the different inventions with the pictures above.

	a) Wire spokes were invented in England in the 19th century by Sir Georg
	b) The plank wheel with three planks of wood attached by wooden cross invented around 3000 B.C. by the Sumerians in Mesopotamia.
	c) The modern pneumatic tyre was invented in 1888 in Scotland by John
	d) Spoked wheels were first used in Mesopotamia around 2000 B.C.
	e) The earliest wheels were made from solid wood before 3500 B.C. in Asi

3. We can use a timeline to represent developments over time.
Make a scale on the line to represent the dates as accurately as possible.
Add the different inventions with the name and date of each.

4. Compare your timeline to your classmates'. Which one is the clearest and why?

5 Exploring activity THE BEST INVENTIONS: VOX POPULI

What does the general public think? Which are the best inventions according to a selection of sites on the Internet?

1. Work in groups of 3. Put the cards face down in a pile. Turn over the first two cards. Discuss and decide in your group which invention is more important.
Continue with the next card, and so on, until you have ranked all the inventions.

2. Write down your top three.

3. Tell your 'Top 3' to the rest of the class. A secretary will transfer the data onto a graph on the board.

4. Which is the most popular 'best invention', according to your class?

4 Exploring activity THE BEST INVENTIONS: YOUR LIST

What do you think are the best inventions?

1. Look around your classroom. What inventions can you see that help your teacher to teach and that help you to learn? Give some examples.

The pen in my hand. I use it for writing.
The radiator under the window. It keeps us warm in winter, so we can come to school.

2. Now think of the whole world, and the whole of history.
Work with a partner and make a list of your 'top ten' inventions of all time.

1)
2)
3)
4)

…are your list with them. Do you have any the same?

…de your other choices.

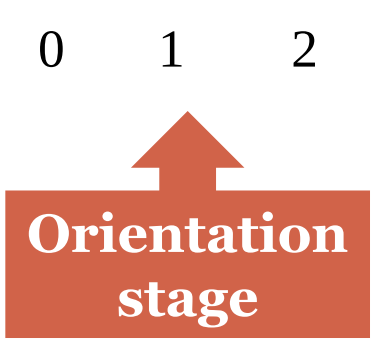
…e most important invention of all time because…

…).…

'Exploratory' activities (interactive)

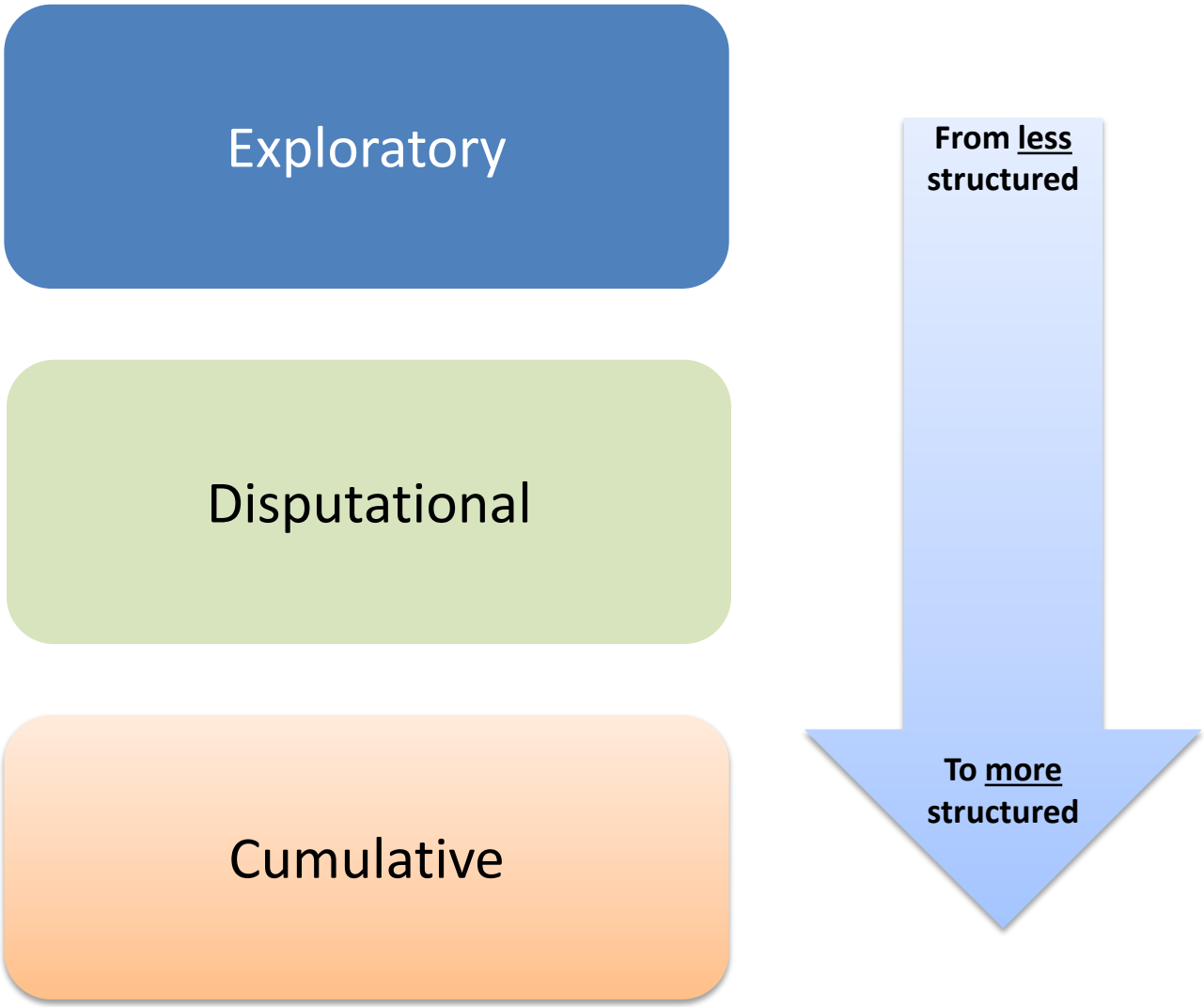
Mainly 'BICS' but some basic 'CALP' (embedded and re-cycled)

A typical CLIL ‘orientation’ sequence



- Concepts (light)
- CALP indicators
- Interaction
- Exploratory (talk - BICS)
- Open/safe
- Scaffold-rich

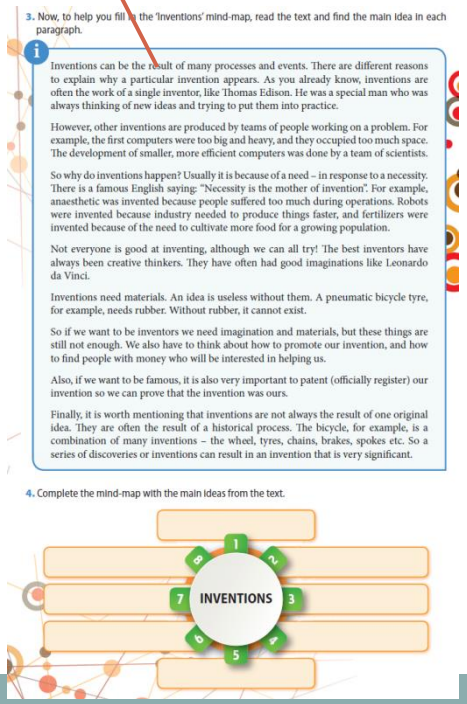
Mercer's 3 types of talk (Mercer, N. 1995)



0 1 2 3 4 5

Complication/Development

Complication stage



3. Now, to help you fill in the 'Inventions' mind-map, read the text and find the main idea in each paragraph.

Inventions can be the result of many processes and events. There are different reasons to explain why a particular invention appears. As you already know, inventions are often the work of a single inventor, like Thomas Edison. He was a special man who was always thinking of new ideas and trying to put them into practice.

However, other inventions are produced by teams of people working on a problem. For example, the first computers were too big and heavy, and they occupied too much space. The development of smaller, more efficient computers was done by a team of scientists.

So why do inventions happen? Usually it is because of a need – in response to a necessity. There is a famous English saying: "Necessity is the mother of invention". For example, anaesthetic was invented because people suffered too much during operations. Robots were invented because industry needed to produce things faster, and fertilizers were invented because of the need to cultivate more food for a growing population.

Not everyone is good at inventing, although we can all try! The best inventors have always been creative thinkers. They have often had good imaginations like Leonardo da Vinci.

Inventions need materials. An idea is useless without them. A pneumatic bicycle tyre, for example, needs rubber. Without rubber, it cannot exist.

So if we want to be inventors we need imagination and materials, but these things are still not enough. We also have to think about how to promote our invention, and how to find people with money who will be interested in helping us.

Also, if we want to be famous, it is also very important to patent (officially register) our invention so we can prove that the invention was ours.

Finally, it is worth mentioning that inventions are not always the result of one original idea. They are often the result of a historical process. The bicycle, for example, is a combination of many inventions – the wheel, tyres, chains, brakes, spokes etc. So a series of discoveries or inventions can result in an invention that is very significant.

4. Complete the mind-map with the main ideas from the text.

Introduction of denser text

Reading strategies to identify and develop the main concepts (that will be needed)

3. Now, to help you fill in the 'Inventions' mind-map, read the text and find the main idea in each paragraph.

Inventions can be the result of many processes and events. There are different reasons to explain why a particular invention appears. As you already know, inventions are often the work of a single inventor, like Thomas Edison. He was a special man who was always thinking of new ideas and trying to put them into practice.

However, other inventions are produced by teams of people working on a problem. For example, the first computers were too big and heavy, and they occupied too much space. The development of smaller, more efficient computers was done by a team of scientists.

So why do inventions happen? Usually it is because of a need – in response to a necessity. There is a famous English saying: "Necessity is the mother of invention". For example, anaesthetic was invented because people suffered too much during operations. Robots were invented because industry needed to produce things faster, and fertilizers were invented because of the need to cultivate more food for a growing population.

Not everyone is good at inventing, although we can all try! The best inventors have always been creative thinkers. They have often had good imaginations like Leonardo da Vinci.

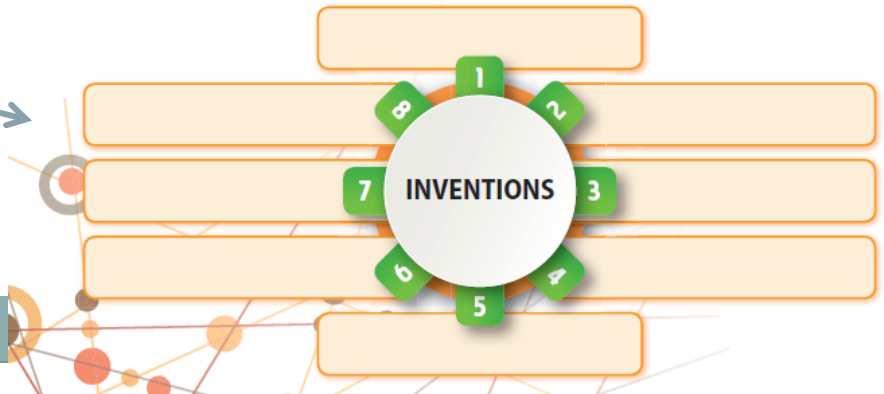
Inventions need materials. An idea is useless without them. A pneumatic bicycle tyre, for example, needs rubber. Without rubber, it cannot exist.

So if we want to be inventors we need imagination and materials, but these things are still not enough. We also have to think about how to promote our invention, and how to find people with money who will be interested in helping us.

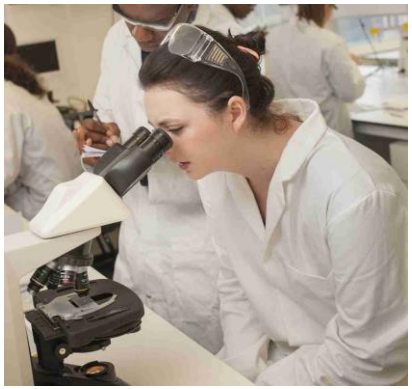
Also, if we want to be famous, it is also very important to patent (officially register) our invention so we can prove that the invention was ours.

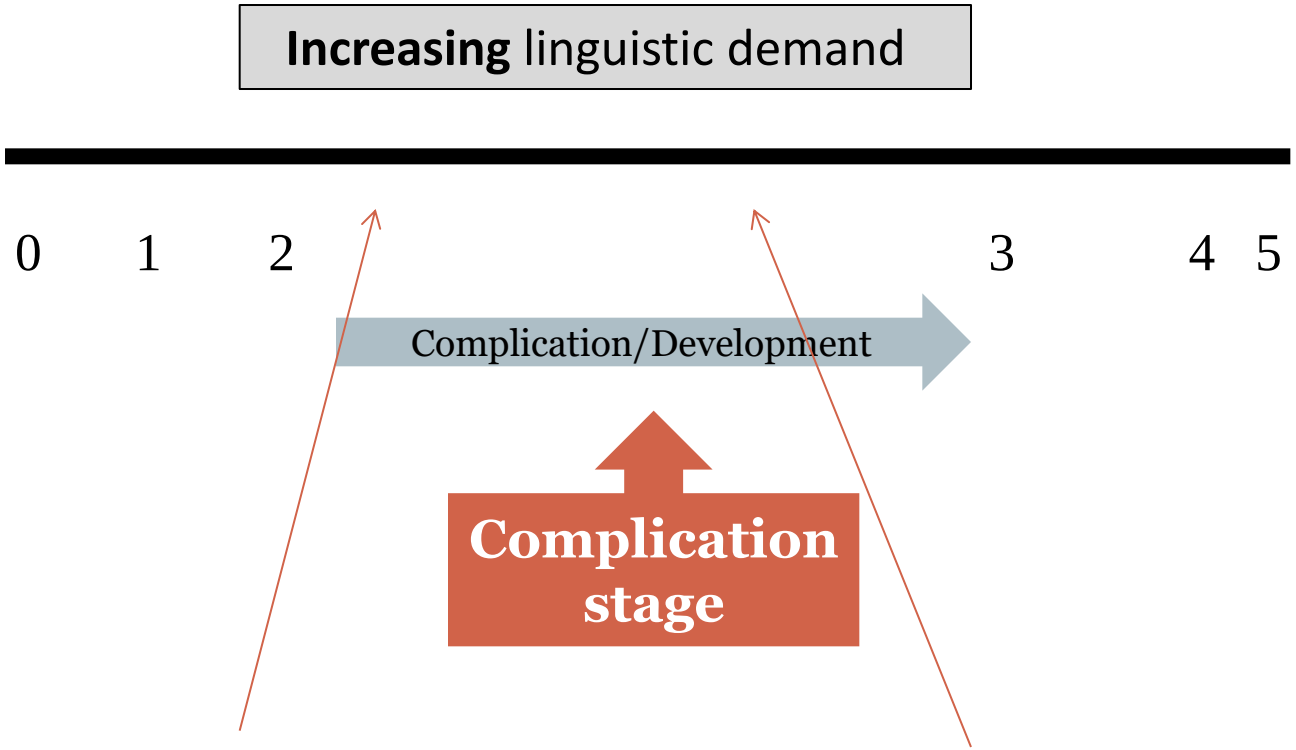
Finally, it is worth mentioning that inventions are not always the result of one original idea. They are often the result of a historical process. The bicycle, for example, is a combination of many inventions – the wheel, tyres, chains, brakes, spokes etc. So a series of discoveries or inventions can result in an invention that is very significant.

4. Complete the mind-map with the main ideas from the text.



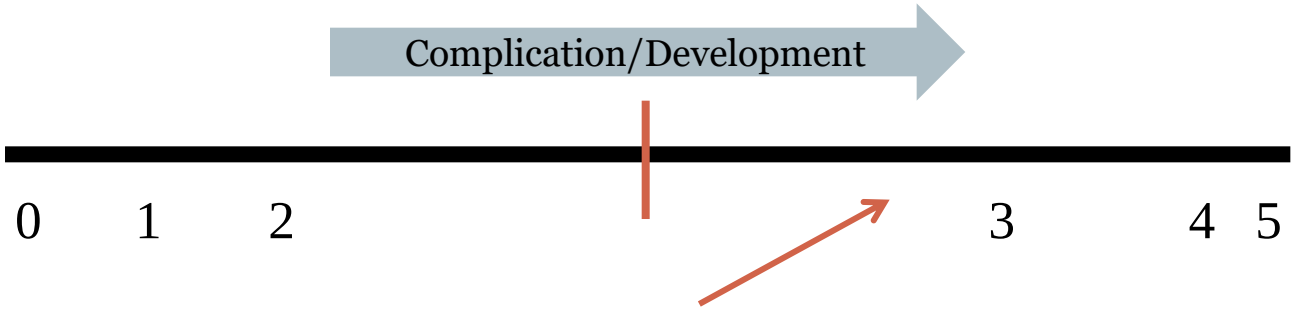
Changing subject – ‘Micro-organisms’ (Biology)





Ok – in groups, make a list of all the defences that you think the human body has to prevent micro organisms from causing infection

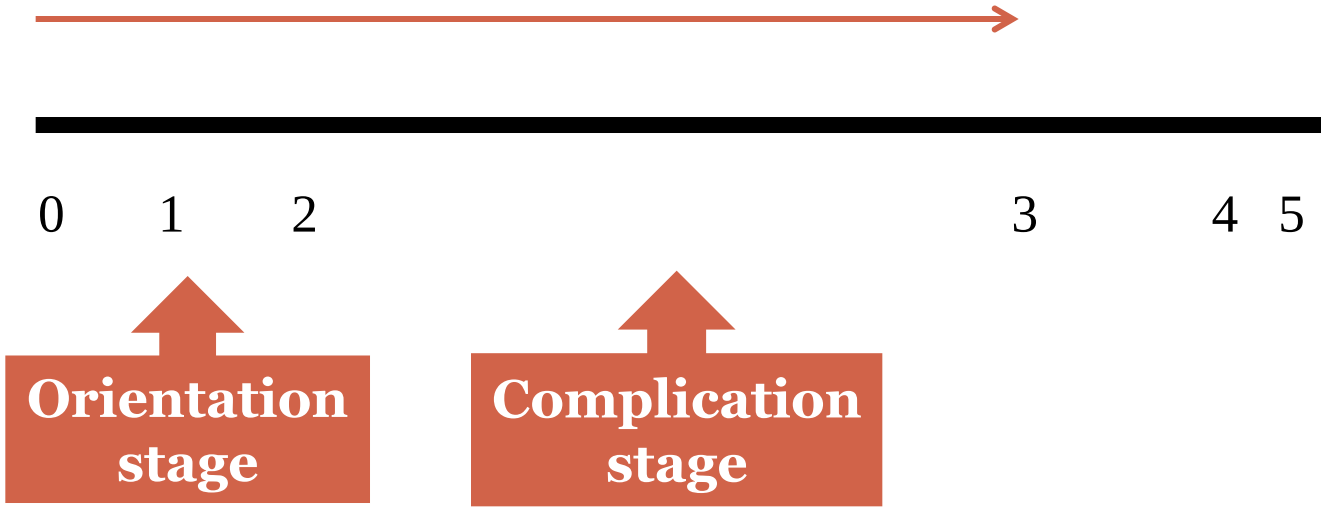
Other *white blood cells* digest any cells that the *antibodies adhere* to. (More '**CALP**' sounding)



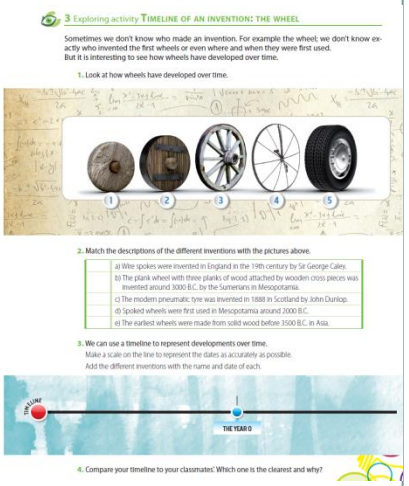
$C_6H_{12}O_6 \rightarrow 2C_3H_6O_3 + 2\ ATP$
Glucose → Lactic Acid + (Energy)
As opposed to aerobic, anaerobic respiration refers to the oxidation of molecules in the absence of oxygen, to produce energy. **(written text)**

CALP – Cognitive Academic Language Proficiency
'Secondary discourse' (Gee, 2001)

A ‘CALP journey’



‘Resolution’ (Back to Technology)



3 Exploring activity TIMELINE OF AN INVENTION: THE WHEEL

Sometimes we don't know who made an invention. For example the wheel; we don't know exactly who invented the first wheels or even where and when they were first used. But it is interesting to see how wheels have developed over time.

1. Look at how wheels have developed over time.

2. Match the descriptions of the different inventions with the pictures above.

	a) Wire spokes were invented in England in the 19th century by Sir George Caley.
	b) The plank wheel with three planks of wood attached by wooden cross pieces was invented around 3000 B.C., by the Sumerians in Mesopotamia.
	c) The modern pneumatic tyre was invented in 1888 in Scotland by John Dunlop.
	d) Spoked wheels were first used in Mesopotamia around 2000 B.C.
	e) The earliest wheels were made from solid wood before 3500 B.C. in Asia.

3. We can use a timeline to represent developments over time.
Make a scale on the line to represent the dates as accurately as possible.
Add the different inventions with the name and date of each.

THE YEAR 0

4. Compare your timeline to your classmates' Which one is the clearest and why?

0 1 2 3 4 5

Resolution stage

Synthesising the concepts

(Stage 3)

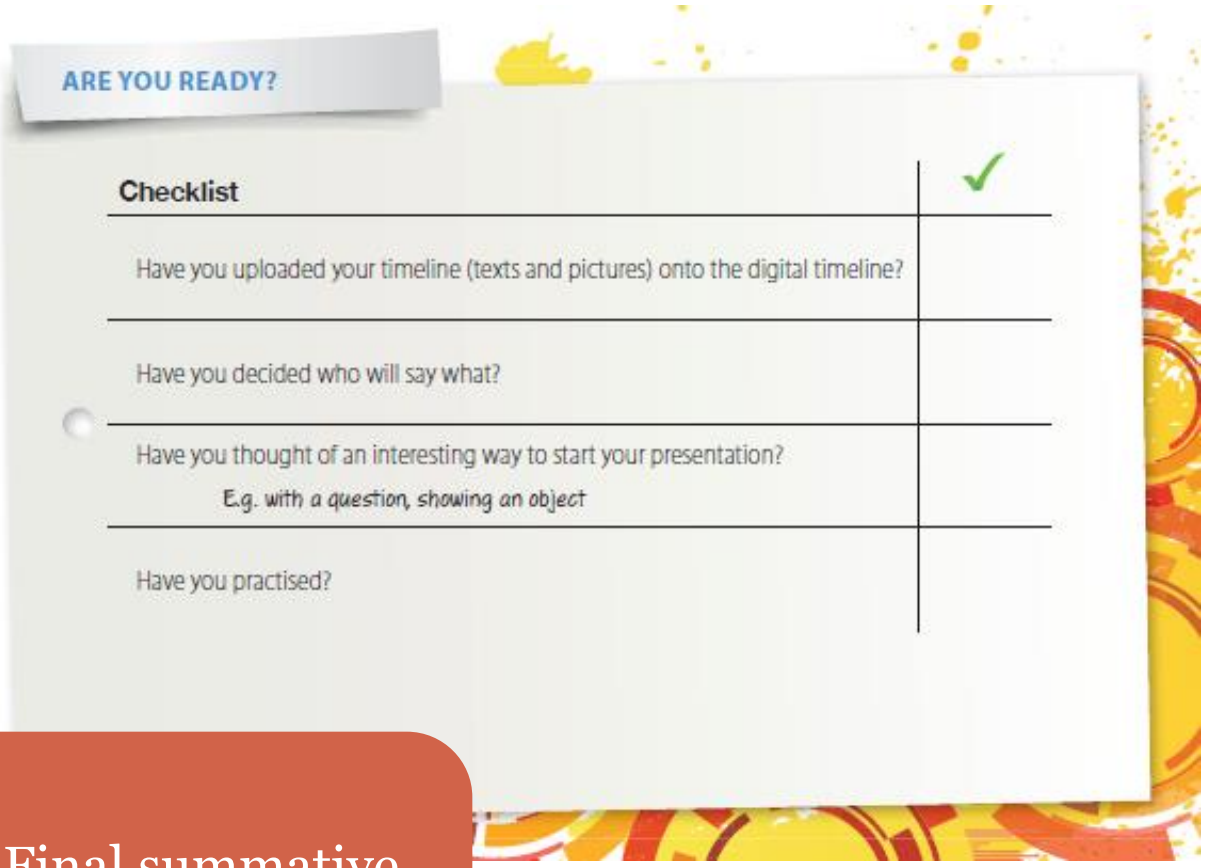
1. Your teacher will show you texts about different inventions. Choose one of them. Read the text carefully, and identify the information that you need for the timeline. Transfer the information onto the table below.

NAME OF INVENTION:

THE PROGRESS OF THE INVENTION OVER TIME	WHEN WAS IT INVENTED?	WHERE WAS IT INVENTED?	WHO INVENTED IT?	OTHER INFORMATION E.G. HOW DID IT WORK?

2. Now write out short descriptions of each invention for your timeline. These descriptions are the ones that you will use for your timeline. Use the information from the table above.

Student checklist before presentation (procedural)



ARE YOU READY?

Checklist	✓
Have you uploaded your timeline (texts and pictures) onto the digital timeline?	
Have you decided who will say what?	
Have you thought of an interesting way to start your presentation? *E.g. with a question, showing an object*	
Have you practised?	

= Final summative task preparation (for an exam)

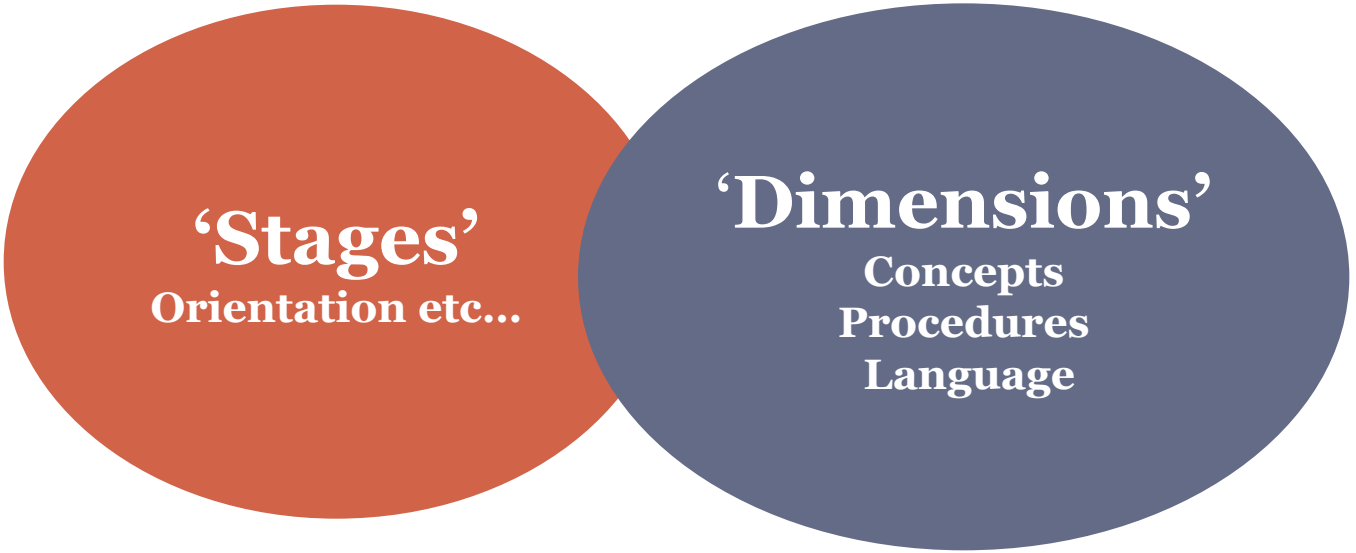
37 Self-assessment activity REFLECTING ON MY WORK

Now that you have finished writing and presenting the timelines, complete the three tables below.

	FOR THE TIMELINE, I...	I MANAGED WELL	I DIDN'T MANAGE VERY WELL
TASK 1	filed in all the table cells I could with the information in the text.		
	placed the information in the correct cell.		
	copied the informion with the correct spelling.		
TASK 2	described the inventions.		
	organised information according to the categories that appear in the task.		
	used pronouns.		
	used temporal expressions.		
	used the infinitive of purpose to describe what inventions are for.		
	used the passive (past tense).		
	created a digital timeline with texts and images.		
TASK 3	wrote a short biography of an inventor.		
	organised information according to the categories that appear in the task.		
	used pronouns.		
	used the past tense.		
	inserted the information into the timeline.		

Self-assessment (after tasks)

Note the emphasis on the 3 dimensions



If teachers are aware of these stages

If we’re aware of which dimension is being prioritised

If the learners are aware of the stages (and their different demands)

If we make the learners aware of this *(‘let’s just take a look at the language here….*’

....then the teaching-learning process, using an additional or foreign language.....

....is facilitated

.....I think! 

The Shape of a CLIL Sequence

ball.philip6@gmail.com

Thanks for listening!