

ANALYSIS OF THE NATIONAL SCIENCE CURRICULUM FOR MIDDLE SCHOOL

**Instructional Context**

*Complexity of cognitive competences\**

Section	Degree 1 (SC <sup>-</sup> )	Degree 2 (SC <sup>+</sup> )	Degree 3 (CC <sup>-</sup> )	Degree 4 (CC <sup>+</sup> )
<b>KNOWLEDGE</b>	Contain competences of low level of complexity, involving processes that require the retrieving of relevant knowledge from long-term memory	Contain competences of a level of complexity higher than that of SC <sup>-</sup> as the understanding of simple instructional messages like exemplification	Contain competences of a level of complexity higher than that of SC, as the understanding of complex instructional messages, like explanation, and application	Contain competences of very high level of complexity as analysis, evaluation and creation
<b>AIMS</b>	Aims that refer to competences of low level of complexity, involving processes that require the retrieving of relevant knowledge from long-term memory	Aims that refer to competences of a level of complexity higher than that of SC <sup>-</sup> as the understanding of simple instructional messages like exemplification	Aims that refer to of a level of complexity higher than that of SC, as the understanding of complex instructional messages, like explanation, and application	Aims that refer to competences of very high level of complexity as analysis, evaluation and creation
<b>METHODOLOGICAL GUIDELINES</b>	Strategies/methodologies that call for mobilizing competences of low level of complexity, involving processes that require the retrieving of relevant knowledge from long-term memory	Strategies/methodologies that call for mobilizing competences of a level of complexity higher than that of SC <sup>-</sup> as the understanding of simple instructional messages like exemplification	Strategies/methodologies that call for mobilizing competences of a level of complexity higher than that of SC, as the understanding of complex instructional messages, like explanation, and application	Strategies/methodologies that call for mobilizing competences of very high level of complexity as analysis, evaluation and creation
<b>EVALUATION</b>	It is focused on competences of low level of complexity, involving processes that require the retrieving of relevant knowledge from long-term memory	It is focused on competences of a level of complexity higher than that of SC <sup>-</sup> as the understanding of simple instructional messages like exemplification	It is focused on competences of a level of complexity higher than that of SC as the understanding of complex instructional messages like explanation, and application	It is focused on competences of very high level of complexity as analysis, evaluation and creation

**Complementary information for analysing the complexity of cognitive competences\***

<b>Degree 1 (SC<sup>-</sup>)</b>	<b>Degree 2 (SC<sup>+</sup>)</b>	<b>Degree 3 (CC<sup>-</sup>)</b>		<b>Degree 4 (CC<sup>+</sup>)</b>		
Remember	Understand (low level)	Understand (high level)	Apply	Analyse	Evaluate	Create
- Memorizing - Referring - Recalling	- Identifying - Exemplifying	- Interpreting - Comparing (simple relations) - Inferring (simple relations) - Explaining	- Executing - Implementing - Discussing	- Analyzing - Organizing - Attributing - Comparing (complex relations) - Inferring (complex relations) - Data researching and selection	- Arguing - Checking - Criticizing - Judging - Problem solving - Decision-making exercise	- Formulating problems - Formulating hypotheses - Planning projects/works - Producing projects/works

\*Based on the new version of Bloom's Taxonomy of Educational Objectives (Krathwohl, 2002).