Fédération Wallonie-Bruxelles

Administration générale de l'Enseignement et de la Recherche scientifique

CORE SKILLS

The following document is a translation of the *Socles de Compétences* but the French version remains the only official framework of reference

Basic education and the first stage of secondary school education

HOW TO READ THE CHARTS

First Step
(from the first year of basic education to the end of the 2nd year of primary school)

Second Step
(from the 3rd year to the 6th year of primary school)

Third Step
the first two years of secondary school

MEANING OF USED SYMBOLS

Initiation into the skill ↗

certification of the skill (at the end of a stage) C

maintaining proficiency in the skill E

FRENCH

TABLES OF CONTENTS

1. General principles

Working towards appropriating the French language means working to acquire the language of teaching, developing the ability to communicate and draw pleasure from it and gaining access to culture.

These priorities will be met if communication situations are charged with meaning for pupils and conducive to their development.

This document presents a broad set of skills that every teacher, both in primary education and in secondary school education, will develop, making sure they interact.

These skills, indicating a level of proficiency appropriate to the first three stages of compulsory schooling (end of the second year of primary school, end of the sixth year of primary school, end of the first stage of secondary education), have been selected for their importance in the development of children and young adolescents. This does not mean that other skills cannot be addressed in the syllabus, as long as this is done outside of a certified evaluation.

2. Transversal skills

The French language is the first key that is offered to the child and adolescent to access all areas of learning. This means that we are all responsible for building this reference language.

Thus, throughout the syllabus, through a gradual mastery of the French language, pupils will be prompted to perform a set of interactive skills, **mental processes, learning strategies and relational attitudes**, that can be used directly in the construction of their knowledge, but more importantly, once their schooling is completed, **as the foundations of their life-long learning processes**.
These skills will be built up as part of **educational activities within the different areas of learning**.

Mental approaches

Grasping information :

- have a satisfactory knowledge of the French language to convey information ;
- use other codes, other languages (e.g. the languages of image, graphics, etc.) ;
- transpose into the French language the signs of other languages (e.g. the language of mathematics) ;
- search for information, know where to look (documentation centre, library, media library, etc.) and the resources (reference books, special literature, newspapers, Internet, CD-ROM, etc.).

Processing the information:

- "reread": going back over to consolidate understanding;
- analyse, i.e.:
  - recognise
    - ideas (distinguish the essential elements, prioritise them according to relevant criteria),
    - links between ideas (distinguish the concepts of temporality, cause, consequence, opposition, proportionality, similarity),
    - the relative importance of ideas (compare, sort, classify information);
  - make assumptions, recognise the explicit and the implicit;
- reformulate: modify the form of a piece of information while preserving its meaning;
- summarise: reformulate ideas in condensed form.

Memorising information:

- Memorising means :
  - cataloguing ideas ;
  - associating the words with an idea, with a particular context ;
  - integrating what is memorised with what is already known ;
  - generating content, but also procedures ;

    - activating the visual, auditory and motor memory using varied methods ;
- recording information in the memory to be able to use it in a new action situation.

Using information:

- integrating the information with a network of established concepts or a network of more complex information ;
- using the information to perform similar tasks ;
- imitating information, transposing it into new situations.

Communicating information:

- communicating the approaches followed, the results of a survey, a literature search, etc.

Learning strategies

Through the exercise of the transversal skills learned here, pupils can gain autonomy. They will also acquire tools that are transferable to their everyday and work lives :

- focusing attention on their ways of understanding and learning, on their work methods in order to express them, to compare them with those of others ;
- planning an activity ;
- managing the time it takes to complete an activity ;
- using reference materials ;
- using IT or audiovisual work tools, etc.

Relational attitudes

Throughout their schooling, pupils will be encouraged to think about themselves, about others, about their environment. The structuring of their personality is decisive for their future.

Through various communication activities, pupils will:

Get to know oneself, gain in self-confidence:

- be empowered,
- take on responsibilities,
- demonstrate intellectual curiosity,
- be sensitive to life, nature, art.

Get to know each other and accept differences:

- listen,
- dialogue,
- work as a team,
- let others express themselves.

3. Disciplinary skills

To indicate the level of approach to the skill, the document uses the following symbols:

↗ **literacy** in the skill,

C **certification** of the skill**,**

E **maintaining proficiency** in the skill (proficiency in a skill certified at a certain level must be maintained at the subsequent level(s), which implies that pupils apply it in increasingly varied and complex situations).

How to read tables : mastering a given skill takes place gradually ; so,
the level II (i. e. the last year of primary school) is superimposed on level I (i. e. the end of the 2nd year of primary school) and so does level III (i.e. the end of the first stage of secondary school education).

Words or expressions marked with an asterisk are explained in the glossary

Reading

Reading means constructing meaning as recipient of a written message (story, novella, novel, play, poetry, fable, song, letter, article, user manual, various instructions, etc.) or visual message (fixed or moving image : drawing, painting, poster, film, etc.).

The constructed meaning is determined by an interaction between :

- the characteristics of the message (dominant intention and structures),
- the reader's acquired knowledge (including his/her linguistic, literary, artistic, historical knowledge, including his/her emotional dispositions),
- the specifics of the situation (or context) in which the reader processes the message.

In a given situation, the reader conceives a plan according to which he/she will read the message.

Guiding reading according to the communication situation

	I	II	III
Recognising information relating to references from a book, a text, a visual document*.	**C** title in a collection appropriate to the age of the child	**C** familiar collections	**E**
Choosing a document* according to the project and the context of the activity.	**C** in the reference system* developed by the class	**C** in a library and documentation centre	**C** in a media library
Anticipating the content of a document* using external and internal cues (illustrations, images, first and fourth cover pages, typography, etc.).	↗	**C** front and back cover, back of the book, table of contents	**C** introductory information
Grasping the dominant intention of the author (inform, persuade, urge, move, give pleasure, etc.).	↗	**C** by considering a short, simple statement in its entirety where the intention is clear	**C** by considering a longer and more complex text where the intention is clear
Adapting reading strategies according to the project, document* and the time granted : full or selective reading.	↗	**C** in a document*, with the help of internal cues (titles, headings, illustrations, alphabetical order, etc.)	**C** in a set of documents*, with the help of internal cues (titles, headings, illustrations, etc.)
Adopting a reading speed that aids the processing of the information.	↗	↗	**C**

Building meaning

	I	II	III
Managing the understanding of the document* to: • recognise explicit information,	**C** that relates either to the main characters and their actions, or to the essential information in a text	**C** determine the essential and secondary information, establish the relations to manner and place	**C** establish cause-and-effect relationships
• discover the implicit information (infer*),	↗	**C** build information from core elements on the place, time and characters	**C** from more disperse elements, from personal knowledge and diagrams built in the classroom
• check assumptions expressed personally or proposed,	**C** offer a plausible continuation to a simple text	**C** taking into account a larger number of clues	**C** a higher level of complexity
• perceive the overall meaning in order to : ▪ restoring a story respecting the chronological order, the logical links,	**C** in simple stories using support materials	**C** in short stories : novella, story, etc.	**C** in longer stories : novel, film, etc.
▪ rephrase and use information,	**C** from a simple, well-structured text	**C** from a structured and longer text	**E**
▪ rephrase or execute a sequence of instructions,	**C** simple instructions to perform a simple task	**C** simple instructions to perform a more complex task	**E**
▪ recognise the proposition and identify some arguments.	↗	↗	**C** understand the position of the author and main arguments
Reacting according to the nature of the document*, possibly by interacting with other readers, and distinguishing between: ▪ the real and the imaginary,	↗	**C** on the basis of a short story where the real and imaginary appear distinctly	**C** distinguish between fact and fiction on the basis of various documents*
▪ the real from the virtual,	↗	**C** on the basis of any virtual documents* and particularly depictions of animals, human beings and their environment	**E**
▪ the plausible and the implausible,	↗	↗	**C** on the basis of a short story in which the notions of plausibility, implausibility are clearly perceived
▪ true from false.	**C** on the basis of a short document* where true and false are clearly distinguishable	**C** on the basis of a more complex document* where true or false are clearly distinguishable	**C** by comparing a set of documents* and various reference systems* that make it possible to clearly distinguish true from false

Bringing out the organisation of a text

	I	II	III
Recognising a diverse number of documents* identifying the dominant structure: • narrative,	**C** identify the main characters, time and place of a story using the document*	**C** identify the essence of a story, a narrative, a film sequence with or without the document*	**C** rephrase the main sequence of a story, a narrative, a film sequence with or without the document*, using the narrative outline
• descriptive,	↗	**C** identify how the elements are described	**C** identify a portrait
• explanatory,	↗	↗	**C** identify the problem, then perceive the explanations and conclusions proposed
• argumentative,	↗	↗	**C** detect a clearly stated stance and the arguments that support it
• dialogue structure.	**C** identify the speaker	**C** recognise speech marks, show that the replies of the characters are linked	**C** find information on the feelings of the characters in the comments that surround direct speech
Recognising the markers of the general organisation: • paragraphs (various signs separating groups of paragraphs, subsections and/or double line-spacing, titles and headings),	↗	**C** recognise titles and headings, paragraphs, signs and subsections	**E**
• layout,	**C** recognise documents* worked on in class by their layout	**C** identify the types of texts : letter, article, poster, poem, etc.	**C** identify the components of a layout and context : text, paratext*, graph, table
• text organisers*,	↗	**C** recognise temporal and spatial organisers	**C** recognise logical organisers
• modes and tenses.	↗	**C** identify tenses	**C** identify the tense system of a text, justify the use of modes such as the infinitive and the imperative

Perceiving the coherence[1] between sentences and groups of sentences throughout the text

	I	II	III
Spotting coherence factors* : • words or expressions used to string sentences ;	↗	**C** chronological sequence : the next day, an hour later, the day before, etc.	**C** logical sequence : thus, that's why, etc.
• backward references (anaphora) ;	↗	**C** identifying linguistic elements that refer back to the main character(s)	**C** identifying the linguistic elements that refer back to the main characters and any information
• tense system ;	↗	↗	**C** situate facts and events in relation to each other (simultaneous, preceding, subsequent)
• thematic progression*.	↗	↗	**C** recognise information from sentence to sentence and the information already stated

Taking grammatical units into account

	I	II	III
Understanding the meaning of a text: • based on punctuation and grammatical units ;	**C** identify the sentences of a text	**C** identify the sentences with the same structure	**C** perceive the influence of a syntactic construction on the meaning of the text
• recognising the grammatical markers (nominal and verbal).	↗	**C** recognise grammatical clues to establish links between the words : gender and number markers	**C** with due consideration for all links : feminine and plural markers and markers of the person and verb tenses

[1] See the glossary for the terms *coherence* and *cohesion*. For the sake of clarity, the first term is the only one used, as it is more broadly accepted.

Processing lexical units

	I	II	III
Understanding by: • making assumptions about the meaning of a word, discovering the meaning of a word from the context ;	**C** a written, illustrated context	**C** based on the paragraph, the text, examples	**C** with more distant contextual clues
• confirming the meaning of a word ;	↗	**C** find the meaning in a dictionary or in a suitable reference system*	**C** in a lexicon, a glossary, footnotes
• establishing the relationships between words : word families, synonyms, antonyms ;	↗	**C** understand the meaning of words by identifying them according to the family to which they belong	**C** understand the meaning of words by identifying synonyms and antonyms
• distinguishing the elements that make up a word (prefix, root, suffix).	↗	↗	**C** understand the meaning of words by analysing their components

Perceiving the interactions between verbal and non-verbal elements

	I	II	III
Linking a text to non-verbal elements.	**C** typography, illustrations	**C** sketches, diagrams, captions, tables, graphs, etc.	**E**

Writing

Writing means producing or reproducing meaning as the transmitter of a message.

The meaning is produced or reproduced by an interaction between:

- the characteristics of the message (dominant intention and structures),
- the acquired knowledge of the writer (including his/her linguistic, literary, artistic, historical knowledge ; including his/her emotional dispositions),
- the specifics of the situation (or context) the writer is in.

In a given situation, the writer develops a project in relation to which, mobilising his/her acquired knowledge, he/she will draft a document* in which it is possible for the recipient to understand his/her intentions.

Guiding writing according to the communication situation

	I	II	III
Taking into account the following criteria of : • the intention sought (to inform, tell, describe, persuade, enjoin, give pleasure), • the status of the writer (child, representative, group, etc.), • the addressee, • the project, the context of the activity,	↗	**C** On the basis of the criteria selected	**C** On the basis of all the criteria
• the type of text chosen or required,		↗	
• the known procedures and observed models,		↗	
• the supporting materials.		↗	

Building content

	I	II	III
Searching for and inventing ideas, words, etc. (stories, information, arguments, injunctive texts, etc.).	**C** On the basis of each person's knowledge	**C** On the basis of consultation with people	**C** On the basis of documentation
Reacting to written, audio, visual documents*, etc. expressing a personal opinion and justifying it in a coherent manner.	↗	↗	**C**

Ensuring that the text is organised and coherent*

	I	II	III
Planning the overall organisation by selecting an organisational model appropriate to the text to be produced (injunctive, narrative, descriptive, explanatory, informative, argumentative).	↗	**C** In predominantly injunctive, narrative, informative texts	**C** In texts that are predominantly explanatory, descriptive, argumentative
Contributing to the coherence* of the text: • creating paragraphs appropriately (various signs separating groups of paragraphs : subsections and /or double line spacing, etc.) ;	↗	**C** In predominantly injunctive, narrative, informative texts, using models	**C** In predominantly explanatory, descriptive, argumentative texts, using models
• making good use of indicators of sets larger than the sentence (paragraph and group of paragraphs) : ▪ headings and subheadings,	↗	**C** Titles, headings in predominantly informative texts	**C** In predominantly narrative texts
▪ Usual text,	↗	**C** Organisers	**E**
▪ choice of tense system and the appropriate mode.	↗	↗	**C**
Using the usual coherence*: • words or expressions used to string sentences ;	↗	**C** Factors	**E**
• backward referencing (anaphora) ▪ repeated using a pronoun,	**C** Personal pronouns	**C** Other usual pronouns	**C** All pronouns
▪ repeated using a lexical substitute, often highlighted by a definite determiner, a demonstrative determiner,	↗	**C** In simple texts	**E**
▪ repeated by a possessive determinant,	↗	**C**	**E**
▪ repetitions.	↗	↗	**C**
Using the other factors that contribute to the coherence of the text* : • choice of adverbs of time and place,	↗	**C** In predominantly injunctive, narrative, informative texts	**C** In predominantly explanatory, descriptive, argumentative texts
• thematic progression* (sequencing of information).	↗	↗	**C**

Using grammatical and lexical units

	I	II	III
Using appropriately: • sentence structures,	↗	**C** The most usual coordination, juxtaposition, subordination	**C** By widening the choice
• punctuation.	**C** Full stop	**C** Comma in a list, question mark, exclamation mark	**C** The set, including the speech marks
Using specific vocabulary appropriate to the communication situation.	↗	**C** Specific vocabulary for the subject in question	**C** Vocabulary appropriate to the reader of the text
Spelling in own production **(using spelling and grammar reference systems*)**.	**C** 50% of correct forms in own production	**C** 80% of correct forms in own production	**C** 90% of correct forms in own production

Paying attention to the layout

	I	II	III
In terms of graphics: • layout according to style,	**C** Writing of simple texts worked on when developing content	**C** Writing of texts worked on when developing content	**E**
• tidy and legible writing,	**C**	**E**	**E**
• writing using tools (word processing).	↗	↗	**C**
In terms of interactions between verbal and non-verbal elements : choice of medium, choice of illustrations, photographs, sketches, maps, graphs, tables, etc.	↗	**C** Illustrations, photos	**C** Sketches, maps, graphs, tables

Speaking-listening

Talking is expressing thoughts through speech and the body ; it is producing meaning as the transmitter of a message.
Listening is mobilising one's attention to perceive audible*, verbal and physical signs ; it means producing meaning as recipient of a message.

Meaning is constructed through the interaction between:
- the message characteristics (dominant intention, structures, physical signs),
- the acquired knowledge of the transmitter (including his/her linguistic, literary, artistic, historical knowledge, including his/her emotional dispositions),
- the specifics of the situation (context) in which the transmitter or the recipient processes the message.

In a given situation, the transmitter and recipient conceives a plan according to which he/she will issue or listen to the message.

Speaking and listening mobilise specific skills, attitudes and knowledge.

Both lines of communication are combined here because, in most cases, speaking and listening are exercised in a context of immediate exchange (although technically mediatised) where each party alternately plays the role of transmitter and recipient.

Guiding speaking and listening to the communication situation

	I	II	III
Taking into account the following criteria: • the talking or listening intention sought (inform, be informed/explain, understand/give instructions, understand them/ give pleasure, enjoy)	**C** Conversation on a familiar subject with a familiar interlocutor	**C** Presentation or reception of an explanation, a sequence of instructions	**C** Presentation or reception of a presentation, a document*, an opinion
• by the interlocutors,	↗	**C** Number and age	**C** Verbal and non-verbal reactions, status of the speaker and/or of their interlocutors
• the constraints of the activity,	↗	**C** Of time and place	**E**
• of the conditions of the situation.	↗	**C** Spontaneous or delayed interaction	**C** Formal or informal situation, with or without use of audiovisual, IT or other resources
By practising active listening (asking questions, reformulating, etc.).	↗	↗	**C**
Using linguistic processes that ensure the relationship (courtesy, taking turns and talking time, etc.)	↗	↗	**C**

Building meaning

	I	II	III
Presenting the message or reacting to it.	↗	**C** From a personal point of view	**E**
Practising reading a message aloud with prior mental reading.	↗	**C**	**E**
Connecting significant information within the message to own knowledge and other sources.	↗	**C** By connecting it to own knowledge	**C** By connecting it to other sources
Selecting information in response to a project.	**C** Inherent to their everyday environment	**C** Inherent to their collective living environment	**C** Inherent to their broader social frameworks
Responding to a document, possibly in interaction with others,	**C** In an everyday environment	**C** In a collective living environment	**C** Through broader social contacts
• distinguishing between: ▪ the essential and the accessory,	↗	↗	
▪ the real and the imaginary,	↗	**C**	
▪ the plausible and the implausible,	↗	**C**	
▪ the real and the false ;	↗	**C**	
• expressing their personal opinion, accompanied by a coherent justification.	↗	↗	
Recognising, presenting explicit and implicit information.	**C** Explicit in their everyday living environment	**C** Explicit in their collective living framework	**C** Explicit and implicit
Checking assumptions expressed personally or proposed.	**C** Propose a plausible continuation to a text heard	**C** Taking into account several clues	**C** At a higher level of complexity
Managing the overall meaning of the message and rephrasing the information.	**C** On the basis of a simple message presented in a simple structure, following an example presented in class	**C** On the basis of a message presented in a simple structure	**C** On the basis of a message presented in a complex structure

Ensuring and bringing out the message organisation and coherence*

	I	II	III
Using and identifying the different structures : narrative, descriptive, explanatory, argumentative, dialogue structure.	↗	**C** Except descriptive and argumentative	**C** Descriptive and argumentative
Organising and perceiving the progression of ideas.	↗	**C** Sequence of instructions and the elements of a simply narrative	**C** In an argument
Identifying primary and secondary information.	↗	**C** In a simple structure	**E**
Using and identifying processes intended to clarify the message (e.g., illustrations, anecdotes, etc.).	↗	↗	**C**
Taking care with the phonic presentation of the message.	**C** Express themselves audibly in close and informal communication situations	**C** Express themselves audibly with appropriate pronunciation and sufficient volume in an wider or new communication situation	**E**

Using and identifying non-verbal elements

	I	II	III
Using and recognising physical clues (among them, the occupation of space, posture, gestures, facial expressions, the gaze, etc.).	↗	↗	**C** Using at least one or two tangible clues
Using and identifying interactions between the verbal elements and the supports : drawings, objects, illustrations, tables, etc.	↗	↗	**C** Using at least one or two supports

4. Glossary

Coherence
"For a document (text, message, etc.) to be coherent, it must contain information that is repeated (repetition), new information must be included in its development (progression), there must be no contradiction between the information (non-contradiction) and it must be possible to connect the information (relationship)"
(in M. CHAROLLES, *Les études sur la cohérence, la cohésion et la connexité textuelle depuis la fin des années soixante,* "Modèles linguistiques", Presses Universitaires de Lille, 1988).

Cohesion
This is defined by all the markers that establish relationships between the various elements of a document and/or its different information. Text organisers, backward references (anaphors) are important elements of textual cohesion. These formal techniques make a document coherent.

Document
This generic term refers to any kind of message and oral or written media (texts, films, presentations, etc.).

Infer
"The mental process of the reader who establishes a connection between two or more elements of a document and/or with their experience of the world and with mental frameworks to construct a meaning that is not explicitly given in the text".
(Ministry of the French-speaking Community, *Pistes didactiques*, 1997, p. 15).

Paratext
All written and/or visual elements surrounding the text and making it possible to qualify or to enrich our response to it.

Thematic progression
The ways in which information is carried from sentence to sentence throughout a text.

Reference system
A document drawn up in the classroom or outside the classroom in order to build a body of knowledge and/or skills (dictionaries, anthologies, glossaries, syllabus, collections of texts, word boxes, CD-ROM, etc.).

Audible sign
The parameters related to the voice (the volume of the voice, the speed, articulation, intonation, etc.) and sound effects.

Tense system
It's related to the choice of one or several dominant tenses, e.g. the present or the past tense in a news story, the alternation of the simple past and imperfect in a story.

MATHEMATICS

TABLE OF CONTENTS

1. Introduction

Mathematics is taught on the basis of objects and situations experienced and observed in real life to raise questions about mathematical facts. The mathematics course is not just about imparting knowledge. From primary school to the end of the first stage of secondary school, stimulating the imagination, provoking thought and developing critical thinking about these observations lead pupils to understand their environment and have an effect on it.
This document presents two types of skills: general skills to be developed and skills required to master mathematical tools and approaches.
Through problem-solving, pupils develop mathematical abilities, acquire in-depth knowledge and forge a confident and active personality.

Four major *transversal skills* interact in problem-solving :

- Analysing and understanding a message.
- Solving, reasoning and arguing.
- Applying and generalising.
- Structuring and synthesising.

These are clarified by means of a non-exhaustive list of approaches designed to develop them.
Each skill includes communication-related aspects. Indeed, this is essential to build up a relationship to knowledge. Mastering communication tools allows pupils to contribute their thinking to the work of the class as a whole, to use the others' input and to help build a collective knowledge.
It also leads them to a situation where they can present their work in the way which highlights them the most and which enables others to use it.

The *skills necessary to master mathematics* can be divided into four major fields:

- Numbers
- Solids and shapes
- Measures
- Data handling

The formulation of these skills is based on choices that, in each field, determine cultural references common to all young people within the same school year.

2. Transversal skills to be developed

2.1. Analysing and understanding a message

Analysing and understanding a message means appropriating it before dealing with solving strategies.

- Reliving the situation, connecting it to their own environment, areas of interest, to other objects studied, to personal experience.
- Recognising, reformulating the explicit or implicit question(s).
- Questioning.
- Recognising the type of information contained in a table, graph ; recognising important words, the relationship between the various proposals, taking the context of a word into account to determine its meaning.
- Distinguishing, selecting relevant information ; perceiving the absence of necessary data and formulating the observation.
- Making use of the usual reference tools : dictionary, index, table of contents, teaching materials, etc.

2.2. Solving, reasoning and arguing

Solving, reasoning and arguing imply identifying the steps and/or operations to be performed to reach the solution while ensuring an oral or written justification of all the stages.

- Connecting the situation with known mathematical objects (measures, shapes, measurements, operations on numbers, etc.).
- Acting and interacting on various materials (tables, shapes, solids, measuring instruments, calculators, etc.).
- Using a diagram, a drawing, a table, a graph when these materials are relevant.
- Estimating the result, checking its plausibility.
- Presenting and comparing arguments and methods ; comparing one’s results with those of others and with a prior estimate.
- Breaking down a problem, transposing a statement into a sequence of operations.
- Finding an example to illustrate a property or a counter-example to prove that a statement is false.
- Speaking in a clear and precise language ; quoting the statement that is used to back up the argument ; mastering the common mathematical symbolism, vocabulary and phrases needed to describe the stages of the process or solution.
- Distinguishing between "what we are sure of" and "what must be justified".
- Presenting strategies that lead to a solution.

2.3. Applying and generalising

Applying and generalising mean appropriating subjects, methods, but also building new approaches.

- Evoking and reactivating knowledge, approaches, experiences in relation to the situation.
- Linking facts or situations.
- Using directly and in the same context a rule, a method or a statement that has already been learned.
- Identifying situations as similar or dissimilar.
- Using already learned knowledge in a new context and adapting it to different situations.
- Questioning to extend a property, a rule, an approach to a wider area.
- Imagining a situation, a statement on the basis of the effective solution or the structure.
- Combining several approaches to solve a new situation.
- Constructing a formula or rule, depicting a process in schematic form, i.e, ordering a sequence of operations, creating a flow diagram.

2.4. Structuring and synthesising

Structuring and synthesising means organising, orally and in writing, the process of reflection. It also means reorganising prior knowledge by integrating the newly acquired knowledge.

- Making changes to analyse the effects on the solution or result and recognising the permanence of logical connections.
- Identifying the similarities and differences between properties and situations drawn from the same context or different contexts.

3. Skills relating to basic mathematical tools

The skills are grouped under four headings: "numbers, solids and shapes, measures and data handling". Each time, these are introduced by a text that situates them in the genesis of mathematical teaching.
The following tables list the different skills to master in mathematics in the first three stages of compulsory education.

The presence of a letter **C** in the right hand columns indicates that the skill must be certified at the end of the stage in question.

The presence of a ↗ indicates that pupils must be initiated into the skill and must train using it in the course of the stage in question.

The presence of the letter E means that this skill must continue to be exercised during the stage in question.
Indeed, before mastering a skill, the child must develop it in a variety of problem situations, and when it is acquired, must continue to practise it in more complex problem situations.

3.1. Numbers

First there are the numbers that are used to count: they are written using the decimal system and produce an ordered sequence.
By doing mental arithmetic, we discover some properties of operations. We use these tools to develop basic written calculation and to use the calculator.
Ease in the world of numbers requires a good knowledge of the mechanisms of the decimal system and the acquisition of automatisms relating to the ability to count in units of ten, in multiples and powers of ten, the addition and multiplication tables , calculations of doubles, halves and square roots.
The inversion of multiplication and addition operations sheds light on certain aspects of division and subtraction. These operations extend the universe of numbers ; they pave the way for fractions, decimals and prime numbers.
The discovery and development of properties for certain classes of natural numbers also help to ensure ease in the field of numbers. In addition, the analysis of these arithmetic phenomena leads to the establishment of proof and to the use of letters for generalisation purposes. This study is thus a springboard to algebra.

In the world of numbers :

3.1.1. Counting, enumerating, classifying

	I	II	III
Enumerating.	**C** By counting objects or object representations	**C** By organising the counting and replacing it with a calculation	**C** By a calculation and where appropriate by a formula
Saying, reading and writing numbers in the decimal form while understanding the principle behind this.	**C** Natural numbers ≤ 100	**C** Decimal natural numbers to three decimal places	**E**
Classifying (situating, ordering, comparing).	**C** Natural numbers ≤ 100	**C** Natural and decimal numbers to three decimal places	**C** Integers, decimals and fractions bearing a sign

3.1.2. Arranging numbers in families

	I	II	III
Decomposing and recomposing.	**C** Natural numbers ≤ 100	**C** Natural and decimal numbers to three decimal places	**E**
Decomposing numbers into prime factors.		↗	**C**
Creating families of numbers from a given property (even, odd, multiple of, divisor of).	↗	**C**	**E**
Detecting patterns in sequences of numbers.	↗	↗	**C**

3.1.3. Calculating

	I	II	III
Identifying and performing operations in various situations.	**C** With small numbers	**C** With natural and decimal numbers to three decimal places	**C** With integers, decimals and fractions bearing a sign. Including to the power of
Estimating, before the operation, the order of magnitude of a result.	↗	**C**	**E**
Constructing addition and multiplication tables, understanding their structure, and reproducing them from memory.	**C** For the addition table of the ten first numbers	**C**	**E**
Using subtraction as the reciprocal of the addition and division as the reciprocal of the multiplication.	↗	**C**	**E**
In a calculation, using the appropriate decompositions of the numbers.	**C** In sums	**C** In sums and in products	**E**
Using the properties of the operations.	↗	**C** To replace a calculation with a simpler one, including by applying compensation approaches	**C** To justify a calculation method
Appropriately selecting and using mental calculation, written calculation or calculator, depending on the situation.		**C**	**E**
Performing a calculation involving several operations using a calculator.		↗	**C**
Checking the result of an operation.	↗	**C**	**E**
Using the equal sign in terms of results and in terms of equivalence.	↗	↗	**C**
Writing numbers in a suitable form (whole, decimal or fractional) to compare, organise or use them.		**C**	**E**
Adhering to the priorities of the operations.			**C**
Using the conventions[2] of mathematical terms.		↗	**C**
Transforming literal expressions, adhering to the equivalence relation and aiming for a more convenient form.			**C**
Constructing literal expressions where the letters have the status of variables or unknown measures.			**C**
Solving and checking a first degree equation in one variable drawn from a simple problem.			**C**
Calculating the numerical values of a literal expression.		↗	**C**
Using, in their context, the usual terms and the notations specific to numbers and operations.	↗	↗	**C**

[2] Writing conventions : conventions that lighten the writing such as for example: "3a" means "three times "a", "ab^2" means that only "b" is squared.

3.2. Solids and shapes

Situating oneself and situating an object in space are essential learning milestones that mark all stages of the geometry teaching. Pupils learn how to encode movements on a network, how to read maps and plans, how to use a double-entry table, how to determine the coordinates of a point.
Objects and solids are handled. The enumeration of faces, edges, vertices leads to flat surfaces, straight sections, points and the study of their relationships. Learning to move from a solid to flat representations and vice versa develops vision in space.
The handling and observation of objects and drawings help to characterise the transformations of the flat surface. Enlarging, reducing shapes associates a geometric phenomenon with the concept of proportionality.
Concrete activities such as assembling articulated stalks, crossing strips of paper, constructing shapes and classifying them pave the way to the discovery of the properties of quadrilaterals and triangles. Later these properties are compared, linked to those of the transformation. This teaches how to link statements together and pupils gradually learn how to carry out a mathematical proof.

In the field of solids and shapes :

3.2.1. Spotting

	I	II	III
Situating oneself and objects.	**C** In real space	**C** In a marking system	
Associating a point to its coordinates in a coordinate system (straight line, Cartesian coordinates).		↗	**C**
Moving about following oral directions.	**C**		
Representing the movement on a plan, according to the instructions given.	↗	**C**	

3.2.2. Recognising, comparing, building, expressing

	I	II	III
Recognising, comparing solids and shapes, differentiating and classifying them.	**C** On the basis of perception and the comparison with a model	**C** On the basis of properties of sides, angles for shapes	**C** On the basis of the symmetry elements for shapes and on the basis of their characteristic elements for solids
Building simple shapes and solids with a variety of materials.	↗	**C**	**E**
Drawing simple shapes.	**C** On raster paper	**C** In relation with the properties of the shapes and using the ruler, the set square and compass	**C** In relation with the properties of the shapes and instruments including the protractor
Understanding and stating the properties of sides and angles useful in the construction of quadrilaterals and triangles.		**C**	**E**
Knowing and stating the properties of the diagonals of a quadrilateral.		↗	**C**
Associating a solid to its flat representation and vice versa (coordinated views[3], isometric perspective, development).		↗	**C**
Constructing a cuboid isometric.		↗	**C**
In a flat representation of an object in space, mark elements in real size.		↗	**C**

[3] Coordinated views: front view, profile, from above.

3.2.3. Identifying patterns, properties, arguing

	I	II	III
In the context of folding, cutting, mosaic and reproduction of drawings, detecting the presence of patterns.	↗	**C** Recognising the presence of an axis of symmetry	**C** Recognising and characterising a translation, an axial symmetry and a rotation
Describing the different steps of a construction based on the properties of shapes, transformations.		↗	**C**
Recognising and building enlargements and reductions of shapes.	↗	**C** Using grids	**C** Using the properties of proportionality and parallelism
Identifying patterns in families of flat shapes and drawing from them properties relating to angles, distances and remarkable lines.			**C**
Describing the effect of a transformation on the coordinates of a figure.			**C**
Understanding and using, in their context, the terms usually used in geometry.	↗	**C** To describe, compare, draw	**C** To state and argue

3.3. Measures

Learning numbers and operations is anchored in contexts of measures.
Working with different standards allows us to make comparisons and do calculations.
The construction of formulae for the calculation of perimeters, areas and volumes starts with activities that carry forward the unit.
Proportionality is worked on using examples from everyday life. Tables and graphs showing relationships between measures are constructed.
Measuring and dividing lead to decimals and fractions.

In the field of measures :

3.3.1. Comparing, measuring

	I	II	III
Comparing measures of the same type and conceiving the magnitude as a property of the object, recognising and naming it.	↗	**C**	**E**
Performing measurements using familiar and conventional standards and expressing the result (lengths, capacities, weights, areas, volumes, durations, cost).	↗	**C**	**E**
Making estimates using familiar and conventional standards.	↗	**C**	**E**
Building and using procedures for calculating perimeters, areas and volumes.	↗	**C**	**E**
Measuring angles.		↗	**C**
Situating oneself and events in time.	**C** Only for the day and week	**C**	
Knowing the meaning of the prefixes deca., deci., hecto., kilo., centi., mili.		**C**	**E**
Establishing relationships in a system to make sense of the reading and writing of a measurement.	↗	**C**	**E**

3.3.2. Calculating, dividing

	I	II	III
Dividing objects to compare them.	**C** Dividing by two and four	**C**	**E**
Composing two fractionings of a real or represented object limited to fractions whose numerator is one (for example, taking a third of a quarter of an object).		↗	**C**
Adding and subtracting two fractioned measures.		**C**	**E**
Calculating percentages.		**C**	**E**
Solving simple problems of direct proportionality.	↗	**C**	**E**
In a direct proportionality situation, completing, constructing, and exploiting a table that relates two measures.		**C** Completing only	**C**
Recognising a direct proportionality table among others.		↗	**C**
Determining the relationship between two measures, switching from a ratio to the inverse ratio.		↗	**C**

3.4. Data handling

The goal is to train future citizens to understand and analyse the data supplied by the media, learn how to use various media containing encrypted information.
It is important to learn how to interpret, compare tables, tree diagrams and graphs and build them to clarify a situation or illustrate research. The calculation of percentages, means, sample sizes and frequencies are tools to answer questions.
The handling of certain situations prepares the notion of function.

In data handling :

	I	II	III
Organising according to a criterion.	**C** Real or represented objects	**C** Data drawn from various contexts	**E**
Reading a chart, a table, a diagram.	↗	**C**	**E**
Interpreting a table of numbers, a graph, a diagram.		↗	**C**
Representing data on a graph, a diagram.		↗	**C**
Determining a sample size, a mode, a frequency, the arithmetic mean, the range of a set of discrete data.		**C** Only the mean	**C**
In a simple and concrete situation (drawing cards, rolling a dice, etc) estimating the frequency of an event in ratio form.		↗	**C**

NON-CORE SUBJECT : INTRODUCTION TO SCIENCES

TABLE OF CONTENTS

1. Introduction

Teaching science is both about the development of specific and transversal skills and the acquisition of knowledge and offers the most appropriate methodologies to encourage young people to get a lasting grasp of them. The progressive construction of knowledge and skills is the founding element (paradigm) of **any scientific approach**. This, in effect, allows pupils, regardless of their age and level of study, to be **the main actors in their learning process** starting out from situations that encourage them to get involved in research. Furthermore, **the study of science offers some specificity because it opens the eyes of young people to their natural environment and puts them in direct contact with real objects, natural phenomena and living beings**. In the virtual age with its packaged products, this is an important input that should be highlighted.

The simulation exercises are based on an approach to objects, living beings and natural phenomena that lead pupils to ask questions.

These simulation exercises can explore the following areas :

- living beings ;
- energy ;
- materials ;
- air, water and land ;
- people and the environment ;
- the history of life and sciences.

To be easily legible, the document is divided into three parts :

- the know how,
- the knowledge,
- the skills, shows the relationship between the skills and knowledge in contextualised situations.

The attached table shows this relationship.

The skills are numbered for ease of presentation. This numbering does not imply any hierarchy.

2. Know how

Coming across and grasping a complex reality

Bringing a unsolved enigma to light

	I	II	III
Showing curiosity to observe in different ways using all our senses.	↗	↗	↗
C 1			
Formulating questions on the basis of the observation of a phenomenon, mediatised information, a fortuitous event, etc. to specify a conundrum to be solved.	**C** On the basis of a conundrum represented, for example * by a few illustrations, choose from among three or four proposals the one that corresponds to the conundrum	**C** On the basis of a conundrum presented by a short text (ten lines for example) with explicit clues, a photo, a slide, a short video, etc. formulate a written question related to the context	**C** On the basis of a conundrum presented by a short text (ten lines for example) with explicit and implicit clues, a photo, a slide, a short video, etc. Formulate in writing a relevant question on a scientific level, related to the context

Identifying clues and coming up with possible research tracks specific to the situation

	I	II	III
C 2			
Once the conundrum is stated, searching for and identifying clues (factors, parameters, etc.) that may influence the situation envisaged.	**C** Choose from a list a factor likely to influence the situation	**C** Choose from a list factors likely to influence the situation	**C** Suggest one or several factors likely to influence the situation
Moving outside the context of the conundrum and investigating other fields of knowledge.		↗	↗
C 3			
Within the context of a conundrum, arranging the clues in order to formulate at least one question, assumption or hypothesis.	**C** On the basis of a clue provided, select an avenue of research from a proposed series that only takes into account the clue provided	**C** Select an avenue of research from two clues provided	**C** Propose one or more research tracks
Proposing at least one possible avenue of resolution.	↗	↗	↗

* "For example, etc. " illustrate one of the means of certifying.

Comparing the identified tracks, specifying the selection criteria for the tracks of research and selecting according to these criteria

	I	II	III
C 4			
Differentiating between established facts and assumptions, emotional reactions and value judgements.	**C** From among a series of proposals expressed about an illustration, pinpoint the one that indicates an established fact	**C** In response to several proposals made about a familiar topic, distinguish those that indicate an established fact	**C** In a scientific paper suitable for the level of understanding of the pupils, distinguish between established facts and research hypotheses, beliefs and emotional judgements
Determining the selection criteria for the research tracks to be selected and comparing them before selecting them and organising them according to the selected criteria.		↗	↗
Expressing an opinion, developing it, backing it up with arguments.		↗	↗
Reframing the research tracks selected based on the groupings made and planning the research work (constraints, resources, allocation of time and tasks).		↗	↗

Collecting information through experimental research, observation and measurement

	I	II	III
Conceiving simple experiments and taking initiatives.	↗	↗	↗
Recording the results of experiments without readjusting them if they do not match the expected result.	↗	↗	↗
Adhering to safety conditions. Avoiding waste. Using equipment with care.	↗	↗	↗
Reading and following a simple experimental procedure.		↗	↗

C 5

Designing or adapting an experimental procedure to analyse the situation with regard to the conundrum.	**C** ∗ For example, reorder the stages illustrated with a simple operation	**C** For example, reorder the steps, written and/or illustrated, of an experimental procedure or a simple operation involving several steps one of which may need to be rejected	**C** For example, reorder steps, written and possibly illustrated, of an experimental procedure or operation involving several steps, one of which may need to be rejected and another to be devised and described
Constructing a simple experimental device.		↗	↗
Observing in a targeted, structured, organised manner according to predetermined criteria.	↗	↗	↗

C 6

Collating information through qualitative observations using the five senses and quantitative observations.	**C** Convey the observation of objects and real phenomena by choosing the appropriate words from a list of proposals, for example, criteria relating to shape, size, texture, surface, colour, modifications and changes	**C** Convey the observation of objects and real phenomena by formulating proposals, for example, on criteria relating to shape, size, texture, surface, colour, modifications and changes	**C** Convey the observation of objects and real phenomena by formulating and quantifying proposals, for example, for criteria relating to shape, size, texture, surface, colour, modifications and changes

∗ “For example, etc. ” illustrate one of the ways of certifying the skill.

	I	II	III
C 7			
Identifying and estimating the magnitude to be measured and associating it with a suitable measuring instrument.	**C** In a real situation, associate the magnitude to be measured or identified with the measuring instrument (length, capacity, weight). The measurement will not be performed	**C** In a real situation, identify the magnitude to be measured or identified and associate it with the appropriate measuring instrument (length, capacity, weight, duration, temperature, area, volume, by direct or indirect measurements)	**C** In a real situation, identify the magnitude to be measured or to be identified and associate it with the appropriate measuring instrument (length, capacity, mass, density, duration, temperature, area, volume, force, pressure, by direct or indirect measurements)
Using a measuring instrument correctly and reading the measurement value.	↗	↗	↗
C 8			
Expressing the result of measurements specifying the familiar and/or conventional chosen unit and the framework. Distinguish the magnitude identified or measured, its value and the unit in which it is expressed by its symbol.	↗	**C** After measuring and pinpointing, express the result and specify the instrument's nearest scale unit (length, capacity, weight, area, duration, volume, temperature)	**C** After measuring and pinpointing, express the result and specify the instrument's nearest scale unit, (length, capacity, weight, area, duration, volume, temperature, force) and give any framework
Comparing the value of the measurement with the initial estimate.	↗	↗	↗

Collating information through a literature search and consultation with key informants

	I	II	III
Putting together a questionnaire.	↗	↗	↗
Identifying key informants, questioning them and keeping a record of responses obtained.	↗	↗	↗

C 9

Identifying and correctly recording information drawn from a scientific text.	**C** From a short informative and/or descriptive text, identify an explicit element in response to a specific question	**C** In relation to a given topic, recognise and record without distorting it, explicit and implicit information in an informative and/or descriptive text (about the size of a normal page)	**C** In relation to a given topic, recognise and record, without distorting it, explicit and implicit information in a set of informative, descriptive and/or argumentative texts (all the documents cannot exceed the value of a normal page)

C 10

Identifying and correctly recording information drawn from a graph.	**C** Recognise information depicted on a bar or strip graph for the purpose of comparison (less than, greater than, the smallest, the largest, the same as, etc.)	**C** Identify and correctly record the information sought, from immediate-read bar or strip graphs or pie charts	**C** Identify and correctly record the information sought, on the basis of bar or strip graphs or pie charts or Cartesian graphs. Describe distributional and evolutionary aspects linked to the types of graph
Identifying and correctly recording information drawn from a data table.	↗	↗	↗

C 11

Recognising and correctly recording information drawn from a diagram, sketch, photograph or audio-visual document.	**C** For example, decode an audiovisual document, a photo, a realistic sketch, to identify information	**C** For example, decode an audiovisual document, a photo, a realistic sketch, a diagram to identify and record relevant information in the context of the research	**C** For example, decode an audiovisual document, a photo, a realistic sketch, a diagram, a chart to identify and record relevant information in the context of the research
Distinguishing the important from the unimportant in the context of the research.	↗	↗	↗

Structuring results, communicating, validating and synthesising them

Collating and organising information in a way that fosters understanding and communication

	I	II	III
Following the instructions established.	↗	↗	↗
Making a brief oral presentation, a small scientific presentation on the results of a research project, using a medium.		↗	↗
Listening and receiving a brief oral and extracting relevant information based on context.	↗	↗	↗
Analysing, interpreting and organising information collated on the subject of the research.		↗	↗
C 12			
Comparing, sorting elements in order to classify them scientifically.	**C** Classify into two groups, e.g. four elements, according to a criterion and its provided characteristic, generating a clear dichotomy	**C** Classify into two groups, e.g. six elements, according to a universally accepted criterion and a personal characteristic	**C** Classify on two levels, e.g. six to eight elements according to two or three scientific criteria and their characteristics
C 13			
Highlighting the relationship between two variables.	↗ Discover and express in a non-formalised manner the notion of variables and associated values	**C** Identify two variables and some of their values and express quantitatively whether a relationship exists between them	**C** Identify two variables and some of their values and express quantitatively whether a relationship exists between them. If so, characterise it (cause and effect relationship, consequence, direct proportionality)
Model an experimental situation and write an account of an operation.		↗	↗
Draw a sketch, titled and captioned, of an object, an organ, a living thing, etc. draw a section plan to scale.		↗	↗
C 14			
Collating information in the form of a table and communicating them using a graph.	↗ Complete a table of data	**C** Communicate in the form of a bar or strip diagram, the information given in a table	**C** Organise results, information in a data table and communicate it in graphical form. Select and construct the graphical form best suited to the message to be transmitted (distributional or evolutionary)

Questioning the research results, drawing up a synthesis and building new knowledge

	I	II	III
Proposing a solution to the conundrum and comparing with the initial situation.	↗	↗	↗
Confirming or refuting a reasoning using verified arguments.	↗	↗	↗

C 15

Validating the results of a research project.	↗ Accept, reject or qualify a provisional and/or partial statement by referring to illustrated documents	**C** Accept, reject or qualify a provisional and/or partial statement by referring to scientific data	**C** Accept, reject or qualify a provisional and/or partial statement by referring to scientific laws
Consider the practices implemented, evaluate an approach followed.		↗	↗

C 16

Developing a concept, a principle, a law, etc.	**C** On the basis of an object or a living thing, list or represent perceived characteristics	**C** On the basis of objects or living beings that are scientifically related, list or represent external characteristics to arrive at the concept of group	**C** On the basis of multiple objects, phenomena or living beings that are scientifically related, list or represent common characteristics to arrive at the concepts, laws, principles, etc.

C 17

Reusing the knowledge acquired in other situations.	↗ Use the knowledge acquired in other similar learning situations	**C** Use the knowledge acquired in situations explicitly linked to the initial learning situations	**C** Use the knowledge acquired in situations implicitly linked to the initial learning situations

3. Knowledge

1. Living beings

1.1. Characteristics

1.1.1. Living beings are organised

The skill covers the organisation of living beings in terms of structure and not of definition. This study includes several levels and only those listed below come under knowledge. Excluded levels are "molecule", "cell", "tissue", "ecosystem" and "biosphere"

	I	II	III
"Organ" level		↗	C
"Apparatus and system" level		↗	C
"Organism" level		↗	C
"Population" level		↗	↗
"Community" level			↗
"Biotope" level			↗

1.1.2. Living beings respond

Living beings respond to stimuli in their environment as well as changes in their environment.

	I	II	III
The stimuli receptors : the sensory organs (without exhaustive anatomical study).	↗	C	E
The stimuli may be changes in the environment or signals transmitted by living beings.		↗	C
Diversity of responses to stimuli.		↗	C

1.1.3. Living beings metabolise

	I	II	III
From nutrients (digested food) and oxygen, living organisms produce the energy necessary for their daily needs, growth, repair, reproduction, excretion, etc.		↗	↗

1.1.4. Living beings breed

	I	II	III
The life cycle.	↗	C	E
Diversity of the life cycle.	↗	C	C
Diversity of reproduction methods.	↗	↗	C
Human reproduction (without exhaustive anatomy).	↗	↗	C
Evolution and adaptation.			↗

1.2. The organism

The descriptive anatomy is addressed in general (humans, animals and plants)

- in its functional aspect **(certification at the end of the second stage),**
- **through the linking of the different organs and systems specified below (certification at the end of the third stage)**,
- in their complementarity,
- in raising awareness about health and lifestyle.

The physiological aspects are excluded, as well as an exhaustive description of the organs and systems.

	I	II	III
Functional anatomy.	↗	C	
Connections.		↗	C
4			
The integumentary system and its protection and touch functions.	↗	C	
The musculoskeletal system and its support, protection and mobility functions.	↗	C	
The nervous system and the processing of information.			↗
The endocrine system and the regulation of chemical reactions.			
The circulatory system and its transport function throughout the body.		C	C
The excretory system and discharge of excess toxins from the body.		↗	↗
The digestive system and its absorption, degradation, assimilation and storage functions.	↗	C	C
The respiratory system and gas exchange.		C	C
The reproductive system and the perpetuation of the species.		↗	↗
The immune system and defence against attack.		↗	↗

4 The endocrine system and the regulation of chemical reactions are not included in the knowledge.

1.3. Relationships between living things and their environment

1.3.1. Food relationships

[5]	I	II	III
Food chains.		↗	C
Food webs.			C
Material flow between producers, consumers and decomposers.		↗	C
Predation.	↗	↗	C
Parasitism.		↗	↗

1.3.2. Other types of relationships

	I	II	III
Competition, cooperation.		↗	↗

1.4. Classification

	I	II	III
Living/Non-living beings.	↗	C	E
The five kingdoms			↗
The branches.		↗	C
Classes of vertebrae.		↗	C

[5] the photosynthesis is not included in the knowledge.

2. Energy

2.1. General remarks

*	I	II	III
The main sources of energy.	↗	↗	C
The different forms of energy.	↗	↗	C
Transformation of one form of energy into another (not exhaustive list).		↗	C
Some forms of energy storage.		↗	↗

2.2. Electricity

**	I	II	III
Electricity is the result of the conversion of energy.		↗	C
Conversion of electrical energy into other forms of energy.	↗	↗	C
The simple electric circuit.	↗	C	E
Good and bad conductors.	↗	C	E

2.3. Light and sound

***	I	II	III
Distinction between luminous and non-luminous bodies.		↗	
Colour : a characteristic of light.		↗	
Shadow and darkness.	↗	↗	
Propagation of light and sound.		↗	
Production and characteristics of different sounds.	↗	↗	
Perception of vibrations by the human ear.	↗	↗	
Diversity of light perception in animals.		↗	↗
Hearing ability of animals and humans.		↗	↗

* Energy conservation is excluded from the knowledge.
** The relationship between electrical energy and magnetism is excluded from the knowledge.
*** The main properties of light, light energy and photosynthesis as well as the characteristics of a force are excluded from the knowledge.

2.4. Forces

	I	II	III
Demonstration of force by its visible effects.	↗	↗	C
Principle of action - reaction.		↗	C
Approach to the relationship between mass/weight.		↗	C
Pressure : relationship between strength/surface.		↗	C

2.5. Heat

	I	II	III
Distinction between heat/temperature.		↗	C
Transformation of different forms of energy into thermal energy.		↗	C
Heat transfer in the different states of matter.		↗	C
The qualities of a good thermal insulator.		↗	C
Expansion and contraction.		C	E

3. Materials

3.1. Properties and changes

	I	II	III
The states of matter.	↗	C	
Identification of some properties of each state of matter.		↗	C
Changes of state (qualitative aspect).	↗	C	E
Relationship between heat input and release and change of state.		↗	C
Physical characteristics of some substances (mass, volume, density).		↗	↗
Distinction between reversible and irreversible phenomena.		↗	C

3.2. Pure bodies and mixtures

*	I	II	III
Molecular aspect of matter (molecule = "ball" symbolising the limit of divisibility of matter).			C
Relationship between the molecular model, the states of matter and their properties.			C
Pure bodies are formed of identical molecules. Mixtures are composed of different molecules.			↗
Homogeneous and heterogeneous mixtures.			C
Identification of several techniques for separating mixtures.		↗	C

* Atoms and molecules are excluded from the knowledge.

4. Air, water and land

4.1. Air and water

	I	II	III
The air, the gaseous substance that surrounds us and whose movement we perceive (wind).	↗	↗	
Composition of the air.		↗	C
Relationship between the oxygen in the air and water – respiration of living beings.	↗	↗	C
Atmospheric pressure (qualitative aspect).		↗	C
The states of water.	↗	C	
Different forms of water in the environment : snow, fog, frost, etc.	↗	C	
Identification of factors that affect the evaporation of water in the atmosphere.	↗	C	
The water cycle.	↗	C	E
Characteristics of a weather report.	↗	C	

4.2. Land

*	I	II	III
Distinction between the soil and subsoil.	↗	↗	↗
Characteristics of land in relation to its composition (water content, permeability, etc.).		↗	↗
The land as a living environment.		↗	↗
Classification of rocks.			
Some effects of sun, wind, water, ice on relief and soils.		↗	↗

* The distinction between minerals and rocks is excluded from the knowledge.

5. People and the environment

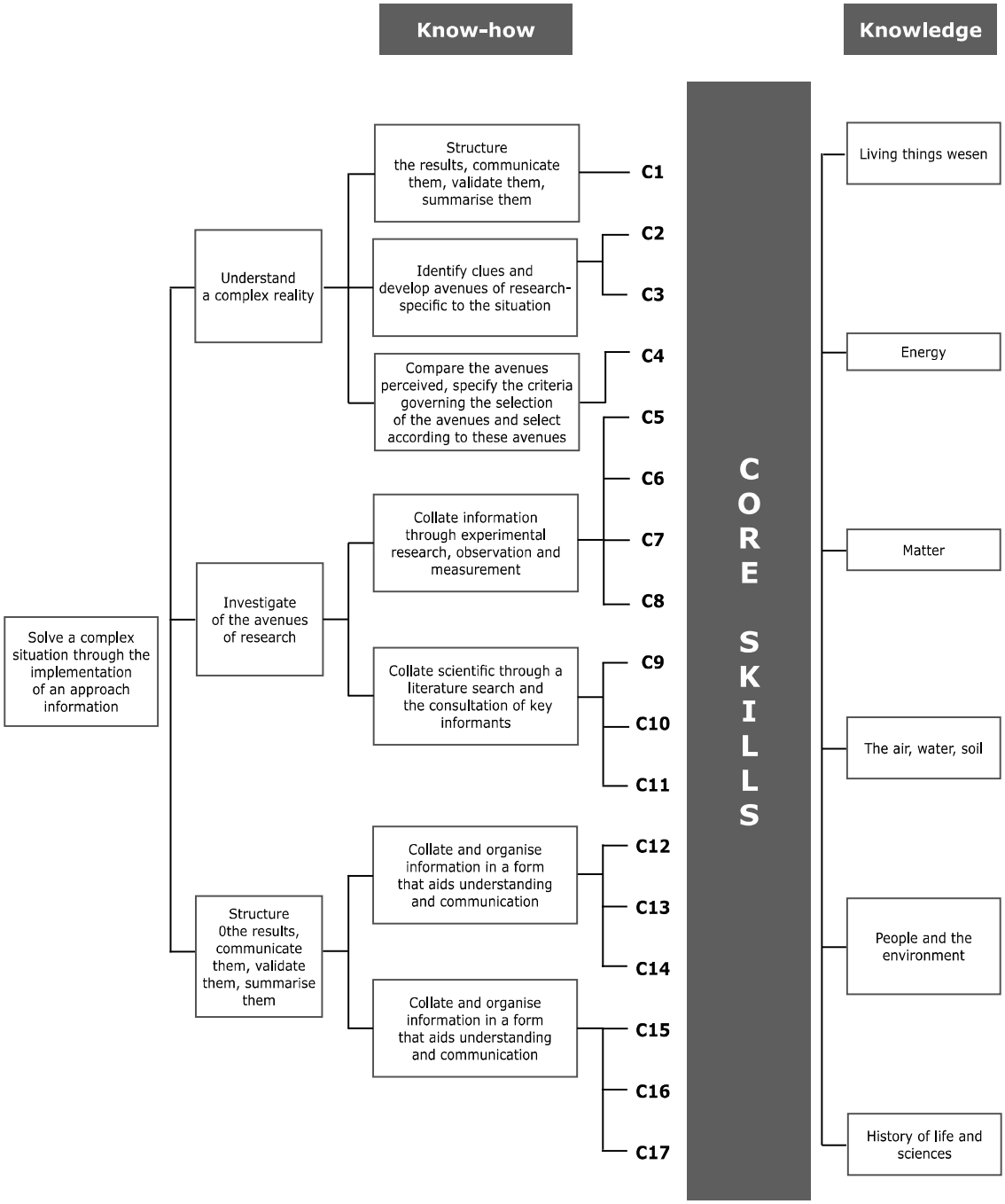
Education about the environment is based on a simple principle : "It is not a matter of learning in order to accept, but of understanding in order to act"
(A. Giordan). The main objective is therefore for children, adolescents and adults to act in an informed manner to the benefit of us all. Science teaching not only contributes to the understanding of the scientific aspects but also the development of many skills. This behavioural nature and the ethical, social, political aspects, etc. of environmental education mean that it should not be subject to certified assessment but rather focused on constant awareness-raising.

	I	II	III
Management, conservation and protection of resources.	↗	↗	↗
Use of resources.	↗	↗	↗
Exhaustion, destruction, pollution, etc.	↗	↗	↗

6. History of life and sciences

	I	II	III
Formation of the universe.			↗
Emergence of life.			↗
Evolution and extinction of species.		↗	↗
Mankind in evolution.		↗	↗
Temporary and evolutionary aspect of scientific theories.		↗	↗
Critical approach to the consequences of scientific research and technological applications.		↗	↗

4. The skills


Know-how
Knowledge
Solve a complex situation through the implementation of an approach information
Understand a complex reality
Investigate of the avenues of research
Structure 0the results, communicate them, validate them, summarise them
Structure the results, communicate them, validate them, summarise them
Identify clues and develop avenues of research-specific to the situation
Compare the avenues perceived, specify the criteria governing the selection of the avenues and select according to these avenues
Collate information through experimental research, observation and measurement
Collate scientific through a literature search and the consultation of key informants
Collate and organise information in a form that aids understanding and communication
Collate and organise information in a form that aids understanding and communication
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
CORE SKILLS
Living things wesen
Energy
Matter
The air, water, soil
People and the environment
History of life and sciences

5. Appendix

Core skills : the intersection between knowledge and know-how

	Fields of knowledge / Know-how	Living things	Energy	Matter	Air, water the soil	Man and the environment	History of life and sciences
C1	Formulate questions on the basis of observation						
C2	Search for and identify clues						
C3	Organise the clues in order to develop an avenue of research						
C4	Differentiate between facts drawn from emotional reactions and value judgements						
C5	Design or adopt an experimental procedure						
C6	Collate information through observations						
C7	Identify and estimate the magnitude to be measured and associate it with an appropriate measuring instrument						
C8	Express the result of a measurement						
C9	Recognise and record a piece of information drawn from a scientific text						
C10	Recognise and record a piece of information drawn from a graph						
C11	Recognise and record a piece of information drawn from a sketch, a diagram, etc.						
C12	Compare, sort, classify						
C13	Identify relationships between two variables						
C14	Collate information in a table and communicate it using a graph						
C15	Validate the results of a research project						
C16	Draw up a concept, a law, etc.						
C17	Reuse knowledge acquired in other situations						

MODERN LANGUAGES

TABLE OF CONTENTS

1. Introduction

This document is a reference for all modern language teachers in compulsory education.

Modern language teaching covers some of the general objectives of education :

- promote self-confidence and develop personality ;
- enable all pupils to master knowledge and acquire skills that will enable them to confidently and successfully enter economic, social and cultural life ;
- prepare all pupils to be responsible citizens, able to contribute to the development of a democratic, inclusive, pluralist society open to other cultures ;
- ensure that all pupils have equal opportunities for social emancipation.

It also aims at :

- promoting pupils' awareness of their own culture and relate it to that of others ;
- promoting modern languages as a factor of European integration.

The cultural dimension will take shape by approaching certain subject fields that will allow the child to experience another culture and the socialisation elements linked to this.
However, it will not be subject to certified assessment.

2. CORE SKILLS

The specific objective of modern language courses is **COMMUNICATION**, which is divided into the four skills :
LISTENING, SPEAKING, READING, WRITING within the subject areas identified by the Council of Europe.

As far as the core skills are concerned, priority will be given to the oral component.

At the end of the second stage of compulsory education

Within the limits defined within each skill, pupils will be able to understand and express themselves orally in the following areas :

1. personal characteristics : name, age, address, telephone number, close family, clothing, pets,
2. their daily life : their class (understanding of instructions in the class, school materials), school, home,
3. relationships with others (greeting, thanking),
4. food and drinks (meals and pupils' preferences).

At the end of the third stage of compulsory education

Within the limits defined within each skill, pupils will be able to understand and express themselves orally in the following areas :

1. Personal characteristics, of family and friends :

Information and requests concerning :

- name, age, place and date of birth, address, telephone number and nationality, appearance ;
- family members ;
- profession and occupations ;
- clothes ;
- pets.

2. Habitat, home and environment :

Information and requests in relation with :

- the home and its environment ;
- parts of the home and the main furniture, as well as their location.

3. Daily life :

Information and requests relating to the main activities of the day at home, at school, on holiday.

4. Holidays and leisure :

Information and requests about :

- the main holiday activities ;
- leisure time, hobbies.

5. Transport and travel :

Information and requests about :

- the main means of transport ;
- destinations and times ;
- ticket purchase.

6. Relations with others :

- greetings ;
- thanking, apologies ;
- proposals ;
- agreement and acceptance ;
- disagreement and refusal ;
- wishes, congratulations ;
- ability, inability, desire, obligation, permission ;
- certainty, ignorance ;
- surprise, pleasure, joy, satisfaction, dissatisfaction.

7. Health and well-being :

Information and requests about current state of health.

8. Education :

Information and requests about :

- school, class, classroom instructions ;
- lessons, timetable.

9. Purchases :

Information and requests about :

- the existence, location and opening hours of shops ;
- the availability and description of an article ;
- the article's description : size, shape, colour, weight ;
- the quantity and price of an item.

10. Food and drink :

Information and requests about :

- the availability of common foods and drinks ;
- pupils' preferences ;
- meals, menus and prices.

11. Services :

Information and requests about the existence, location and opening hours of services.

12. Places :

Information and requests about :

- the location of their village or town in their region, country ;
- the existence and location of public buildings and places of interest ;
- a route, distances ;
- the situation of their region, country in Europe.

Information and requests about the location of objects.

13. Foreign languages :

Information and requests about knowledge of foreign languages.

Pupils will also be able to :

- ask to repeat, to speak more slowly, to specify ;
- ask the meaning ;
  to inform and be informed of understanding ;
- to spell.

14. Time :

Information and requests about the time, date, day, month, year, season, frequency, the chronological order of events, an event in the present, past and future.

Information and requests about the weather.

Listening

Definition : listening is to understand spoken messages

Core skills

	EXPECTED SKILLS	IMPLEMENTATION CONDITIONS	LEVEL TO BE ACHIEVED
II	• understand familiar words, common phrases	• in a face to face situation, in good reception conditions, with someone who speaks slowly and clearly	• recognise the target language • identify syntactic structures, sounds, language functions, intonation (order, questions) • recognise key words and understand their meaning
III	• understand short, varied, simple, familiar messages relating to their experiences, everyday life, their needs, their interests	• in a face to face, direct or indirect situation, in good emission or reception conditions	• act and react according to the required task (global and selective understanding depending on the nature of the message)

Transversal skills

Faced with spoken messages, pupils will :
- adopt a positive listening attitude,
- implement comprehension strategies,
- construct meaning on the basis of the elements understood.

Speaking

Definition : speaking means producing a comprehensible oral message

Core skills

	EXPECTED SKILLS	CONDITIONS OF ACHIEVEMENT	LEVEL TO BE ACHIEVED
II	Expressing oneself orally to produce simple messages	• simple messages close to the models the pupils encountered in the lesson	• be able to use simple expressions and sentences
III	expressing oneself orally : • describing • relating • answering questions • interacting • concerning their needs, interests and experience	• in simple messages close to the learning situations that have been practised, • during short interactions	• be able to produce a simple message using the vocabulary, grammar and language functions appropriate to the communication situation • with intonation, pronunciation and at a speed that does not interfere with communication, for a patient, attentive and willing auditor

Transversal skills

The pupils will :
- venture to speak,
- adapt their message and behaviour to the communication situation, the purpose, the interlocutor and his/her reactions,
- use non-linguistic resources to facilitate understanding.

Reading

Definition: Reading is understanding a written message

Core skills

	EXPECTED SKILLS	IMPLEMENTATION CONDITIONS	LEVEL TO BE ACHIEVED
II	• be able to understand very simple sentences	• the text includes only known elements	• recognise the target language • identify the syntactical structures • identify key words and understand the meaning
III	• be able to understand short simple messages relating to their needs, interests, experience of everyday life	• the messages are logical and explicit • if they include unknown words, they must not prevent pupils achieving the objective assigned to the reading task	• act, react according to the required task (understanding will be global, selective or detailed depending on the nature of the message)

Transversal skills

Faced with a written message, pupils will :
- adopt a positive reading attitude,
- apply reading strategies to communication situations (layout, punctuation, etc.)
- construct meaning on the basis of the elements understood,
- perceive and react to the reading goal.

Writing

Definition: Writing means producing an understandable written message

Core skills

II At the end of the second stage of compulsory education (the third level of primary school) **no written production will be evaluated.**

	EXPECTED SKILLS	***IMPLEMENTATION CONDITIONS***	***LEVEL TO BE ACHIEVED***
III	• write correct, simple, coherent and logical messages relating to their needs, interests and daily life experiences	• the pupil has models, elements of guidance and reference tools	• use the appropriate vocabulary and language functions as well as the necessary grammatical concepts

Transversal skills

Pupils will :
- write the message in accordance with basic writing rules (punctuation, layout, etc.)
- write legibly.

To understand and express themselves, pupils must also use the following grammatical elements :

II

- simple affirmative, negative and interrogative sentences,
- verb forms and basic tense markers to talk about the present,
- personal subject pronouns,
- question words,
- the main determinants : the article, the possessive adjective, the demonstrative adjective.

III

- simple affirmative ,negative and interrogative sentences,
- the verb forms and basic tense markers to talk about the present, past and future,
- modal auxiliaries,
- personal subject pronouns ; understand additional personal pronouns, question words
- the main determinants : the article, the possessive adjective, the demonstrative adjective.

Grammatical and lexical elements are not a skill on their own, they will therefore not be subject to specific assessment.

PHYSICAL EDUCATION

TABLE OF CONTENTS

General principles

- All skills pertaining to physical education should be developed continuously throughout compulsory education with the aim of promoting health, safety, expression, motor skills and sports culture, the primary purposes of physical education.

- To develop these skills, the physical education teacher will offer a variety of activities that implement all aspects of the motor skills (cognitive, sensorimetric, emotional and social).

- All skills to be developed fit into the three fields of physical education: gestural and motor skills, physical fitness and motor social cooperation. The aim is not to prioritise one field over another, but to consider them all to foster the child's personal development.

- Note: pupils should be able to perform each of the skills listed below. They will gradually master these skills and each level of proficiency will incorporate the previous one.

Gestural and motor skills

	I	II	III
Mastering the basic forms of movement (running, climbing, sliding, jumping, hanging, stopping, leaning, landing, turning around the three body axes, etc.)	**C** Master these movements in isolation	**C** Put together at least two of these movements	**C** Put together a sequence of basic movements to achieve a specific action in relation to a codified physical activity and by applying ergonomic precepts Put together a sequence of basic movements to produce a fluid motion
Coordinating their movements: pull, push, handle, throw objects according to their characteristics (nature, shape, weight, fragility, size, etc.)	**C** Adapt their movements to manipulate objects and people	**C** Refine their movements and integrate them into the situations developed ↗ Using assistance and protection techniques	**C** Use their movements in codified situations Use technical assistance and protection
Finding their bearings in space	**C** Generally perceive space and its limits, move within it and represent it	**C** Find their bearings, orientate themselves, move in a known space, represent it	**C** Find their bearings, orientate themselves, move in a new space, represent it
Maintaining balance and managing scheduled or accidental overbalances	**C** Balance their body in the locomotion functions and in different environments	**C** Acquire balancing techniques in more elaborate situations	**C** Use balance techniques in codified situations
Adapting their movements to an action according to: • their morphology, • the goals pursued, • their physical characteristics	**C** Adjust a movement in a simple situation Perceive a simple rhythm and express it with a motor action	**C** Adjust a movement in an elaborate situation Perceive and memorise rhythmic structures Express through gesture increasingly complex rhythmic structures, alone or with a partner	**C** Adjust a movement in a codified situation Perceive and memorise elaborate rhythmic structures Change pace in pursuit of performance and in accordance with external changes
Expressing emotions with their body	**C** Imitate a simple expressive attitude and control their movements to convey a simple action	**C** Express emotion through gesture and movement	**C** Act on the parameters of the expressive movement: time, space, energy </pt5579
Adopting a safety attitude in an aquatic environment	**C** Float and propel oneself	**C** Swim	**C** Swim 25 metres in a correct style

Physical condition

	I	II	III
Endurance: exert themselves for long periods at moderate intensity	↗ Physical fitness skills will be exercised in order to develop and maintain pupils' health and safety capital enabling them to assess themselves against the Euro-Fit tests. **Euro-Fit**: European physical fitness tests, *Council of Europe – Committee for the development of sport, Strasbourg 1993* Alactic strength and power cannot be worked on systematically before III.		
Flexibility: stretch the muscles of large joints			
Speed: perform simple movements at high speed			
Strength: move suitable loads			
Alactic strength: execute explosive movements			

Motor social cooperation

	I	II	III
Following rules agreed in the interest of the group and according to the aim to be achieved	↗ Accept rules	↗ Adapt behaviour to the agreed rules	**C** Adapt behaviour to the agreed rules
	C Recognise the aim to be achieved	**C** Identify different roles to play in a collective action based on the goal to be achieved	Take on different roles in a collective action
Acting collectively towards a common goal	↗	**C** Adapt movements based on signals received in the environment or issued by partners (team-mates and opponents) Respect one's partners (team-mates and opponents)	**C** Use acquired technical means to participate in a collective action Value and respect their partners (team-mates and opponents)
Acting with fair play, in victory and defeat, showing self-respect and respect for their partners (team-mates and opponents)	↗	↗	↗

EDUCATION THROUGH TECHNOLOGY

TABLE OF CONTENTS

1. What education through technology is about

1. Technology and its implications

Education through technology is a course based on the fact that technology is a discipline that contributes to the overall training of young people just as much as general education courses do. Technology is a complex system combining specific techniques around a central process (e.g. nuclear technology). Techniques are machines, challenges, processes, ways of using materials, they are combinations of a scientific principle with appliances built for a specific use of these principles.

2. Targets

The education through technology lesson contributes to the overall education of the child, allowing him or her to implement skills that gradually contribute to the development of different ways of thinking. It involves the acquisition of mental and behavioural approaches through technological problem solving in a knowledge building context.
In primary education and in the 1st stage of secondary education, the education through technology course favours the acquisition of a technological problem-solving approach with a technical object and/or technical concept as a support.

3. Specificity : the technical object

However, a technical object is not a problem situation itself. The problem it raises stems from the issues related to its design, manufacture, implementation, use, repair and transformation, making it a support for a didactic approach to problem solving.

4. The fields

This approach is applied in several of the following areas:

Biotechnology: technology that uses living systems, organisms or parts of organisms in natural processes to develop production processes, systems or environments that benefit people (systems such as water management or purification systems or environments).

Electronics - technological control: technology using electrical and electronic systems. These can be simple electrical circuits, complex integrated electronic circuits or robotics.

Food technology: technology including the understanding and use of safety and reliability measures to produce, prepare, present, store food and also packaging development and marketing of food products.

Information and communication technology: systems that enable the collection, structuring, manipulation, retrieval and communication of information in various forms.

Materials technology: technology covering the implementation, use and development of materials to achieve the desired result. Materials technology may include knowledge of quality or compatibility of different types of materials including wood, textiles, composites, metals, plastics, fuels as well as the treatment process, conservation and recycling process.

Structures and mechanisms: technology studying the mechanisms of simple and/or complex constructions, of machinery implementing mechanical, electrical, pneumatic and hydraulic principles.

Production and process techniques: technology covering

- the production and assembly of finished or semi-finished products ;
- the production and assembly of components ;
- the raw materials processing process ;
- energy production.

This list is not exhaustive.

5. The contexts

These areas will be addressed in the following contexts: personal, home, school, society (environmental, energy, commercial and industrial).

6. The stages

Moreover, problem situations will be adapted to the different stages defined by the Decree. As it is constructivist, education through technology is not just about the transmission of knowledge and also rejects any objective that exclusively targets gestural teaching.

2. Skills development

Observing

	I	II	III
Identifying Identifying the criteria specified in the statement of the problem situation with a view to its resolution.	C **Identify** a significant part of the problem situation	C **Identify** all the significant elements of the problem situation	C **Identify** all the significant elements of the problem situation and prioritise them
Rephrasing the problem situation of a technological nature.	C **Put** the problem situation in their own words	C **Summarise** the problem situation	C **Choose** the most adequate formulation of the problem situation (oral, written, graphic, etc.)
Defining the problem to be solved: breaking down the main problem into sub-problems and organising them in relation to each other.	C **Compare** two given elements in the problem situation	C **Classify** elements of the situation according to a defined criterion	C **Break down** the problem situation and **prioritise** the sub-problems according to a defined criterion
Showing in a drawing the significant elements of the problem situation.	↗	C	E

Putting forward hypotheses

	I	II	III
Analysing Collating documentation and selecting the relevant elements.	C **Select** an element relevant to the problem situation in a document supplied by the teacher	C **Select** several relevant elements in one or several documents supplied by the teacher	C In a pre-defined database, **select** the documents and, in them, the relevant elements
Recognising concepts that have not been understood and deciding to seek an explanation.	↗	C **Identify** concepts, new terms, **attach** a definition in reference to the context	C Ditto + **check** the relevance of the definition by means of research (key informant(s) - documentation)
Planning Making an inventory of the different problem-solving hypotheses.	↗	↗	C
Formalising testing.	↗	C	E
Selecting the most favourable working hypothesis on the basis of defined criteria.	↗	C Depending on several hypotheses expressed in a group, **determine** whether they can be selected on the basis of defined criteria	C Based on hypotheses identified by the pupil **prioritise** them on the basis of defined criteria
Structuring information by establishing logical links between the different elements.	↗	C On the basis of a series of relevant information, **order** them according to a given structure	C **List** the relevant information, **order** them according to the given structure

Implementing

	I	II	III
Modelling the situation Translate the problem-solving stages into an organisation chart.	↗	**C** **Order** the stages to be implemented in chronological order.	**C** **Sort** the stages to be implemented in chronological order, **schedule** them.
Making a freehand drawing to formalise the implementation.	↗	↗	**C**
Handling Performing the necessary operations in the right order to achieve the objective.	↗	↗	**C**
Using tools, materials and equipment.	↗	**C**	**E**
Organising the workspace according to the task at hand.	↗	**C**	**E**
Adhering to health and safety standards.	↗	↗	**C**

Regulating

	I	II	III
Checking the results obtained, their matching with the initial criteria, their compliance with the solution sought.	↗	↗	**C**
Identifying errors and making corrections or improvements.	↗	↗	**C**

Structuring

	I	II	III
Formalising the process in a graphic language.	↗	**C** By means of a freehand drawing	**C** Ditto + the symbols
Formalising the process in an oral language using the correct technical terms.	↗	↗	**C**
Formalising the process in writing in accordance with the specific structure of technical writing.	↗	↗	**C**
Reusing the acquired knowledge (concepts, procedures) in the same technological field.	↗	↗	**C**

ARTS EDUCATION

TABLE OF CONTENTS

1. Introduction

The objectives of arts education can be naturally integrated into the main teaching goals.
Arts education can and must have its place like any other educational activity, being in its very essence a means of awakening awareness: awareness of the self, of others and the world.

By establishing literacy in the various arts, the school must:

- raise awareness of all forms of expression, including through the exercise of visual and auditory perception;
- ensure the acquisition of techniques allowing pupils to access objective proficiency in "things of art," to push their limits to achieve creativity;
- tackle and structure knowledge in such a way as to make it transferable;
- participate in balanced teaching so that every pupil can discover and build his/her personality.

And thereby develop behaviours (autonomy, critical thinking, tolerance, etc.) such that the pupil can acquire a quality of life by becoming a citizen of the world, responsible and therefore free.

In short, even if all young people cannot become artists, at least their sensitivity can be awakened to provide aesthetic pleasure and some skills can be developed so that they can explore their creative abilities.

The document consists of three parts: a framework for integration of artistic development, with a range of areas and capacities, transferable skills to be exercised and disciplinary skills.
The point of interest in the third part is the skill as it is broken down more precisely into the skills listed in the first column.

2. Framework for the integration of artistic development

Personal self-development means: →	allowing a personal inner balance, →	helping establish a contact with sound and plastic materials, →	developing all forms of expression and communication.
Helping young people develop means: →	developing a relational harmony, →	producing or devising different original solutions to problems encountered, →	proper use of cultural and artistic sensibilities to convey personality more accurately.
To achieve these goals and build abilities; to develop skills in the following areas →	• **openness to the world;** • **knowledge of self and others;** →	• **acting on the world through self-expression;** • **the transfer of expression and creativity;** →	• **exchange, communication.**
And in particular, more specifically: →	• identify others, their forms of expression, their culture, their folklore, their art, their crafts, their approaches, their productions; describe, compare and classify them; • identify their original culture; • be familiar with the vocabulary specific to the five senses, artistic languages; • maintain and exploit their curiosity; • etc. →	• organise and adjust their own rhythms, shapes, materials and colours; • organise sounds, shapes in space, in time; • respond to auditory and visual stimuli; • venture to sing, draw, paint...; • produce new forms; • understand and use the language specific to the musician, the artist; • understand an approach followed by a creator; • create by experimenting, feeling, imitating, interpreting, imagining, playing; • etc. →	• assert and defend their tastes, their identity; • differentiate production and producer; • assert and defend aesthetic values; • position themselves in a life rich in artistic; • act and react to their own production and to the production of others; • explain their personal approach; • assess their own work, defend it, change the error status; • reuse specific and creative skills in all learning situations; • etc.

3. Transversal skills to be exercised

Appropriating a sensory language

- Discriminate auditory, visual, tactile, gustatory and kinaesthetic elements and phenomena.
- Use a repertory of sensory, auditory, visual, gustatory, tactile and kinaesthetic vocabulary.
- Perceive works of art and associate them with registers of the sensory languages.
- Deduce a law, rules, conclusions from their perceptions.

Identifying personal feelings, emotions and recognising others.

- Express an emotion felt when encountering a work, music, a particular situation.
- Associate perceptions and classify them into one or other sensory field.
- Describe feelings.
- Express an emotion through different modes of expression.
- Transpose into another artistic language an emotion felt when encountering a work, music, a particular situation.

Recognising themselves in their culture and that of others.

- Identify themselves and others through their modes of expression, their art, crafts, folklore, etc.
- Develop, organise documentation, a classification, a sampling.

Cooperating

- Pool individual abilities to come up with a collective production.
- Take part in the distribution of roles for collective creations and meticulous execution.

Venturing to express pleasure and presenting a personal production

- Clearly formulate their intention according to the artistic aim.
- Be positive about their production and that of others.

Assessing – Backing up with arguments

- Give and defend their opinions on productions, art events and means of dissemination.
- Explain the identification of an element or context.
- Defend their tastes.
- Report on their own initiative.
- Express an opinion on the production of others.
- Justify an emotion, mode of expression, performance techniques, the subject, the context, the means used.

4. Disciplinary skills

4.1. Opening up to the world of sound and image: perceiving and appropriating languages in which to express oneself

	I	II	III
Perceiving and differentiating sounds, noises, notions.	**C** Of different intensity, pitch, tempo and origin	**C** Associate them: • with codes of pitch, intensity, dynamics, duration; • with modes of sound production (rub, blow, hit, pinch); • with sound spaces	**C** Instrument groups and families and their components
Searching, locating, naming objects, atmospheres, sound qualities.	**C** Some school percussion instruments	**C** Some instruments (wind, string, etc.)	**C** Different styles, recognition criteria
Identifying, classifying, combining voices, scenery, sound extracts, instruments, multicultural productions.	↗	**C** The spoken voice, singing voices, intentions conveyed vocally and the main languages of sung voice	**C** Instruments and their families Voices and vocal ensembles Associating binary, ternary rhythmic character to bodily movements
Perceiving and differentiating shapes.	**C** Simple manufactured shapes and natural forms	**C** Geometric and non-geometric shapes Shapes put together in an abstract or figurative manner	**C** Physical and psychological origins, appearances and characteristics
Classifying graphic productions based on their degree of lightness or darkness (their values).	**C** In ascending order	**C** Into families	**E**
Identifying and naming the colours.	**C** Colours and neutral tones	**C** The primary, secondary colours and their components The temperature sensation	**C** Complementary colours and their components
Characterising harmonies monochromes and polychromes.	↗	↗	**C**
Perceiving and describing matter.	↗	**C** And name the different appearances of materials	**C** And the psychological evocations that they exude
Decoding languages (composition, colours, spaces, materials, sounds, gestures, etc.) used to build media images.	↗	**C**	**C** And grasp implicit messages, symbolic
Describing and comparing the productions of artists (music, painting, sculpture, etc.).	↗	↗	**C** Different regions, eras, cultures and functions
Identifying modes of expression and execution techniques.	**C** Methods of expression	**C** Execution techniques	**C** And their relevance to the subject of a work
Locating an object in a given space.	↗	**C**	**C** And distinguish the background, the mid-range, the foreground and perspective
Describing how the elements making up a production are organised.	↗	↗	**C**
Perceiving the notion of time in different works (cinema, cartoon comic strip, sculpture - movement...).	↗	↗	**C**
Locating a work in a Historical and cultural context.		↗	**C**

4.2. Acting and expressing oneself, transferring and creating in the vocal, verbal, rhythmic, instrumental and physical fields

Reproducing, imitating, copying

	I	II	III
• movements, gestures,	**C** Reproduce bodily movements to songs, audible signals	**C** Reproduce rhythmic body movements. Occupy space and reproduce beats that are tapped, walked, spoken	**C** Reproduce instrumental rhythmic gestures
• of vocal expressions,	**C** Vocally reproduce changes in pitch, intensity, duration. Vocally imitate soundscapes	**C** Reproduce breathing, vocal intonation when reading a text, singing a song	**C** Reproduce a vocal, verbal sequence resisting ambient noise
• rhythmic and melodic,phrases,	↗	**C** Repeat in a group and from memory rhythmic and melodic sequences, songs	**C** Apply performance indications (breathing, emphasis, intensity)
• of sound expressions.	**C** Run a short and simple musicogram	**C** Reproduce sound effects, sound setting, a short rhythmic score	**C** Execute a score of polyrhythms

Understanding, organising, interpreting, creating

• movements, gestures,	**C** Translate into movements musical sequences heard	**C** Organise rhythms in time and space to physically express feelings in response to hearing a piece of music	**C** Physically interpret a musical form heard
• vocal expressions,	**C** Convey soundscapes in vocal sounds	**C** Associate the sound parameters to produce a coherent vocal, verbal, musical message	**C** Combine gesture, speech, voice and music into a coherent expressive whole
• of sound expressions,	**C** Create execution codes, organise and apply them	**C** Graphically organise a sequence heard. Write a simple musicogram to convey an intention in the form of a sound setting	**C** Harmonise the codes within the class group
• the elements of a sound message,			**C** Identify the main elements of the structure of a simple piece of music. Isolate the text or rhythm or melody of a song (say the text, beat out the rhythm, play the melody, etc.)
by playing school percussion instruments, using sound effects, sound qualities, rhythm and voice elements.	↗	↗	**C**

4.3. Acting and expressing oneself, transferring and creating in the tactile, gestural, physical and artistic fields

Acquiring means of expression and performance techniques (copying, engraving, printing, modelling, sculpture, collage, assemblage, folding, moulding, colour, graphics methods, etc.).

	I	II	III
Adapting production to the format.	↗	**C** Based on a theme	**C** By choosing a type of layout
Choosing tools.	**C** According to an execution technique	**C** Based on an execution technique and a mode of expression	**C** Based on an execution technique, a mode of expression and the medium
Reproducing lines on different supports (freehand, using instruments).	**C** Different lines Use of different tools and materials	**C** Special lines Use of instruments	**C** Strokes of different intensities. Proficiency in line drawing
Representing objects in two dimensions.	↗	↗	**C**
Preparing mixtures of colours.	↗	**C** Making secondary colours from primary colours.	**C** Achieve different tones and saturations and colour gradients.
Organising a space by putting together elements and respecting the rules of equilibrium (background, shape, colours, movement, etc.)	↗	↗	**C**
Composing harmonies.	↗	**C** Monochrome harmonies	**C** Polychrome harmonies
Uniformly cover surfaces.	↗	**C**	**C** Following technical instructions given or "in the manner of"
Combining elements to create volumes.	**C**	**C** Based on a theme or style	**C** And "in the manner of".

Organising, transforming, creating, etc.

Depicting characters, objects, animals, landscapes, etc.	**C** Depictions with characteristic details	**C** Realistic representation	**C** Representation with respect for proportions and perspective
Conveying a mood, an atmosphere, personal perception.	↗	↗	**C**
Creating by combining shapes, colours, values, materials, methods of expression, execution, techniques, etc.	↗	↗	**C**
Transforming characters, objects, animals, landscapes, etc.	**C** Deform, fragment, explode	**C** And simplify, geometrise, change proportions	**C** And reverse the order, the materials

5. Glossary

Musicogram: graph-type plan of a sound sequence, of an extract from a work.

School percussion: small percussion used in schools: claves, tambourine, etc.

Polyrhythmics: rhythmic score with several voices.

NON-CORE SUBJECTS: HISTORY AND GEOGRAPHY – TRAINING IN HISTORY AND GEOGRAPHY INCLUDING AN INTRODUCTION TO SOCIAL AND ECONOMIC LIFE

TABLE OF CONTENTS

Skills to be implemented in non-core subjects: history and geography – Training in history and geography including an introduction to social and economic life

1. General principles

Non-core subjects: history and geography – training in history and geography - are important areas where pupils become aware of society and environmental problems. Pupils discover that they belong to diverse and multicultural groups of people such as the family, school, company, association, etc. They live in a neighbourhood, a village, a town, in one of two regions of the French Community, in Belgium, in the European Union.
These disciplines set out to build spatial, temporal and social references and educate pupils in their civic responsibility. They therefore become aware that they have to play an active part in society.

The skills listed here invite pupils to open up to the world and develop critical thinking skills. The two disciplines, each with its specificity, together and with others, contribute to the overall development of the individual. It is this interdisciplinary approach that should make it possible to master transferable references to understand a new situation.
This mastery is gradually built up and each level incorporates the previous one and expands its scope. A skill achieved at the end of the second year of primary school must still be exercised throughout the pupil's education. Similarly, another expected at the end of the first stage of secondary education will be developed as soon as possible.
Thus the set of skills defined below concerns all levels of education.

To be easily legible, the paper is organised into four parts:

- the first part develops knowledge common to both disciplines;
- the second part develops know how and knowledge specifically related to the non-core subject: history– training in history - including an introduction to social and economic life;
- the third deals with the know how and knowledge specifically to the non-core subject: geography – training in geography - including an introduction to social and economic life;
- Finally, the fourth shows how the skills are hinged around knowledge and know how.

2. The know how common to the two disciplines

2.1. Asking (yourself) questions, means

- focusing attention on environmental aspects;
- expressing surprise;
- demonstrating the desire to know and understand, asking relevant questions.

	I	II	III
Formulating questions, etc.	↗	↗	↗

2.2. Building an investigative approach, means

- identifying a problem, defining it and expressing it in words, drawings;
- distinguishing what is known from what remains to be discovered;
- planning a research project.

	I	II	III
Defining the purpose of the research project undertaken by formulating…	↗ …the questions we are asking	↗ …the problem in question	↗ …the problem in question
Selecting useful questions…	↗	↗ …according to a criterion	↗ …according to several criteria
Expressing what we think we know before starting the research project…	↗	↗ …and discussing what remains to be discovered, what is uncertain	↗ …and stating what remains to be discovered, what is uncertain, what needs to be checked
Drawing up a research plan means…	↗ …expressing who and what can provide information	↗ …establishing the main stages of the research project	↗ …proposing a research plan

2.3. Searching for information, means

- using suitable and diversified sources: resource persons, traces of the past, other elements of the environment, media (photos, audio tapes), work tools, multimedia…;
- reading a graph, an informative or explanatory text, a map, a plan, a data table.

	I	II	III
2.3.1. Using a work tool…		↗ …selecting the most appropriate: atlas, suitable dictionary, manual, suitable encyclopaedia, supporting media and multimedia	↗ …selecting it from a library or resource centre
	↗ …an informative or explanatory text	**C** using it methodicaly: • dictionary: alphabetical order • manual: table of contents • atlas: alphabetical index, table of contents	**C** using it methodically: • dictionary: alphabetical order, key words • manual: table of contents, index • atlas: alphabetical index, thematic index, table of contents
2.3.2. Reading… …a map, a plan…		**C** …using elements of the key: colour representation, administrative boundaries, lines showing the communication channels, pictograms …using the linear scale	**C** …using qualitative and quantitative keys …using the linear and digital scale
…an informative or explanatory text	Refer to the core skills for the French course		
…a graph…		**C** recognise and correctly record information from simple bar, strip, cartesian graphs	**C** the same as under II pie charts
…a data table…	↗	↗ Correctly recognise and record information from pie charts	↗ Describe general trends: distribution, evolution

2.4. Exploiting the information and checking its relevance according to the search undertaken

	I	II	III
Decoding and selecting elements…	↗ …that are useful depending on the question asked	↗ …that are useful depending on the research project	↗ …that are useful and essential for a research project
Comparing and organising the information…	**C** …depending on the question asked, complete a single entry table	**C** …according to the research project undertaken, complete a single entry or double entry table	**C** …according to the research project undertaken, build and complete a single entry, double entry chart
Situating the information in a spatial and chronological context with the help of markers and specific representations	**C** these markers and these representations are defined under 3.1.1. and 4.1.1.	**C** these markers and these representations are defined under 3.1.1. and 4.1.1.	**C** these markers and these representations are defined under 3.1.1. and 4.1.1.

2.5. Structuring the results of the research, validating the approach to the research

	I	II	III
Organising the results of the research by producing a short text, a drawing, a sketch.	↗	↗	↗
Distinguishing the important from the unimportant in these results.		↗	↗
Integrating them into a dynamic spatio-temporal framework.	↗	↗	↗
Assessing the relevance of research practices implemented.		↗	↗

2.6. Communicating, means

- expressing questions, information, results;
- reporting on the research process implemented.

	I	II	III
Choosing…			↗ …the type of graph best adapted to the message to be conveyed
Drawing up a…			**C** …cartesian, bar, strip chart
Producing a text…	Refer to the core skills for the French course		

2.7. Transferring to new situations

	I	II	III
Reusing the knowledge and the know-how acquired…	**C** …in situations that are close to the learning situation	**C** …in situations with an explicit link to the learning situation	**C** …in situations with an implicit link to the learning situation

2.8. Acting and reacting, means

- demonstrating a critical mind;
- making a commitment and assuming a commitment;
- taking an active part in the drawing up and implementation of a project to promote justice, solidarity, a sense of responsibilities with regard to others, the environment and heritage.

	I	II	III
Concerning facts, situations, problems relating to Human Rights, heritage and the environment…	↗ …have an opinion and express it	↗ …question their opinion, adjust it, modify it and forge an opinion	↗ …question their opinion, adjust it, modify it, take a position and express it by putting forward arguments

3. The know how and knowledge specifically related to the non-core subject: history – training in history – including an introduction to social and economic

3.1. Know how

3.1.1. Using:

- temporal reference points…
- representations of time…

…to situate themselves and situate facts in time

	I	II	III
Using temporal reference points:	• chronological reference points: **C** ▪ breaking down the day into hours, ▪ the week into days, ↗ ▪ the year into months	**C** the conventional periods including indicators based on significant events. • Prehistory (the age of the hunters-gatherers, the age of the first farmers) ▪ *The first cave paintings.*	**C** the conventional periods including the same indicators as under II and others. • Prehistory (Palaeolithic, Neolithic) ▪ *the first human beings,* ▪ *sedentarisation.*
	• reference points based on significant events experienced: ↗ ▪ personally, ▪ by the class, by the school.	• Antiquity (the era of the Celts, the Gallo-Romans), ▪ *the arrival of the Romans in our regions.*	• Antiquity (the Celts, the Mediterranean civilisations: Egyptians, Hebrews, Greeks, Romans), ▪ *the first texts,* ▪ *the legendary founding of Rome.*
		• the Middle Ages (the age of the major migrations, invasions, large estates and the development of the towns), ▪ *The arrival of the Francs in our regions,* ▪ *the arrival of the Vikings in our regions, the first fortresses.*	• the Middle Ages (rural, urban, nomadic societies), ▪ *The Hegira,* ▪ *the first charter granting freedoms.*
		• Modern times (the age of the major technical and geographical discoveries), ▪ *The invention of the printing machine,* ▪ *The discovery of the Americas by the Europeans,* ▪ *The invention of the steam engine.*	• Modern times (the economic and cultural expansion in the world, the development of a class of merchants and financiers), ▪ *The French Revolution.*

		• Contemporary period (the time of industrial societies), ▪ *The independence of Belgium,* ▪ *The 14-18 war,* ▪ *The 40-45 war,* ▪ *The signing of the Rome Treaty,* ▪ *the first man in space.*	• Contemporary period (industrial societies, the globalisation of economic and cultural exchanges), ▪ *The fall of the Berlin Wall.*
Using representations of time:	• calendar: **C** ▪ *of the week,* ↗ ▪ *of the month,* ▪ *of the year.*	**C** timeline of the year divided into months, time line showing: ▪ *the birth of Jesus Christ,* ▪ *the centuries,* ▪ *the conventional periods and the reference points defined above.*	**C** time line showing: ▪ *the birth of Jesus-Christ,* ▪ *the millennia, the centuries,* ▪ *the Roman, Christian, Muslim eras.* ▪ *the conventional periods and the reference points defined above.*
	• timeline: **C** ▪ *of the day divided into hours,* ▪ *of the week divided into days,* ↗ of the school year divided into months		
	↗ weekly hour grid	**C** weekly hour grid	**E** weekly hour grid

3.1.2. Reading a trace of the past

	I	II	III
Reading a trace of the past (objects, monuments, habitat, landscape features, toponym, old photos or postcards, testimonials, customs…):	↗ identify it.	**C** • identify it and classify it according to its type. *These types are defined under point 3.2.4.* • determine its origin and link it to a way of life. *These aspects of the way of life are defined under point 3.2.2.*	**C** • identify it and classify it according to its type. *These types are defined under point 3.2.4.* • determine its origin and link it to its context. *This context is defined under point 3.2.2.*

3.1.3. Exploiting historical sources

	I	II	III
Distinguishing …		↗ …an original or reconstituted document (model, sketch, plan, life size copy, drawing) …witness or specialist …fact or opinion	**C** …original or reconstituted document. …witness or specialist …fact or opinion
Interpreting…		**C** …by distinguishing between what is read and what is deduced.	**C** …by distinguishing between what is certain and what is hypothetical.
Comparing…		**C** …two documents (iconographic documents or objects) dealing with the same subject. ↗ …two documents of a different nature dealing with the same subject.	**C** …two documents (iconographic documents or objects) dealing with the same subject. …two documents of a different nature dealing with the same subject.

3.2. Knowledge

3.2.1. Organising time

	I	II	III
Situating…	**C** facts experienced personally or by other family and friends (before, after, during, earlier, later, often, sometimes, never)	**C** facts experienced personally or by other people (chronology, frequency, duration, distance in time)	**C** facts experienced personally or by other people (chronology, frequency, duration, distance in time) and the evolution of these situations

3.2.2. People's way of life in a certain era

	I	II	III
Identifying, comparing…		concrete aspects of the way of life .. in our regions taking into account the fact that our society is multiculturaln:	concrete aspects of way of life in society, in our regions and in others, taking into account the fact that our society is multicultural:
Characterising…		**C** • activities and techniques: ▪ to obtain food, housing, travel, clothes, care, production. ▪ to educate, communicate, express, entertain.	**C** • activities and techniques: ▪ the same as under II; ▪ to exchange, organise, ▪ to represent the world.
		↗ • work and life in the community: ▪ organisation, ▪ the resulting social differences, ▪ methods of oppression or exclusion, ▪ struggles undertaken to overcome them.	• work and life in the community: ▪ organisation, ▪ the social differences resulting from them, ▪ methods of oppression or exclusion, ▪ struggles undertaken to overcome them. …taking into consideration the relationships that link these aspects.

3.2.3. The evolution of people's way of life

	I	II	III
Describing…		↗ the evolution of a concrete aspect of the way of life in our regions	↗ the evolution of concrete aspects of way of life in our regions

3.2.4. The nature of a trace of the past

	I	II	III
Identifying, classifying…	↗	**C** • object, monument • written document (original or reconstituted document) • photograph, painting, sculpture • graph • audio-visual document (original or reconstituted document)	**C** • archaeological remains (object, monument, landscape feature) • written document (official, non-official source, scientific text) • iconographic document (engraving, sculpture, painting, photograph) • document in schematic form (plan, map, graph) • audio-visual document

4. The know how and knowledge spefifically related to the non-core subject: geography – training in geography – including an introducetion to social and economic

4.1. Know how

4.1.1. Using:

- spatial reference points…
- spatial representations…

…to situate themselves and facts in space
…to move about

	I	II	III
Using spatial reference points:	**C** fixed reference points chosen in the near environment: • in the home, • at school, • in the neighbourhood, in the village.	**C** spatial reference points: • on a map of Belgium: ▪ the commune, ▪ the Walloon Region and the Brussels-Capital Region, ▪ the Rivers Meuse, Sambre, Escaut, other waterways close to the district, ▪ the main towns. • on a map of Europe: ▪ Belgium, ▪ the Member States of the European Union. • on the planisphere: ▪ the continents, ▪ the Atlantic and Pacific oceans.	**C** spatial reference points: • on a map of Belgium: ▪ the same as under II, ▪ the Regions , ▪ the Communities, ▪ the Provinces. • on a map of Europe: ▪ The same as under II ▪ the main seas (North Sea, Mediterranean Sea, Baltic Sea), ▪ the Alps and the Pyrenees. • on the planisphere and the terrestrial globe: ▪ the continents, ▪ the oceans, ▪ the equator, the Greenwich meridian, the tropics, the polar circles, ▪ the Northern and Southern hemispheres.
Using representations of space:	**C** • A space to which we have direct access: drawing a plan, an itinerary experienced in this space without necessarily conserving the proportions.	**C** • plan of their district, • map of Belgium showing the different Regions, • map of Europe showing the Member States of the Union, • planisphere.	**C** • The same as under II, • the globe.

4.1.2. Locating a place, a space

	I	II	III
Situating:	C • a location in relation to you and visual reference points (in front, behind, to the right, to the left, between) • a location in relation to the reference points defined under point 4.1.1.		
		C • a location in relation to the reference points defined under point 4.1.1. • orientation according to the 4 cardinal points.	C • a location in relation to the reference points defined under point 4.1.1. • orientation according to the 8 cardinal points.
Orientating:			

4.1.3. Reading a landscape, a geographical image

	I	II	III
Reading a landscape in the field:		↗ • delimit it. • determine the different plans. • identify the horizon line.	C • delimit it. • determine the different plans. • identify the horizon line.
	↗ • look for the dominant elements.	C • look for the dominant elements.	E • look for the dominant elements.
		↗ • identify to what type of space it belongs.	C • identify to what type of space it belongs.
Reading a geographical image:	↗ • look for dominant elements.	The same as above.	The same as above.
		↗ • recognise the nature of the document.	C • recognise the nature of the document.
		C • distinguish between an aerial and ground photograph.	• identify the angle of view.

4.2. Knowledge

Here, the term "space" is used with the following meaning: space is the product of human activities (with historical heritage) on the basis of a "natural" environment. The "natural" environment is made up of all of the elements that give a geographical place its particular, unique features. Societies have always tried to adapt to natural environments by transforming them (landscaping, production, destruction) turning them into spaces in constant evolution.

4.2.1. The components of the landscape

	I	II	III
Identifying:	**C** • …at least two concrete aspects relating to elements of the landscape, adapted by man or his activities.	**C** • buildings, fields, meadows, wooded areas, axes of communication, flat or rugged surface, waterway, valley.	**C** • relief, vegetation, impact of human activity.
Characterising:		• natural or human elements, little or highly humanised landscape, rural, urban or industrial landscape.	• rural, urban, industrial, mixed.

4.2.2. "Natural" environments"

	I	II	III
Identifying and characterising some of them.		**C** Forests, deserts, mountains, seas and oceans.	**E** Forests, deserts, mountains, seas and oceans.
Associating them with the five climate zones.		↗ The two polar, zones, the two temperate zones, the intertropical zone.	**C** The two polar zones, the two temperate zones, the intertropical zone.
Identifying their assets and limitations.		**C** • Slope, altitude. • Waterways. • Weather conditions. • Scarcity or exuberance of vegetation.	**C** • Altitude, main forms of relief (plain, plateau, mountain, valley). • Hydrographical elements (hydrographical basin, flood basin). • average temperature, thermal range, rainfall. • Scarcity or exuberance of vegetation.
			↗ Water cycle.
…and their transformation into spaces.		↗	**C**

4.2.3. The organisation of the space

<table>
<tr><th></th><th>I</th><th>II</th><th>III</th></tr>
<tr><td rowspan="5">characterising …</td><td rowspan="5">A space to which they have had direct access (familiar spaces or spaces visited during extra-curricular activities or stays).</td><td rowspan="5">A space to which they have had direct access or otherwise:
• in their district,
• in one of the two Regions of the French-speaking Community,
• in the Federal State,
• in Europe,
• in the world.</td><td rowspan="5">A space to which they have had direct or indirect access:
• in their district,
• in one of the two Regions of the French-speaking Community,
• in the Federal State
• in Europe,
• in the world.</td></tr>
<tr><td>…its functions</td></tr>
<tr><td>…its structuring</td></tr>
<tr><td>…its dynamic</td></tr>
<tr><td></td></tr>
<tr><td></td><td>↗
a space to play, study, sleep, sell or buy, work.</td><td>↗
• residential function.
• production function (agriculture, industry, services).
• administrative function.
• consumption/exchange function.</td><td>C
• residential function.
• production function (agriculture, industry, services).
• administrative function.
• consumption, exchange function.</td></tr>
<tr><td></td><td rowspan="4"></td><td>C
• built area, unbuilt area, town, village.
• limits of the fields and meadows.
• regional limits, national limits, limits of the European Union.</td><td>C
• plot of land, copse, open landscape, regroupings.
• political border, natural limit.</td></tr>
<tr><td></td><td>↗
communication network, communication hub.</td></tr>
<tr><td></td><td>• evolution of the use of spaces:
↗
▪ housing estates, industrial estates, business parks.</td><td>• evolution of the use of spaces:
C
▪ housing estates, industrial estates, business parks.</td></tr>
<tr><td></td><td>↗
▪ agglomeration, centre, periphery, rural exodus.
▪ cluster, zone of influence.
▪ evolution of the population and the size of the towns.</td></tr>
</table>

4.2.4. Interactions between man and space

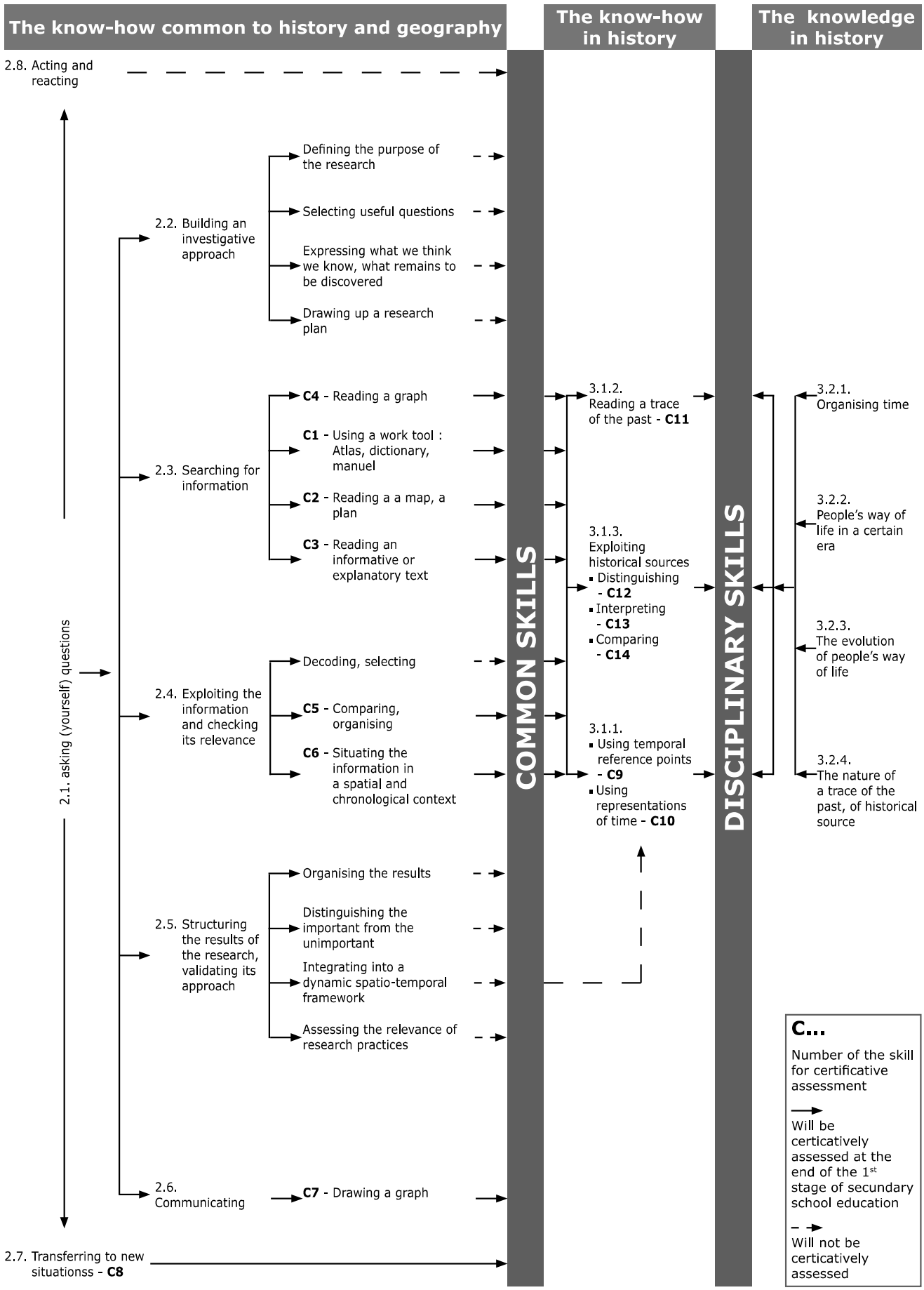
	I	II	III
Identifying, characterising	↗ …concrete aspects of the way of life of children in other spaces (school, home, food, travel).	…concrete aspects of: **C** • the population (number, area with low or high population, urban or rural), • population movement (migration), • communications (ways and means of communication),	…aspects of: **C** • the same as under II, • the population (density), urbanisation, • travel (commuters), • telecommunication,
		↗ • adaptation to natural conditions (altitude, slope, closeness to the sea, vegetation, waterways, drought), • water and air: their management and their conservation or otherwise, • economic activities (agriculture, industry, trade, services), social organisation (school, district, community), • phenomena of exploitation or exclusion, • the implication for social life ▪ the day/night alternation, ▪ the passing seasons.	• settlement by man in high-risk areas, ↗ • water, management, air management **C** • economic activities (agriculture, industry, trade, services), social organisation (school,commune, community), • phenomena of exploitation or exclusion, • the implication for social life ▪ the day/night alternation, ▪ the passing seasons.

5. The skills

Reading of the two tables proposed on the following pages

Skills around which to hinge attitudes,	
know-how →→→→→→ 1st part 2.1.-8. 2nd part 3.1. 3rd part 4.1.	Knowledge ←←←←←← 2nd part 3.2. 3rd part 4.2.

5.1. History early learning and literacy incorporating economic and social life



5.2. Geography early learning and literacy incorporating economic and social life