



## TKT: CLIL Part 1: Cognitive skills across the curriculum – trainer’s notes

### Description

This activity aims to develop participants’ understanding of a range of cognitive (thinking) skills. Participants discuss types of cognitive skills and how learners can develop them. They explore the difference between LOTS (lower order thinking skills) and HOTS (higher order thinking skills) using examples from CLIL contexts.

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**Time required:** 60 minutes

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**Materials required:**

- ③ Participant’s worksheet 1 (one for each pair of participants)
- ③ Sample Task (one for each participant)


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**Learning outcomes:**

- ③ To know about a range of learning skills developed in CLIL subjects from across the curriculum
- ③ To be able to match learning skills with different classroom examples

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### Procedure

1. Before the session, copy **Participants’ worksheet 1** so there are enough for each pair of participants. Copy the **Sample Task** for each participant.
2. Draw a think bubble on the board and elicit what it represents.   

Explain that in CLIL contexts, learners need the language of thinking from the start of their programmes. Unlike ELT contexts, CLIL learners need, for example, the language of prediction for science, the language of comparison for maths, the language of deduction for history.
3. Brainstorm some thinking verbs on the board, writing them in a spidergram with ‘thinking verbs’ at the centre (e.g. *identifying, ordering, comparing and contrasting, classifying, predicting, hypothesising, reasoning, creative thinking, evaluating*). If participants do not provide all of the verbs listed, add them to the spidergram.
4. Explain that thinking skills can be divided into lower order thinking skills (LOTS) and higher order thinking skills (HOTS). Teachers develop learners’ lower order thinking by asking questions to recall information, to check understanding, to review learning. Elicit some examples of these (*what, when, where, which, who and how many?*)
5. Teachers develop learners’ higher order thinking by asking questions to develop reasoning skills, creative thinking, enquiry and evaluative skills. Elicit examples of these (*why, how can you... justify..., invent..., solve... explain...change...create...?*)
6. Ask participants to look at the spidergram and decide which thinking skills demand LOTS and which demand HOTS (**See Key below**).



5. Give each pair of participants a copy of **Participant's Worksheet 1**. Ask them to match the activities written on **Participant's Worksheet 1** with the demands they make on learners, either LOTS or HOTS.
6. Check answers with another pair then check answers together (**see Key below**).
7. Tell participants that these types of cognitive skills are developed in most curricular subjects. Knowledge of these and other cognitive skills is tested in TKT: CLIL Part 1.
8. Ask participants to think of two examples of LOTS activities and two examples of HOTS activities they use in their teaching contexts. Write the examples of activities at the bottom of the worksheet. Feed back their ideas.
9. Give out **the Sample Task**. Ask participants to complete the sample task on their own then compare their answers with a partner. Check answers with the whole group.
10. Plenary to summarise points covered. Ask participants:
  - ③ **What is the TKT: CLIL Module syllabus area for this lesson?** (cognitive skills across the curriculum)
  - ③ **What are candidates being tested on?** (Candidates are tested on their knowledge of a range of cognitive skills and also their ability to identify different types of cognitive skills developed in a range of CLIL activities.)
  - ③ **How can candidates prepare for this area of the syllabus?** (Candidates can study the list of examples of cognitive skills in the TKT: CLIL Handbook and look at examples of when they are used in the TKT: CLIL Glossary, which are both on the Cambridge ESOL website).

#### Additional information

- See **TKT: CLIL Handbook** for a further example of a test from Part 1: Cognitive skills across the curriculum.
- The TKT: CLIL Handbook and Glossary are available to download at <http://www.cambridgeenglish.org/exams-and-qualifications/tkt/how-to-prepare/>



**TKT: CLIL Part 1: Cognitive skills across the curriculum – answer keys**

**Key to Procedure steps**

**Step 6:**

LOTS: e.g., identifying, comparing and contrasting, classifying

HOTS: e.g., predicting, reasoning, hypothesising, creative thinking, evaluating

**Key to Participant's Worksheet 1**

1. LOTS	6. HOTS
2. HOTS	7. LOTS
3. LOTS	8. HOTS
4. LOTS	9. LOTS
5. HOTS	10. LOTS

**Key to Sample Task**

**1 B      2 C      3 B      4 A      5 A      6 B**



## TKT: CLIL Part 1: Cognitive skills across the curriculum – Participant’s Worksheet 1

Look at the activities below and decide which demand lower order thinking skills and which demand higher order thinking skills. Write the numbers under the two headings.

<b>LOTS</b>	<b>HOTS</b>
Example from our curricular subjects: 1.  2.	Example from our curricular subjects: 1.  2.

### Activities from CLIL classrooms

1. Classify the musical instruments into three sets. Which features do they have they in common?	6. Read your partner’s report on industrial paints. Comment on how clearly it was written.
2. Imagine you had no electricity. How would it affect your life?	7. Record the data about rainfall on the graph and decide which data goes on the X-axis and which on the Y-axis.
3. Compare the river Nile and the river Ganges. Write down three similarities and three differences.	8. Suggest two alternative solutions to the maths problem and explain how you worked them out.
4. Sequence the following inventions on the timeline.	9. Look at the three paintings and tell your partner which colours are the most dominant.
5. How would you change the experiment to make sure it was a fair test?	10. Look at the table of imports and exports and then list those which have increased in the last five years.



## TKT: CLIL Part 1: Cognitive skills across the curriculum – Sample Task

For questions 1 – 6, look at the cognitive skills and the three activities listed **A**, **B** and **C**.

Two of the activities are examples of the cognitive skill. One is **NOT**.

Mark the letter (**A**, **B** or **C**) which is **NOT** an example of the cognitive skill on your answer sheet.

### 1. LOTS

- A Match the different types of energy with their uses.
- B Tell your partner why you think the photographer took this picture.
- C Green, orange and purple. Write down the word to describe these colours.

### 2. HOTS

- A Justify why you said the government should raise taxes.
- B Suppose you could design one new type of transport. What would it be?
- C Change the circuit by shortening the wires.

### 3. Rank ordering

- A Agree on the top three locations to build a new community sports centre.
- B Agree where to place each stage of the life cycle of a plant in the diagram.
- C Agree on a list of 19<sup>th</sup> century leaders who made changes to the laws of their countries. Start with the greatest change.

### 4. Classifying

- A Divide the numbers on the top row by those on the bottom row.
- B Categorise the movements into those which are simple and those which are complex.
- C Look at the table and then decide which groups of cells go into the different columns.

### 5. Hypothesising

- A Why don't you change the background music so the audience can hear the violin?
- B If there were no banks, how would people borrow money?
- C Imagine there was life on another planet, what do you think scientists would do?

### 6. Evaluating

- A Assess your partner's description of the sculpture using the criteria on the art website.
- B Separate the symmetrical shapes from the others and then show their lines of symmetry.



- C Say how the role-plays have improved after everyone has performed their work.