

توضيحات إضافية حول قرار وزير التربية والتعليم العالي المتعلق بتوصيف مسابقة علوم الحياة:

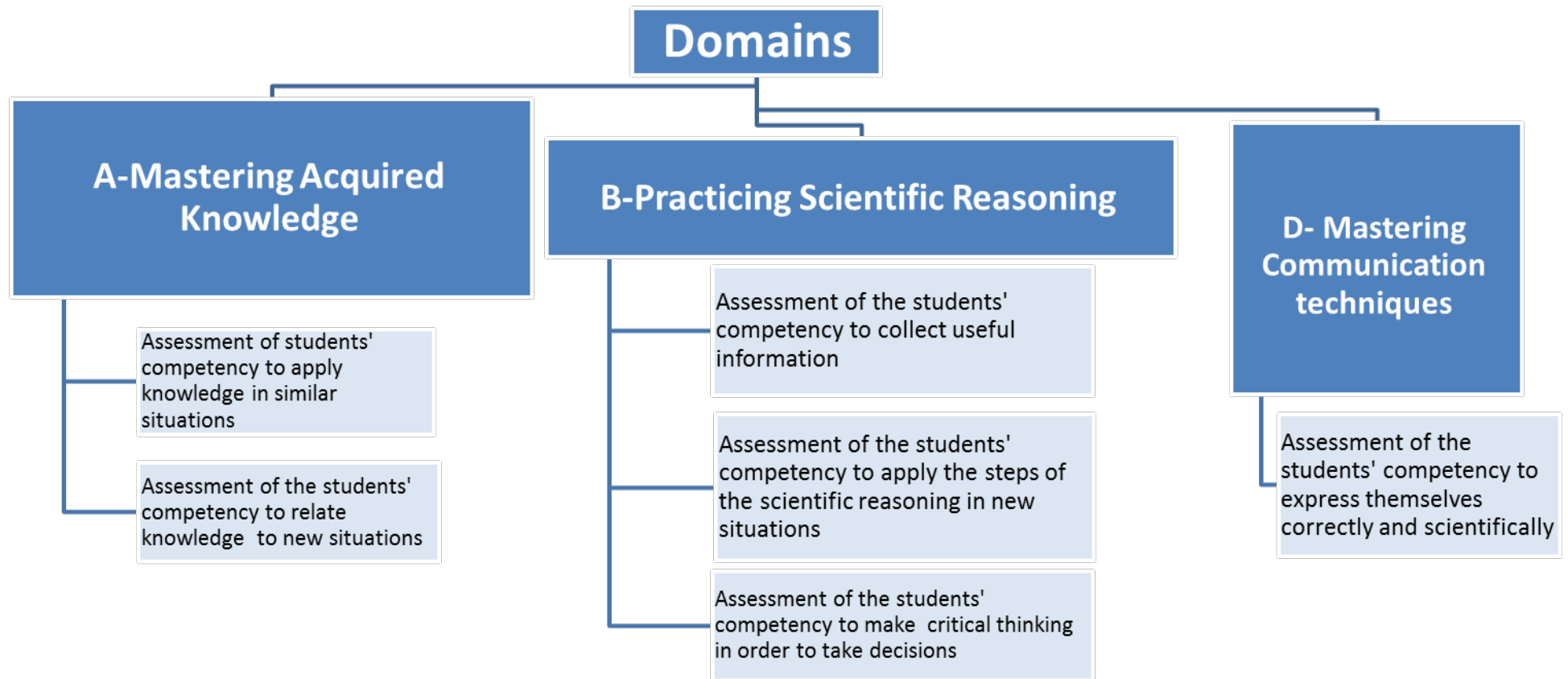
المرجع:

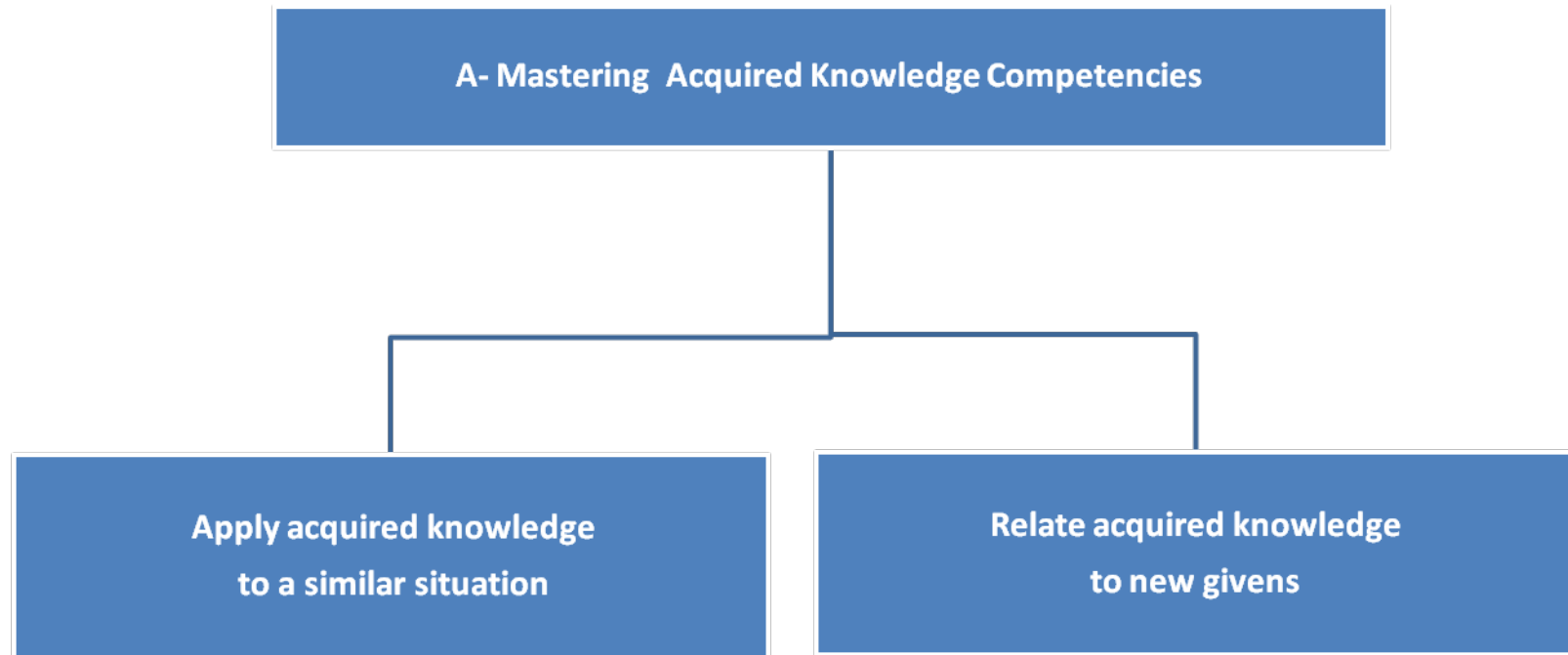
النصوص الرسمية الصادرة عن وزارة التربية بمراسيم وقرارات وتعاميم نذكر منها ما له علاقة بالموضوع:

- ١- مناهج التعليم العام وما يرتبط به من مضامين وفلسفة التقويم (مرسوم رقم ١٠٢٢٧ تاريخ ٨/٥/١٩٩٧ ، والقرار رقم ٢١ تاريخ ٣٠/٤/١٩٩٩
- ٢- الأفعال الإجرائية الصادرة في التعميم رقم ٢٠١٣/١ هي لائحة تتضمن ٢٠ من الأفعال الإجرائية الممكن استخدامها
- ٣- القرار رقم ٦٣١/م/٢٠١٦ تاريخ ٣/٩/٢٠١٦
- ٤- التعميم رقم ٢١/م/٢٠١٦ تاريخ ٣/٩/٢٠١٦

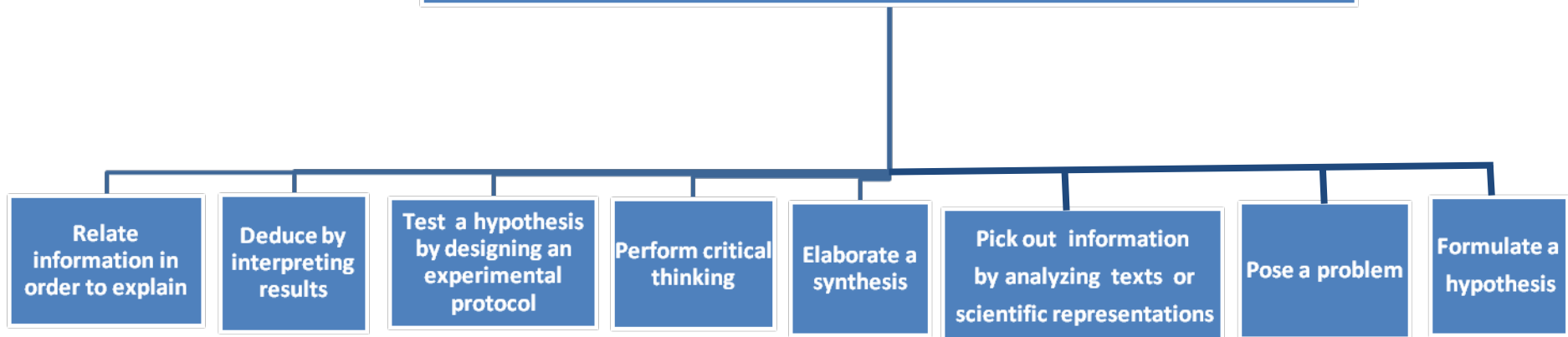
I- Official Instructions for “Life Science” Examination

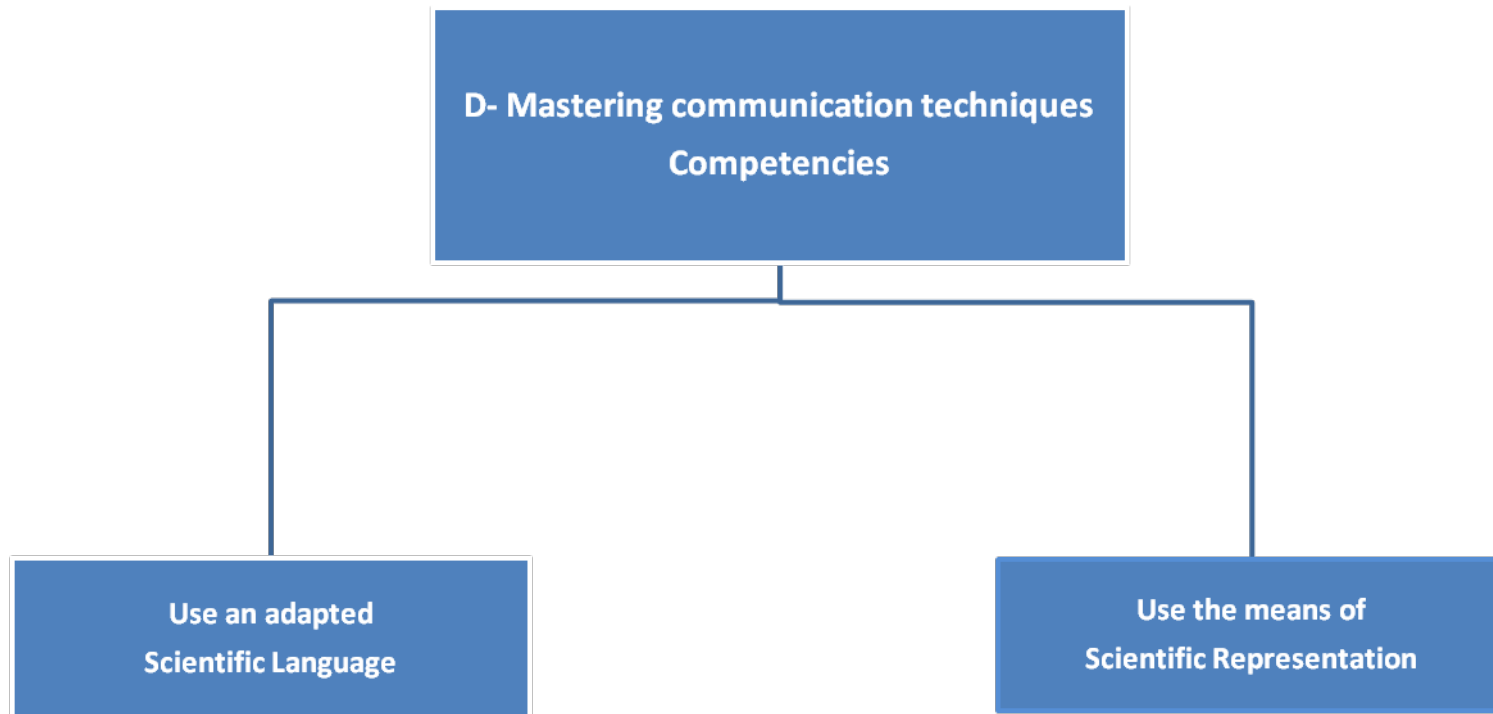
The exam aims to assess the competencies acquired Life Science/ Life and Earth Science subject designated by the system of assessment in 1999. The exam includes 3 to 4 exercises in SE and LH and 4 exercises in LS and Brevet covering 70% of the program. The exercises are independent and meant to test the competencies of the three domains. Each exercise can assess one or several topics of the mentioned program.





B- Practicing Scientific Reasoning Competencies





✓ The exam can assess one domain of competencies or different domains of competencies. In this way, the exercises of the exam can combine one or many competencies of different domains. In all cases, the distribution of marks will respect to each class is respected (mentioned in the ministerial decision).

✓ Some verbs, depending on the context, require the investment of acquired knowledge and / or logical reasoning only.
Examples of these verbs are:

- Justify
- Identify
- Determine or show that
- Calculate
- Explain
- Distinguish or differentiate
- Compare
- Complete
- Indicate
- Specify
- Draw a functional diagram
- Describe...

- ✓ Some verbs require especially the investment of reasoning. Examples of these verbs are:
 - Pose a problem
 - Formulate a hypothesis
 - Design an experiment to test a hypothesis
 - Pick out information from a given document
 - Analyze
 - Interpret
 - Deduce
 - Draw out
 - Conclude...

- ✓ Some verbs are used to translate a scientific representation (graph, table, diagram ...). Some examples are:
 - Describe
 - Draw
 - Establish
 - Schematise

- ✓ Note that many verbs can be used to assess the same competency.
Example: Identify, specify, determine, explain,

II- Instruction for better answering

For Verbs requiring reasoning such as analysis, comparison, explanation... or elaborating a newly produced written text like the description ..., the answer should include:

- The numerical values and the corresponding units if they are indicated in the documents and use the given scale for determining the desired values when they do not appear explicitly or directly.
- Logical connectors (addition, cause, consequence, opposition or concession...) whenever there is a data confrontation and time connectors whenever there are steps or a chronological order.
- Identify the variable or variables in a given experiment in order to determine the analysis to be done (simple analysis or parallel analysis) and to determine in an analysis the appropriate logical sequences that correspond to the different variations.
- Choose the relevant knowledge relevant to the question so as not to waste time using irrelevant information.
- Use the appropriate scientific vocabulary and write it correctly.
- Select freely the suitable process and the connectors that they are relevant to the given instruction.

III- A limited idea to the different types of connectors that can be used based on the type of texts

- The time connectors, which are mainly used to mark the chronological order of the described events: and, then, later, before, after, next, finally, at the beginning. etc.
- The space connectors, which mark the spatial location: here, at the bottom, to the left, to the right, ahead, at the back, next to, etc
- The connectors used to show reasoning and that explain the logico-semantic links between textual sequences. These links are of different types: they can express opposition or concession (but, nevertheless, nevertheless, etc.), explanation and / or justification (because, since, etc.) and the conclusion (So, too, thus, therefore, hence, etc.), etc.
- The enumerating connectors, which make it possible to list a series of elements (first, then, finally, and, or, also, equal to, etc.)
- The rephrasing connectors, which indicate the resumption of what has been said previously (in other words, in short, in short, in summary, etc.)

Examples of some connectors in English Language:

The connectors of time that are specially used to mark the chronological organization of the described events are: before, then, after, immediately, next...

The connectors of space that mark the location in a space are: here, down, to the left, above, near, inside, outside, behind, under, between, on top of...

The connectors of logic explicit the relation (semantic logic) between the sequences of the text; these relations are of various types: they may show opposition or concession, explanation and/or justification; like: because, for that reason, so... and a conclusion; like: hence, therefore, consequently...

The connectors of order allow the identification of a series of elements; like: before, and, first, first of all, second, third, later, finally

The connectors of rephrase allow the representation of the mentioned before; like: to summarize, in other words, that is to say, to clarify ...

And there are also the connectors of presentation like: the connectors of order or organization of the presentation (like: afterwards), and the connectors of metatextual Like: attached, see below, above...

The connectors of time that are specially used to mark the chronological organization of the elements of the described events are:

about	prior to	before	during
after	subsequently	soon	in conclusion
at	until	later	next
first	meanwhile	afterward	in the meantime
second	today	immediately	as soon as
third	tomorrow	finally	then

The connectors of space that mark the location in a space are:

above	near	inside	into
across	among	off	onto
against	Around	beneath	on top of
along	away from	Beside	throughout
alongside	back of	Between	outside
amid	behind	beyond	to the right
in front of	below	by	Over
		down	under

The connectors of logic explicit the relation (semantic logic) between the sequences of the text; these relations are of various types: they may show opposition or concession, explanation and/or justification; like: because... and a conclusion; like: hence, therefore...

Clarify:			
that is	put another way	differently	to clarify
in other words	stated	for insurance	

Show similarities:			
in the same manner	also	similarly	like
in the same way	likewise	as	both

Contrast two things or show a difference:			
but	otherwise	yet	in the meantime
even though	even so	however	as opposed to
conversely	counter to	on the other hand	on the contrary
nevertheless	still		

The connectors of enumeration allow the identification of a series of elements; like: before, and, like that....

Chronological order signal words and phrases	
First, first of all, second, third, etc.	Finally, last, last of all
Then, next, after that, soon, later, later on	Meanwhile. At the same time, now
Gradually, eventually	
Subordinations	
After	As
Since	As soon as
Until	Before
While	When
As long as	Whenever
As, just as	Until

The connectors of rephrase allow the representation of the mentioned before; like: to summarize, in another words, that is to say...

Clarify:			
that is	put another way	differently	to clarify
in other words	stated	for insurance	