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Key Competences for Lifelong Learning in the European Schools

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I. Introduction

This Framework for Key Competences in the European Schools sets the frame within which the eight key competences are visible and can be further developed through the curriculum of the European Schools, supported by its structures and the approaches to pedagogy and assessment. It is intended that the framework will guide the approach of the European Schools to the coherent implementation of the eight Key Competences for Lifelong Learning.

The final report of the team of Experts at the Institute of Education (2016) recommends changes to the European Schools system that includes improving the coherence of the eight key competences. The external evaluators applauded the fact that the European School system was the only one which clearly referred to the eight key competences but noted that their implementation was incoherent and inconsistent. The European Schools have already put the key competences at the centre of the syllabi and this framework has been developed to support their further development and implementation in schools and classrooms.

Key Competences for Lifelong Learning

The European Reference Framework for Key Competences for Lifelong Learning (European Commission, 2018a) sets the context for the development of key competences for lifelong learning. The Recommendation for Key Competences for Lifelong Learning was first adopted by the European Parliament and the Council in 2006. Following a consultation and review of this framework in 2017, a revised framework was proposed and adopted in 2018. The objective of the Recommendation is *to improve the development of key competences for all people throughout life and to promote measures needed to achieve this objective. It encourages Member States to better prepare people for changing labour markets and active citizenship in more diverse, mobile, digital and global societies, and to develop learning at all stages of life* (ibid., p.4). Learners need to develop their skills and competences throughout their lives, for their personal fulfilment, so that they can actively engage with the society in which they live and to ensure that they are prepared for a constantly changing world of work. The recommendation calls especially for investing in basic skills, in entrepreneurial and digital competences as well as in language competences to enable everyone to participate actively in society and the economy. It also emphasises the need for investment in science, technology, engineering and mathematics (STEM) competences to nurture scientific understanding and to increase the attractiveness to follow a career in STEM. The 2018

Recommendation replaces the Recommendation on Key Competences for Lifelong Learning adopted in 2006.

Europe is not alone in this move towards key competences; core competences; essential skills; 21st century skills in education systems. While they may be named differently across the world, they tend to be very similar in the competences that are seen as important.

Growing internationalisation, the rapid pace of change, and the continuous roll-out of new technologies mean that European citizens must not only keep their specific job-related skills up-to-date, but also possess the generic competences that will enable them to adapt to change. People's competences also contribute to their motivation and job satisfaction in the workplace, thereby affecting the quality of their work (European Commission, 2007).

The emerging Future of Education and Skills: OECD Education 2030 Framework places a strong emphasis on competences and states that *A competence is the ability to mobilise knowledge, skills, attitudes and values, alongside a reflective approach to the processes of learning, in order to engage with and act in the world.* The new OECD Global Competence, to be tested in PISA 2018, was constructed on this model (OECD, 2016).

Key competences have become a feature of education policy in EU member states at different times and with different emphases since the adoption of the first reference framework in 2006. The variety of approaches taken in the different member states reflects the history of those states, the prevalent education philosophy and the educational structures already established (KeyCoNet, 2014). As a result, there is no one model followed for integrating the key competences into national curricula. Some countries have introduced them as part of national curriculum reform initiatives and have used those opportunities to ensure that the key competences are threaded through the curriculum. They are often introduced through cross-curricular approaches rather than being presented as separate subjects.
Most importantly, a focus on key competences can lead to a broader and more engaged learning experience for students. While the development of key competences prepares young people for a rapidly changing world of work in the future, it also helps them to think critically and creatively, to work independently and as part of a team, to be innovative and to develop learning skills that are important for them as they travel through their school journey and later along the road of lifelong learning.

Having considered the curriculum of the European Schools, it is clear that there are opportunities to develop some of the competences, for example, the Literacy and Multilingual

competences, mainly through particular subjects. Others, for example the Personal, social and learning to learn competence, are more suited to a cross-curricular approach and others may require other initiatives to fully integrate them.

Eight key competences

Competences are defined by the European Commission (2018b, p.1) as a combination of knowledge, skills and attitudes appropriate to the context, and where:

> *a) knowledge is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject;*
> *b) skills are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results;*
> *c) attitudes describe the disposition and mind-sets to act or react to ideas, persons or situations.*

Key competences are those which all individuals need for personal fulfilment and development, employability, social inclusion and active citizenship. They are developed in a lifelong learning perspective, from early childhood throughout adult life, and through formal, non-formal and informal learning.

The Reference Framework (2018) sets out eight key competences:

1) Literacy competence;
2) Multilingual competence;
3) Mathematical competence and competence in science, technology and engineering;
4) Digital competence;
5) Personal, social and learning to learn competence;
6) Civic competence;
7) Entrepreneurship competence;
8) Cultural awareness and expression competence.

An outline of the eight competences can be found on page 9. Each competence is further developed, including some examples of where it might be developed in the curriculum, in Chapter 4 of this document (pp. 23 to 40).

The key competences are all considered equally important. They overlap and interlock: aspects essential to one domain will support competence in another. How the competences are presented and integrated into the curriculum, and in teaching and learning in schools, depends on the approach taken in different contexts.

Competence in the fundamental basic skills of language, literacy, numeracy and digital technology is an essential foundation for building learning competence. Skills such as creativity, critical thinking, taking initiative and problem-solving play an important role in coping with complexity and change in today's society and are strengthened through the competences in the new framework.

Some suggestions were put forward in the Institute of Education Report (2016), around the reorganisation of the Secondary Studies, on how the eight key competences could be more comprehensively dealt with in the curriculum of the European Schools. These include further clarification and extension of the current curriculum; development of curriculum standards reflecting the key competences that would guide any future development of the various subject curricula; development of appropriate pedagogies to support these curriculum standards and development of appropriate assessment standards. This is work that may be carried out over the coming years, and in the meantime, this document sets out our approach to the integration of the key competences and how they can be supported through current and future curriculum development, pedagogical practice and assessment.

While it is important to identify how the key competences can be supported and developed through the curriculum at the various stages of schooling and through particular subjects, the teaching and learning environment in schools also has much to contribute to competence development. The main approach to teaching key competences is through providing learning environments that facilitate active learning. These environments present open-ended problems and challenges to be solved through debate, experimentation, exploration and creativity. While teacher-led approaches will remain an important pedagogical practice, teachers also need to be supported to develop these other approaches that foster key competences through continuous learning and peer-to-peer support (KeyCoNet, 2014). Assessment and validation of competence development is also important (European Commission, 2018).

Other developments in the areas of key competences that are also useful to consider include: the publication of *EntreComp: The Entrepreneurship Competence Framework* (2016) and

DigiComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels (2017).

A framework for key competences in the European Schools

This framework sets out the key competences in terms of the essential knowledge, core skills and attitudes and suggests how they may be addressed through the curriculum.

Progress has already been made in integrating the key competences into the curriculum of the European Schools. *Chapter 2* sets out the current situation and the aspects of the curriculum, teaching and learning, and assessment that support the development of key competences already. The European Schools already support a competence-based approach to the curriculum, but there is room for improvement in the coherence of our approach. Reviewing current practice provides a very good starting point for further consideration and development of the key competences in our schools.
Based on this review of current practice*, Chapter 3* presents an overview of how the eight key competences are, or will be, developed through the curriculum from early years to secondary, year 7 (S7). Learners will encounter the key competences in a number of ways. Some will be clearly visible in subjects that are closely aligned to the competence. Others will be developed through a number of subjects and some will be an important part of all subjects.

Chapter 4 takes us a little deeper into the eight key competences, presenting each one in terms of its essential knowledge, core skills and attitudes. This helps to clarify what each of the competences sets out to achieve for learners. The tables have been designed to support reflection on where the key competences are most appropriate to the different school stages and subject areas, and indeed to identify aspects of the competences that are not being addressed anywhere. Blank tables which may be useful for schools and teachers to plan for the development of key competences in their schools and classrooms are included in Appendix 2. However, it is not intended that this be a limiting exercise—schools and teachers may have many more creative ideas about how the key competences can be strengthened in their own context. The framework reflects the strong inter-relationships between the competences and how they can be reinforced by being addressed through a range of teaching and learning experiences through a range of subjects at different stages of the school journey.

Chapter 5 looks at what else needs to happen to ensure that learners benefit from the development of key competences. While making sure that the competences are covered in

the curriculum is a very important first step, real change will only happen at school and classroom level.

This framework is a live document that will be added to over time, based on new approaches and suggestions by schools, teachers and other stakeholders. In addition, key competences are subject to change over time. Already since the introduction in the European Reference Framework in 2007, there have been significant changes to the digital world and our experience of working with digital material. This document reflects the changes introduced in the revised European reference framework in 2018. The table on page 9 and 10 outlines the revised key competences.

Table 1: An Outline of the Eight Key Competences for Lifelong Learning (2018)

Literacy competence	Literacy is the ability to identify, understand, express, create and interpret concepts, feelings, facts and opinions in both oral and written form, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to communicate and connect effectively with others in an appropriate and creative way. Development of literacy forms the basis for further learning and further linguistic interaction. Depending on the context, literacy competence can be developed in the mother tongue, the language of schooling and/or the official language in a country or region.
Multilingual competence	This competence defines the ability to use different languages appropriately and effectively for communication. It broadly shares the main skill dimensions of communication of literacy: it is based on the ability to understand, express, and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts according to one's wants or needs. As appropriate, it can include maintaining and further developing mother tongue competences. A learner's level of proficiency will vary between the four dimensions and between the different languages.
Mathematical competence and competence in science, technology and engineering	Mathematical competence is the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations. Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentations (formulas, models, constructs, graphs and charts). Competence in science refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world, in order to identify questions and to draw evidence-based conclusions. Competences in technology and engineering are applications of that knowledge and methodology in response to perceived human wants or needs. Competence in science, technology and engineering involves an understanding of the changes caused by human activity and responsibility as an individual citizen.

Digital competence	Digital competence involves the confident, critical and responsive use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, digital content creation (including programming), safety, (including digital well-being and competences relating to cyber security), and problem solving.
Personal, social and learning to learn competence	Personal, social and learning to learn competence is the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one's own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, support one's physical and emotional well-being, empathise and manage conflict.
Civic competence	Civic competence is the ability to act as responsible citizens and to fully participate in civic and social life, based on understanding of social, economic and political concepts and structures, as well as global concepts and sustainability.
Entrepreneurship competence	Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking, and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or commercial value.
Cultural awareness and expression competence	Competence in cultural awareness and expression involves understanding, and having respect for, how ideas and meaning are creatively expressed and communicated in different cultures and through a range of arts and other cultural forms. It involves being engaged in understanding, developing and expressing one's own ideas and sense of place or role in society in a variety of ways and contexts.

II. Key Competences so far

The key competences are not new in the European Schools. Although our principles have been unquestioned and valid since the foundation of the first school, teaching and learning have undergone considerable changes during the last few decades. Initiatives taken by teachers and inspectors from different member states and other stakeholders have brought changes in our pedagogical culture. Good practices are to be observed both at school level, in everyday teaching situations and in the governance of the system.

The Institute of Education Report (2016) drew attention to the progress made in developing the curriculum of the European Schools around the key competences but observed that more attention should be given to balance and coherence. For example, some of the key competences are not well represented in the organisation of studies in the European Schools.

In this section attention is drawn to some of the good practices that are already in place in the European Schools.

Key competences in the nursery cycle

In recent years, there is a new perspective and an increased importance on teaching and learning in the early years. Early Education is seen as equal to all other levels of education in the European Union.

The Early Education Curriculum (further EEC, Ref.: 2011-01-D-15-en-4 + Annexe), introduced in September 2011, is a pedagogical tool for people working in early education in the European Schools. The fundamental base of this curriculum is the European Reference Framework: Key Competences for Lifelong Learning.

According to the EEC, key competences are those, which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment. Key competences relate to the values, objectives and content of the curriculum.
Teaching and learning in the early years supports and monitors children's physical and psychological wellbeing, including social, cognitive and emotional development. The content of the EEC consists of four areas, Me and my body, Me as a person, Me and the others and Me and the world. Every area has three dimensions, Learning to be, Learning to live with

others and Learning to do and to know based on learning objectives. Teaching and learning is holistic and different areas of development are not separated.

In Early Education children's positive self-concept is strengthened and their learning competence develops. Children build basic skills, knowledge and capabilities from different areas of learning in accordance with their age and abilities. Learning by playing, through experience and actions is essential. It is very important to retain the joy of and enthusiasm for learning and face new learning challenges with courage and creativity. The diversity of children and their special needs are respected.

The transition from nursery to primary and from primary to secondary

The transition from nursery to primary and from primary to secondary level is of major importance in the school life of the pupils of the European Schools and, in a more general sense, for the system of the European Schools. It does not only involve the issue of transfer and assessment of pupils at the end of nursery and primary cycles, but it also implies the educational organisation, curricula, teaching aims and methods, the welfare and guidance of the pupils.

A European School framework for school-specific guidelines for transition has been developed (Ref.: 2015-09-D-41-en-1) to support and improve the current practices and to guarantee their quality of education. It takes into account the need for both clarity and harmonisation among European Schools (common expectations) and the autonomy of individual schools. The framework defines five areas (Domains, Parties, Activities, Organisation and Quality assurance). For each area, it offers the hooks, on which schools can hang their own activities and procedures, taking into account their own context. This provides opportunities for continuing the development of key competences from nursery to primary and from primary to secondary.

Specific procedures for transition from nursery to primary are also described in the Early Education Curriculum, which emphasises that the transition between early education and the primary cycle must be prepared as well as possible in the interest of the children.

Key competences in secondary

As a fundamental development of the ongoing reform, the key competences are now the basis for all the *syllabi* at secondary level. The syllabi define both subject-related and personal and social competences in order to foster critical thinking and problem-solving in each subject and throughout the curriculum. Each syllabus must on principle integrate teaching and learning so that learning is a more complex experience throughout the curriculum, and at the same time ensure active learning, making it possible for pupils to become responsible for their own learning. These fundamental criteria are looked for and checked in the quality assurance procedure for the syllabi. Syllabi should encourage a variety of teaching and learning approaches and strategies, including differentiated teaching methods, and a wide range of learning resources including digital tools. The common structure of the syllabi requires syllabus writers to focus on learning objectives that have to be attained at the end of each cycle (years 3, 5, 7). Besides all these elements, each syllabus should contain attainment descriptors for each cycle. These attainment descriptors should reflect the key competences appropriate to that syllabus.

Key competences across the curriculum

Following a simple analysis of the presence of the key competences in subject syllabi across all levels of compulsory schooling, a broad picture of the presence of the eight competences in the curriculum emerges. It is not intended that this be a very scientific analysis as it would be difficult to conduct an in-depth study, given the number of variables that would need to be considered. But, it is useful to consider where the key competences are present, or have the potential for further development, in the curriculum. The analysis was conducted using the 2006 Framework of Key Competences (European Commission, 2007), as that was the framework that had informed the work on the syllabi. However, these are similar enough to the revised framework (2018) to ensure that the analysis is still useful to provide a broad picture of the presence of key competences across the curriculum.

The following charts show the share that all key competences have, based on the compulsory structure of the curriculum (combination of compulsory subjects) at each level. This means that one key competence can be served by more than one subject and vice versa, and this is reflected in the analysis. The colour code for the competences is included on each diagram, and also in the first graphic. The same analysis and colour coding are applied across all levels.

Table 2: Colour coding for the curriculum analysis charts

Communication in mother tongue
Communication in foreign languages
Mathematical and Science competences
Digital competence
Social and civic competences
Learning to learn
Cultural awareness
Sense of initiative and entrepreneurship

Chart 1: Key competences in primary 1 and 2

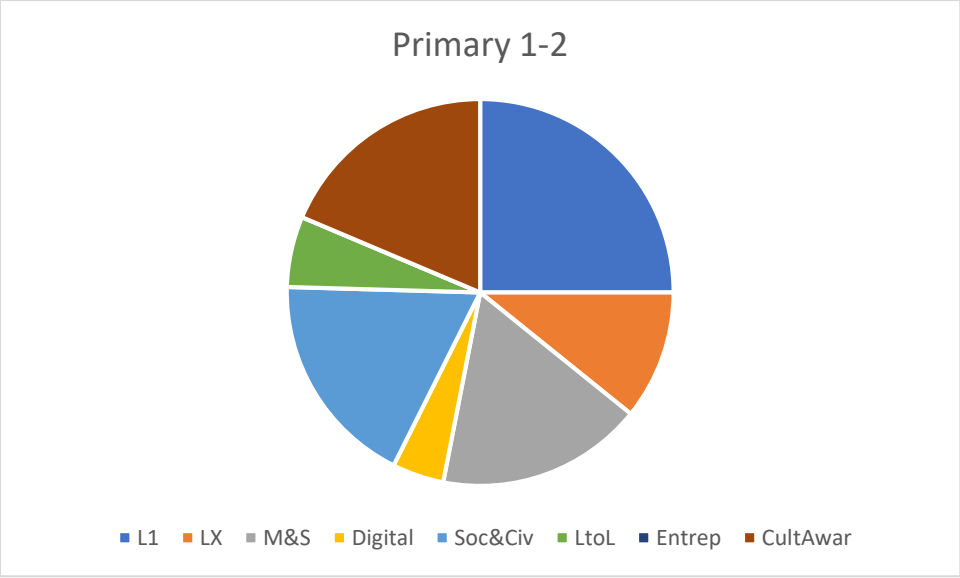


Chart 2: Key competences in primary, years 3 to 5

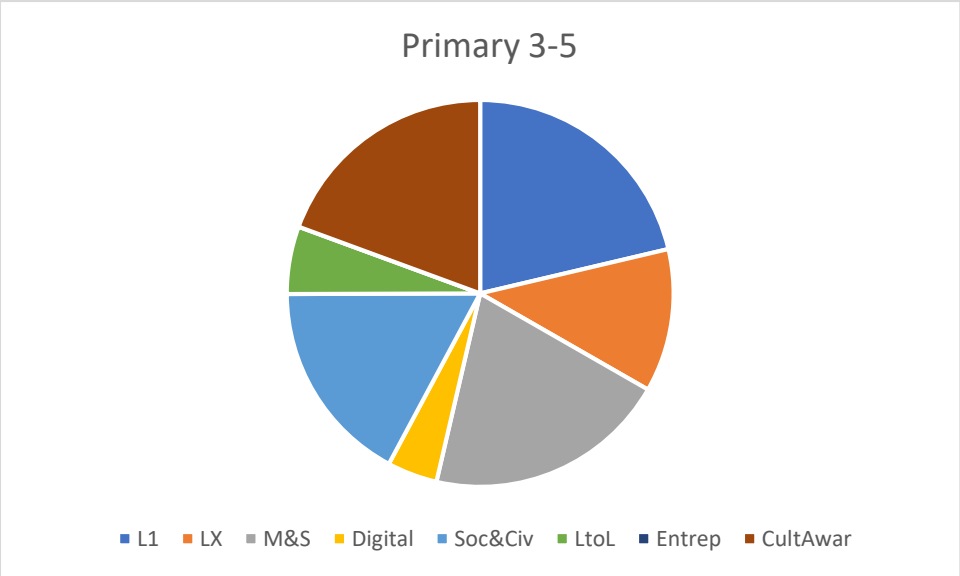


Chart 3: Key competences in secondary, years 1 to 3

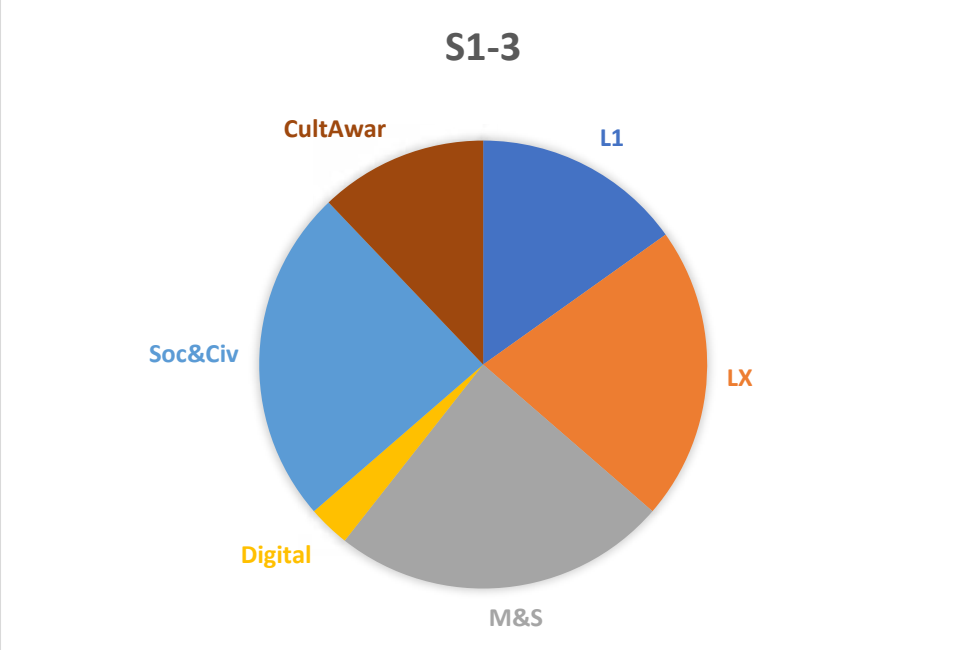
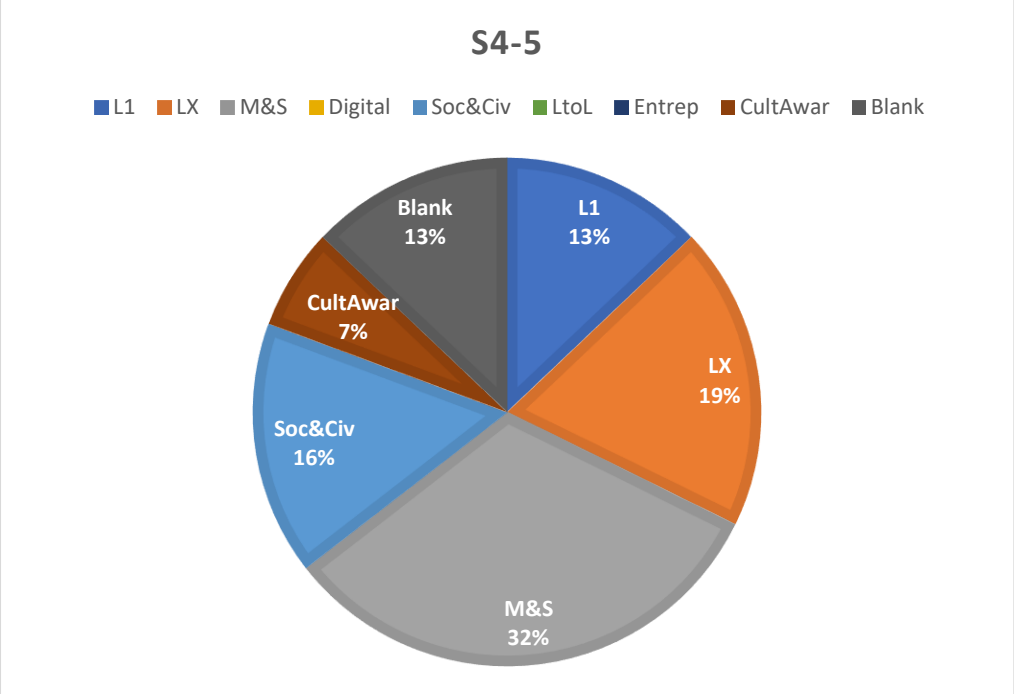


Chart 4: Key competences in secondary, years 4 to 5



Note. *The blank segment refers to the subject options. As students choose from a range of subjects, it is not possible to say what key competences are covered.*

The charts illustrate that the broad curriculum that learners engage with from P1 to S5 provides significant opportunities for the development of most of the key competences through the curriculum as it is at present. The analysis suggests that the communication competences, mathematics and science, social and civic competences are well catered for. But, there are also some gaps, for example a sense of initiative and entrepreneurship isn't really featuring.

Assessment

The Assessment Policy of the European Schools (Ref.: 2011-01-D-61-en-3), introduced in 2011, refers to and is in line with the Key Competences for Lifelong Learning. The main criteria for both formative and summative assessment are validity, reliability and transparency.

Moreover, the concept and tools for ongoing assessment in the nursery and primary cycles (valid in the nursery cycle since 2011 and in the primary since 2013) and the design and implementation of the new marking system in the secondary cycle points to a new culture of assessment being established in the system. The bases for assessment are the learning objectives for each subject/competence per year/cycle. For each cycle, a syllabus contains attainment descriptors: a set of generic statements, which describe levels of attainment in respect of a given set of competences or learning objectives. Attainment descriptors relate to

the marking scales used in the European Schools. Teachers are expected to plan not only the content and methodology of teaching, but also the appropriate forms of assessment according to the learning objectives and the competences that need to be achieved. Future developments in assessment should provide further opportunities for the development and assessment of the key competences, particularly in the areas of project-work and collaborative learning, digital competence and entrepreneurial learning.

Other school practices that support key competences

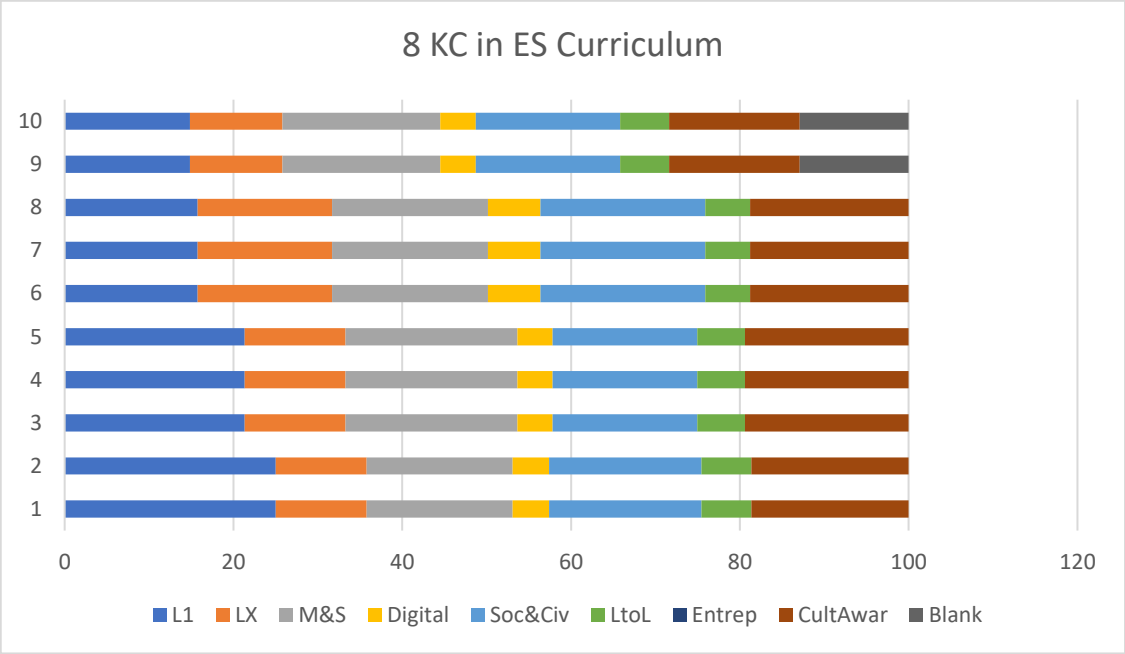
There is evidence of other good practices that support the development of key competences such as cross-curricular projects, carried out during the project weeks in the schools, as well as participation in study trips and other programmes. This means that alongside classroom teaching, learning outside the classroom and appropriate activities outside the school can make a significant contribution to the development of the competences.

The idea of a Transversal or Subject-related school project has already been the subject of some discussion. Such a project would have significant potential for the development of most of the key competences, and particularly those that are not so visible in subjects, such as digital competence, personal, social and learning competence; civic competence; entrepreneurship competence; and cultural awareness and expression competence. While much of the discussion thus far has been about the introduction of this project at S6 and S7, there is also potential to explore this idea for primary and lower secondary, with the possibility of introducing it in two or three phases. It is recommended that the idea of a Transversal or Subject-related project be further investigated in the context of the development of the key competences.

III. Key competences in our curriculum

The analysis of the curriculum from primary to secondary year 5, referred to in the previous chapter, illustrates that most of the key competences can be covered very well through the existing curriculum of the European Schools. The chart below shows the coverage of each competence at the various stages of school, up to and including S5. While the key competences are still important for learners beyond S5, the level of subject choice available to learners in S6 and S7 makes it difficult to analyse the curriculum for coverage of the competences. Learners will have developed a sound base in all the competences by S5 and will continue to build on them in their final two years.

Chart 5: Key competences up through the levels. Number 1 represents Primary 1 and number 10, Secondary 5.



It is encouraging to note that most of the competences are present in the curriculum at all stages, with the communications, mathematics and science, social and civic and cultural awareness competences very well covered. This is important as competences are built and strengthened over time and the more often learners encounter them, the more competent they will be.

The areas that are not so visible are sense of initiative and entrepreneurship and learning to learn. One of the reasons for the gaps in these areas is that these competences are not as

clearly aligned with specific subjects as the others and are therefore not as visible. Entrepreneurship, for example, is quite well covered across a number of subjects, particularly at primary. Where project work is a feature of subjects, students learn about and develop core skills in planning and managing projects, problem-solving, creativity and communicating and collaborating with others (See Table on Entrepreneurship Competence, p. 37). The increased use of projects and other approaches to collaborative learning across all levels will increase the development of the Entrepreneurship competence and other competences. It acknowledged that there are also gaps that need to be addressed, such as the working of the economy, social and economic opportunities and challenges and, to some extent, ethics.

Likewise, many aspects of the learning competence are covered across all subjects, especially at primary. But again, there are gaps in this competence that will need to be addressed across all subjects.

It is clear that learners encounter the key competences in a number of ways. Some are clearly visible in subjects that are closely aligned to the competence, such as the communication competences and mathematics and science. Others are developed through a number of subjects, for example, the civic and entrepreneurship competences and some will be an important part of all subjects, for example, the personal, social and learning competence and digital competence. The tables in Chapter 4 help to illustrate where in the curriculum some of the different aspects of the competences are most suited. These will be further interpreted and added to by schools and teachers to best suit their own practices in developing the competences.

Suggestions for improvement

- While a number of the key competences are very well represented through the curriculum, it will be important to ensure that each of these competences is comprehensively addressed. Chapter 4 provides some ideas on how this might be achieved.
- Personal, social and learning to learn competence should be a strong feature of all subjects. In addition, learners need some guidance and time to learn about learning: learning process and strategies; education, training and support opportunities; Individual and group learning; management of time and information etc.
- Digital competences can also be developed through all subjects. It is also important to have some curriculum space dedicated to learning about and how to use digital equipment and tools, about using the internet safely, data protection etc.

- The Entrepreneurship competence will need some further consideration. While many of the core skills can be developed through other subjects: managing projects, planning, analysing, presenting, negotiating, etc., the essential knowledge around the economy, business and ethics is not currently being covered to any great extent.
- While certain competences are closely aligned with some subjects, it should not be assumed that this competence should only be the responsibility of that subject. All subjects can contribute to the development of all the competences.
- Over time, it will be useful to explore other opportunities to further strengthen the key competences, perhaps through the organisation of secondary studies and/or the introduction of new initiatives such as transversal or subject-related projects.

IV. Getting deeper into the competences

In this Chapter, each competence is presented with its component essential knowledge, core skills and attitudes. This is necessary to really engage with the competences and what they mean. It can be easy to say that all students are developing civic competence, for example, but it is important to look deeper into what this actually involves. Where are they learning the essential knowledge, where are they developing the core skills and how are they forming their attitudes in this competence?

The completion of the right-hand column of the table will help to identify where there are gaps in the development of key competences and how these might be addressed. Some examples of where the essential knowledge, core skills and attitudes can already be found in the curriculum are included in this column. School planning teams and teachers can add to this column by reflecting on their own examples.

The tables will also serve as a resource to curriculum developers as they write new syllabi, teachers for their annual and short-term planning and text-book writers for the embedding of the competences into the teaching and learning material in texts and software. Some examples of where the knowledge, skills and attitudes can be developed through the curriculum are included as a starting point. The tables can be added to over time.

The tables can also be used by schools and teachers for school and classroom planning. Blank templates are included in Appendix 2 for this purpose.

Literacy competence

Table 3: Literacy competence

Literacy is the ability to identify, understand, express, create and interpret concepts, feelings, facts and opinions in both oral and written form, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to communicate and connect effectively with others in an appropriate and creative way. Development of literacy forms the basis for further learning and further linguistic interaction. Depending on the context, literacy competence can be developed in the mother tongue, the language of schooling and/or the official language in a country or region.	
Essential Knowledge *Students know about*	**Where in the curriculum?**
• A broad range of vocabulary	L1 to L5 (All levels); Subject-specific vocabulary in all subjects
• Functional grammar	
• The functions of language	
• The main types of verbal interaction	General student interaction Varied methodologies used in all subjects, especially L1 to L4; Discover the World (P); Integrated Science (S1 to S3); Science subjects
• A range of literary and non-literary texts	
• Different styles and registers of language	
• How language and culture vary in different contexts	European hours (P); extra-curricular activities, students' families

Core skills *Students should be able to*	**Where in the curriculum?**
• Communicate as a listener, speaker, reader and writer, in a variety of situations	
• Monitor and adapt their own communication to the requirements of the situation	All aspects of school life
• Use and distinguish different types of texts, including digital texts	Across all subjects Use of Digital texts needs to be strengthened
• Search for, collect and process information and to use aids	Discover the world (P); Sciences; project work
• Formulate and express their oral and written arguments in a convincing way appropriate to the context	L1 to L4
Attitudes *Students value*	**Where in the curriculum?**
• A disposition to critical and constructive dialogue	Ethics (P, S); Morale; History; Philosophy (S6-S7); Science; Geography
• Aesthetic qualities and are willing to strive for them	Art; Music; Sport
• Interacting with others	Exchange programmes; Music; Art; Sport
• The impact of language on others	Ethics; Morale; Literature; General school life
• Using language in a positive and socially responsible manner	All subjects and school life in general; History

Multilingual competence

Table 4: Multilingual competence

This competence defines the ability to use different languages appropriately and effectively for communication. It broadly shares the main skill dimensions of communication of literacy: it is based on the ability to understand, express, and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts according to one's wants or needs. As appropriate, it can include maintaining and further developing mother tongue competences. A learner's level of proficiency will vary between the four dimensions and between the different languages.	
Essential Knowledge *Students know about*	**Where in the curriculum?**
• An appropriate range of vocabulary	L1 to L5 (All levels); Subject-specific vocabulary in all subjects
• Functional grammar	
• The main types of verbal interaction	General student interaction
• Different styles and registers of language	Varied methodologies used in all subjects, especially L1 to L4; Discover the World (P)
• How language and culture vary in different contexts	
• The role of language in their own and other cultures	European hours (P); Discovery of the World (P)
• Societal conventions	European hours (P); extra-curricular activities; students' families

Core skills *Students should be able to*	**Where in the curriculum?**
• Understand spoken messages in the foreign language	
• Initiate, sustain, and conclude conversations	
• Read, understand and produce texts, including digital texts, appropriate to their needs	
• Use tools appropriately and engage with languages formally, non-formally and informally	
• Monitor and adapt their own communication to the requirements of the situation	
• Appreciate how cultural differences influence language use and communication	
Attitudes *Students value*	**Where in the curriculum?**
• Learning new languages	
• Cultural diversity	
• The role of languages in learning about their own and other cultures	
• Intercultural communication	
• Respect for each person's individual linguistic profile	
• Respect for the mother tongue of persons belonging to minority groups and those with a migrant background	

Mathematical competence and competence in science, technology and engineering

Table 5: Mathematical competence and competence in science, technology and engineering

Mathematical competence is the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations. Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentations (formulas, models, constructs, graphs and charts).

Competence in science refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world, in order to identify questions and to draw evidence-based conclusions. Competences in technology and engineering are applications of that knowledge and methodology in response to perceived human wants or needs. Competence in science, technology and engineering involves an understanding of the changes caused by human activity and responsibility as an individual citizen.

Essential Knowledge *Students know about*	**Where in the curriculum?**
• Numbers, measures and structures	Me and My World (Early education); Mathematics (P, S); Discovery of the World (P); Mathematics (P, S); Discovery of the World (P); European hours (P)
• Basic operations and basic mathematical presentations	
• Mathematical terms and concepts	
• An awareness of the questions to which mathematics can offer answers	Mathematics (P, S); Discovery of the World (P); Craft (P); Music (P, S); Geography (S); PE (S)
• Basic principles of the natural world	Me and My World (Early education); Discovery of the World (P); European Hours (P); Integrated Science (S)
• Fundamental scientific concepts, theories, principles and methods	
• Science as a process for the investigation of nature	Discovery of the World (P); European hours (P); Integrated science (S); Geography (S); Biology (S4-S7)

• Technology and technological products and processes	Craft (P); European hours (P); Discovery of the world (P)
• The impact of science, technology, engineering and human activity in general on the natural world	School trips and other cross-curricular activities
• The advances, limitations and risks of scientific theories, applications and technology in societies at large (in relation to decision-making, values, moral questions, culture, etc.).	Ethics (P, S); Music (P and S); Craft (P); Art (P and S); European hours (P)
Core skills *Students should be able to*	**Where in the curriculum?**
• Apply basic mathematical principles and processes in everyday contexts at home and work, including financial skills	Mathematics (P and S); Projects
• Follow and assess chains of arguments	L1 - L4; Ethics (P, S)
• To reason mathematically	
• Understand mathematical proof	
• Communicate in mathematical language	
• Use appropriate aids, including statistical data and graphs	Integrated science (S); PE (S); Geography (S)
• Use and handle technological tools and machines	Integrated science (S); PE (S); Geography (S)
• Investigate nature through controlled experiments	Discover the world (P); Integrated science (S1 to S3); Biology; Chemistry; Physics (S4 to S7)
• Use and handle scientific data to achieve a goal or to reach an evidence-based decision or conclusion	
• Be able to recognise the essential features of scientific inquiry	
• Be able to communicate the conclusions and reasoning that led to an evidence-based decision or conclusion	Organising school trips; Christmas market

Attitudes *Students value*	**Where in the curriculum?**
• The respect for truth	
• The willingness to look for reasons	Science symposium; project work
• The willingness to assess validity of reasons	
• Critical appreciation and curiosity	European hours (P)
• Interest in ethical issues and respect for both safety and sustainability, in particular as regards scientific and technological progress in relation to oneself, family, community and global issues	Discover the world (P); Ethics (P, S); Science subjects (S)

Digital competence

Table 6: Digital competence

Digital competence involves the confident, critical and responsive use of, and engagement with digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, digital content creation (including programming), safety, (including digital well-being and competences relating to cyber security), and problem solving.	
Essential Knowledge *Students know about*	**Where in the curriculum?**
• How digital technologies can support communication, creativity and innovation	L1 (P); ICT (S1 – S3, option); Supported by all subjects; Individual school policies
• The opportunities, limitations, effects and risks associated with digital technologies	All subjects
• The general principles, mechanisms and logic underlying evolving digital technologies	ICT (S1-S3, option)
• The basic use and function of different devices, software and networks	
• Validity, reliability and impact of information and data made available by digital means	L1 (P); Discovery of the World (P); European hours (P); History and Geography (S1 – S7); Career Guidance (S6 – S7)
• Legal and ethical principles involved in engaging with digital technologies	Ethics (P, S); ICT (S1 – S3); Supported by all subjects; Individual school policies

Core skills *Students should be able to*	**Where in the curriculum?**
• Access, use, filter, process and evaluate digital content	Languages (P and S1 – S7); European hours (P); Discovery of the World (P); History and Geography (S1-S7); Integrated science (S1 – S3); Career Guidance (S6 – S7); Significant potential across all subjects
• Create, program and share digital content	Share digital content (All subjects)
• Manage and protect information, content, data and digital identities	Early education; Ethics (P, S); Morale; Philosophy (S6-S7)
• Use digital tools to produce, present and understand complex information	Graphs and tables in mathematics (All mathematics and science subjects); Spreadsheets to present results in Integrated Science (S1 to S3); Biology, Chemistry, Physics (S4 – S7); Supported by use in all subjects
• Recognise and effectively engage with ○ software and devices, ○ artificial intelligence and robots	 All subjects Science subjects
• Use digital technology to support their creativity and to collaborate with others towards personal, social or commercial goals	Art (P); L1; All subjects

Attitudes *Students value*	**Where in the curriculum?**
• Applying a reflective and critical thinking approach	All subjects
• Being curious, open-minded and forward looking	All subjects
• Using an ethical, safe and responsible approach to the use of digital content and tools	ICT; Supported by all subjects; Ethics (P, S); Morale; Philosophy (S6-S7)
• Engaging in communities and networks for cultural, social and/or professional purposes	European hours; Project work

Personal, social and learning to learn competence

Table 7: Personal, social and learning to learn competence

Personal, social and learning to learn competence is the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one's own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, support one's physical and emotional well-being, empathise and manage conflict.	
Essential knowledge *Students know about*	**Where in the curriculum?**
• The components of a healthy mind, body and lifestyle	Recreation (P)
• Codes of conduct and rules of communication for social participation	Religion/Ethics (P, S)
• Inclusion and equality	
• The learning process and learning strategies	All subjects
• Their own competence development needs and various ways to develop competences	
• How to search for the education, training and career opportunities and guidance or support available	Career Guidance
• Management of time and information	
• Motivation, confidence and self-discipline	

Core skills *Students should be able to*	**Where in the curriculum?**
• Identify their own capacities, focus and set goals	Languages – all levels
• Motivate themselves	
• Deal with complexity	
• Critically reflect and make decisions	
• Learn and work autonomously and collaboratively	
• Organise and persevere with their own learning, and evaluate and share it	
• Self-assess	All subjects
• Develop resilience and confidence to pursue and succeed at learning throughout their lives	
• Seek support when appropriate and effectively manage their learning, their career and their social interactions	
• Cope with uncertainty and stress	
• Communicate constructively and collaborate in teams	L1; Discovery of the World (P); Philosophy (S6 and S7)
• Negotiate effectively and express and understand different viewpoints	L1
• Empathise with others, show tolerance and create confidence	All subjects; All aspects of school life
Attitudes *Students value*	**Where in the curriculum?**
• Looking after their personal, social and physical well-being	
• Learning and working collaboratively	
• Problem solving	
• Being assertive	
• Integrity	

• Intercultural awareness and communication	
• Diversity	
• Showing respect to others, overcoming prejudice and compromising	Religion and/or ethics
• Seeking opportunities to learn and develop in a variety of life contexts	

Civic competence

Table 8: Civic competence

Civic competence is the ability to act as responsible citizens and to fully participate in civic and social life, based on understanding of social, economic and political concepts and structures, as well as global concepts and sustainability.	
Essential Knowledge *Students know about*	**Where in the curriculum?**
• The concepts of democracy, justice and equality	
• Citizenship and civil rights, including the Charter of Fundamental Rights of the European Union and international declarations	Discovery of the World (P); History and Geography (S1 to S7);
• Contemporary events	History and Geography (S1 to S7)
• The main events and trends in national, European and world history	Discovery of the World (P); History and Geography (S1 to S7)
• Aims, values and policies of social and political movements	
• European integration	European hours (P)
• Climate and demographic change at global level and their underlying causes	
• Diversity and cultural identities in Europe, and the world	Discovery of the World (P); History and Geography (S1 to S7)
• The European common values (Article 2 of the Treaty on the European Union and the Charter of Fundamental Rights of the European Union)	
• Multi-cultural and sociology-economic dimensions of European societies, and how national cultural identity contribute to the European identity	

Core skills *Students should be able to*	**Where in the curriculum?**
• Engage effectively with others in the public domain	
• Display solidarity and show interest in solving problems affecting the local and wider community	
• Reflect critically and creatively on community activities	
• Participate constructively in community activities	
• Participate in decision-making at local, national and European levels, in particular through voting	
• Access, have a critical understanding of, and interact with both traditional and new forms of media	
Attitudes *Students value*	**Where in the curriculum?**
• Human rights and equality	
• Being responsible and constructive	
• Belonging to one's own locality, country, the EU and Europe and the world	
• Democratic principles	
• Participating in democratic decision-making	
• Social and cultural diversity	
• Gender equality and social cohesion	
• Sustainable development	
• The values and privacy of others	
• Intercultural communication	
• Being responsible for the environment	

Entrepreneurship competence

Table 9: Entrepreneurship competence

Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking, and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or commercial value.	
Essential Knowledge *Students know about*	**Where in the curriculum?**
• Different contexts and opportunities for turning ideas into action in personal, social and professional activities and understand how these arise	Geography (S); Economics (S4 – S7); Possibility of transversal project
• Planning and managing of projects, including processes and resources	Discover the world (P); L2, L3, L4; European hours (P); Possibility of transversal project
• How the economy works	Discover the world (P); Geography (S); Economics (S4 – S7)
• Social and economic opportunities and challenges facing an employer, organisation or society	
• Being financially literate: managing personal finance, savings, investment and borrowing	
• Ethical principles	Ethics (P, S); European hours (P); L1 (P, S); Religious education; All subjects; Extra-curricular activities
• Their own strengths and challenges	Discover the World (P); Mathematics (P, S); All subjects

Core skills *Students should be able to*	**Where in the curriculum?**
• Use their imagination within creative processes and innovations	European hours (P); Art (P, S1 to S5); L1 (all levels); All subjects
• Think strategically and problem solve	Mathematics (All levels); L1 (All levels); European hours (P); Ethics (P, S)
• Manage projects: plan, organise, manage, lead and delegate	
• Make financial decisions relating to cost and value and estimate the cost of turning an idea into a value-creating activity	
• Plan, put in place and evaluate financial decisions	
• Communicate effectively and negotiate with others	
• Cope with uncertainty, ambiguity and risk as part of making informed decisions	
• Work autonomously	
• Collaborate with others	
• Identify their own strengths and limitations	
Attitudes *Students value*	**Where in the curriculum?**
• Taking initiative	
• Being proactive and forward-looking	
• Courage and perseverance in achieving objectives	
• Being motivated and determined	
• Others' ideas	
• Empathy and taking care of people and the world	
• Being responsible and ethical	

Cultural awareness and expression competence

Table 10: Cultural awareness and expression competence

Competence in cultural awareness and expression involves understanding, and having respect for, how ideas and meaning are creatively expressed and communicated in different cultures and through a range of arts and other cultural forms. It involves being engaged in understanding, developing and expressing one's own ideas and sense of place or role in society in a variety of ways and contexts.	
Essential Knowledge *Students know about*	**Where in the curriculum?**
• Local, national, European and global cultures and expressions, including their languages, heritage and traditions, and cultural works of art[1]	
• How these cultural expressions can influence the ideas of the individual and others	
• The different ways of communicating ideas between creator, participant and audience within written, printed and digital texts, theatre, film, dance, games, art and design, music rituals, and architecture, as well as hybrid forms	
• Their own developing identity within a world of cultural diversity	
• The role of arts and culture as a way to both view and shape the world	
• The importance of aesthetic factors in daily life	

[1] Painting, photography, film, sculpture, music, literature, theatre, dance, opera, crafts, design, architecture…

Core skills *Students should be able to*	**Where in the curriculum?**
• Express and interpret figurative and abstract ideas, experiences and emotions with empathy in a range of arts and other cultural forms	
• Enjoy/ appreciate works of art	
• Express themselves through different media - using/improving one´s innate capacities	
• Identify and realise opportunities for personal, social or commercial value through the arts and other cultural forms	
• Engage in creative processes, both as an individual and collectively	
Attitudes *Students value*	**Where in the curriculum?**
• Participating in cultural experiences	
• Diversity of cultural expression	
• An ethical and responsible approach to intellectual and cultural ownership	
• Being curious about the world and imagining new possibilities	
• Artistic self-expression and participation in cultural life	

V. Supporting the development of key competences

While ensuring that the key competences are present in the curriculum, and in assessment practices, contributes significantly to their development and to learners' experience of them, they also need to be supported in other ways. In support of competence-oriented education, training and learning in lifelong learning contexts, three challenges have been identified: the use of a variety of learning approaches and contexts; support for teachers and other educational staff; and assessment and validation of competence development (European Commission, 2018b). Therefore, all of these areas need to considered and supported if learners are to develop the competences.

Competences will not be developed by teaching about them—learners need to experience them. Key competences can only be brought alive for learners in schools and classrooms, or in other rich learning environments such as outdoor spaces, communities, workplaces or virtual worlds. There are a number of ways that the further development of the key competences can be supported in the European Schools.

Overview of the curriculum

It is important that the coverage of the key competences is comprehensive and balanced in the curriculum of the European Schools. The key competences can be integrated in teaching and learning across all subjects at all levels. Some aspects of the key competences will be more relevant to certain subjects and certain areas within subjects. The suggestions in Chapter 3 will be further considered with stakeholders and other suggestions will be welcomed.

Key competences in new and revised syllabi

During the process of syllabus provision, every effort will be made to enhance the key competences in each subject area. They will be reflected in the learning objectives of the syllabus and there will be reference to particular competences, or aspects of them, throughout the syllabus. This will be part of the usual review process for syllabi and the quality assurance procedure that follows all syllabus development. Changes will be made to the introduction to all syllabi to reflect the changes to the European Reference Framework of Key Competences (2018). Syllabi will encourage a variety of teaching and learning approaches and strategies, including differentiated teaching methods, and a wide range of learning resources including

digital tools. Assessment practices will be based on the syllabi and will support the development of the competences.

School planning

Implementing key competences in schools involves not only specifying them in the curriculum, but also developing appropriate structures and learning environments in the school. As many of the competences are cross-curricular, a whole-school approach to planning and implementing works best. The support of school leadership is central to this work. Discussions among school staffs as part of a planning process might focus on:

- How well is the school supporting the key competences already: what are our strengths? What are our areas for improvement? How can we improve?
- Sharing pedagogical approaches and exploring new ones
- Changes to the learning environment, for example classroom layout, spaces for individual as well as collaborative learning
- Potential for cross-curricular approaches
- Potential for the development of key competences through extra-curricular activities
- Opportunities to reflect on and discuss progress.

These are a few suggestions as starting points, but school staffs will undoubtedly have other areas that they believe would be worth focusing on in their schools.

Schools might also engage with their students around the development of the key competences in a similar way, addressing many of the same questions. Students provide a rich resource of ideas around how the key competences can be strengthened.

Classroom planning

Teachers can plan for how they will integrate aspects of the key competences into their classroom practice by reflecting on the links between their subjects and the knowledge, skills and attitudes that make up the key competences. The tables in Chapter 4 should prove useful in this respect, especially for annual planning. Blank templates are provided (Appendix 2) to aid teachers for short-term planning. Teachers in other systems have found that when they integrate the key competences into their planning and teaching, the dynamic in their classroom changes and students become more engaged in their learning.

Teaching and learning

The teaching and learning environment in schools has much to contribute to competence development. It is therefore important to look at school and classroom spaces to see if they facilitate active learning. Typically, these environments allow for open-ended problems and challenges to be solved through debate, experimentation, exploration and creativity. Well supported project-based learning is also very competence based and can support creative collaboration between learners in the classroom or with others in other schools or settings.

Many teachers are already employing active learning approaches in their classrooms and this supports the development of key competences. Some approaches that work well in developing key competences include:

- learning through involvement in active, authentic, collaborative tasks
- cross-curricular approaches where learners experience contexts that combine a few subject areas
- a combination of individual (autonomous and self-managed) and collaborative learning opportunities
- a combination of learner-centred and teacher-led approaches
- learning experiences inside and outside school
- relevant use of digital resources and virtual learning platforms
- whole school approach to wellbeing supporting learners' social and emotional development (KeyCoNet, 2014).

Teachers need to be supported to develop these new methods through continuous learning and peer-to-peer support (KeyCoNet, 2014).

Key competences are important for all learners. Differentiation in the planning and execution of teaching and learning for all children in all classes supports the development of key competences by taking account of individual differences in learning style, interest, motivation and aptitude, and reflecting these differences in the classroom. Where support structures for learners with special educational needs are required, it is important that these support the development and assessment of the key competences.

Assessment

The integration of key competences into the curriculum and into teaching and learning will necessitate some changes in approaches to assessment. As learners are more likely to be at the centre of their learning when there is a focus on competences, it follows that they need to

be more involved in the assessment also. Formative assessment is important so that learners can gather evidence of their learning during the learning process, can receive feedback on this evidence and then adjust their learning accordingly, in consultation with their teachers. This type of assessment also allows for the assessment of a broad range of knowledge and skills and supports students working collaboratively with their peers.

Of course, there is always a place for summative assessment in the learning process, both in the classroom and as part of examinations at key points in the learning process. It is important that new approaches used to develop key competences are reflected in the assessment approaches taken in these types of assessments. The New Marking System for use in the secondary cycle in the European Schools supports the assessment of key competences.

It may also be possible in the future to consider evaluating students' progress in the competences.

Support for teachers

Over the past few years the European Schools have been working on a sound continuous professional development policy (CPD) for all teachers. The integration of the eight key competences will be a feature of any future CPD.

Schools are also encouraged to facilitate opportunities for networking and collaboration between teachers within the school, in order to share practice and try out new approaches to planning and teaching and learning. These collaborations can work very well across sections, as well as within. In addition, opportunities for teachers to collaborate between schools might be explored. The introduction of *Sharepoint* across the system will help to facilitate teachers in collaborating with each other on these areas of their work.

Evaluation

'Quality teaching in European Schools', the European Schools document on quality education, continuous professional development and school and teacher evaluation, sets out a harmonised approach to evaluation across the system. Some adjustments will be made to the booklet and inspection toolkit to reflect the emphasis on key competences. A competence-based approach will also be strengthened in the Whole School Inspection documents and forms.

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Appendix 1: Glossary

Attainment descriptors	A set of generic statements, which describe levels of attainment in respect of a given set of competences or learning objectives. Attainment descriptors relate to the marking scale used in the European schools. Attainment descriptors are used for the planning of teaching, learning and assessment.
Competence	Competences are defined as a combination of knowledge, skills and attitudes, where: a) knowledge is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject; b) skills are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results; c) attitudes describe the disposition and mind-sets to act or react to ideas, persons or situations.
Curriculum	An overall programme for a cycle of studies.
Eight Key Competences for Lifelong Learning	The European Council adopted a recommendation on Eight Key Competences for Lifelong Learning on 22 May 2018. The eight key competences are: Literacy competence; Multilingual competence; Mathematical competence and competence in science, technology and engineering; Digital competence; Personal, social and learning to learn competence; Citizenship competence; Entrepreneurship competence; Cultural awareness and expression competence. This recommendation replaces the previous reference framework of 2006.

European Reference Framework	The European Reference Framework Defines and identifies the key competences necessary for personal fulfilment, active citizenship, social cohesion and employability in a knowledge society and provides a European level reference tool for policy makers, education providers, employers, and learners themselves to facilitate national and European level efforts towards commonly agreed objectives.
Evaluation	Evaluation refers to the harmonised approach to teacher evaluation for the European Schools, in line with the Teaching Standards. The outcome of the evaluations supports the dialogue between teachers, management and inspectors in a way that each party can make a meaningful contribution to a successful education process which works for the children, the teacher, the school, the European Schools.
Key competences	Key competences are those which all individuals need for personal fulfilment and development, employability, social inclusion, sustainable lifestyle, successful life in peaceful societies, health conscious life management and active citizenship. They are developed in a lifelong learning perspective, from early childhood throughout adult life, and through formal, non-formal and informal learning in all contexts, including family, school, workplace, neighbourhood and other communities.
New Marking System	A New Marking System for use at secondary in the European Schools, introduced from September 2018.
STEM competences	Science, Technology, Engineering and Mathematics competences.

Transversal or Subject related project	A project that would aim to include all key competences or the five key competences not covered by different subjects, including Digital competence, Personal, social and learning to learn (portfolio), Civic competence, Entrepreneurship competence and Cultural awareness and expression. The project could cross a number of subject areas or be based within one subject.

Appendix 2: Key competence templates

These templates of each of the eight key competences can be used as a planning tool by curriculum developers, by schools for whole-school planning and consulting with students, or by teachers for annual and classroom planning. They are most useful when used as a tool for reflection and discussion by whole school staffs or teams when planning the school curriculum, or perhaps an extra-curricular programme for the school.

Subject teachers may find them useful to reflect on when planning a programme of work, to consider how they might incorporate the key competences into their teaching and learning activities.

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Key Competences for Lifelong Learning in the European Schools

School and classroom planning templates

I. Key Competences for Lifelong Learning

The European Reference Framework of Key Competences (2018) sets the context for the development of key competences for lifelong learning. This new framework replaces the original framework first introduced in 2006. It points to the need for European citizens to develop a wide range of key competences in order to adapt to a rapidly changing and highly interconnected world and to be prepared for new challenges confronting Europe and the wider world. Learners need to develop their skills and competences throughout their lives, for their personal fulfillment, so that they can actively engage with the society in which they live and to ensure that they are prepared for a constantly changing world of work.

A Framework, outlining the approach to Key Competences for Lifelong Learning in the European Schools is under development. These templates set out the eight new key competences in a series of tables, presenting the knowledge, skills and attitudes of each one in a way that teachers and other education professionals can use them as part of their school and classroom planning.

Eight key competences

Competences are defined by the European Commission as a combination of knowledge, skills and attitudes appropriate to the context, and where:

> *a) knowledge is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject;*
>
> *b) skills are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results;*
>
> *c) attitudes describe the disposition and mind-sets to act or react to ideas, persons or situations.*

The Reference Framework sets out eight key competences:

1) Literacy competence;
2) Multilingual competence;
3) Mathematical competence and competence in science, technology and engineering;
4) Digital competence;
5) Personal, social and learning to learn competence;
6) Civic competence;
7) Entrepreneurship competence;
8) Cultural awareness and expression competence.

The key competences are all considered equally important, because each of them can contribute to a successful life in a knowledge society. The competences overlap and interlock: aspects essential to one domain will support competence in another. How the competences are presented and integrated into the curriculum, and in teaching and learning in schools, depends on the approach taken in different contexts.

Using the templates

These templates, of each of the eight key competences, can be used as a planning tool by curriculum developers; by schools for whole-school planning; or by teachers for annual and classroom planning. They are most useful when used as a tool for reflection and discussion by whole school staffs or teams when planning the school curriculum, or perhaps an extra-curricular programme for the school.

Subject teachers may find them useful to reflect on when planning a programme of work, to consider how they might incorporate the key competences into their teaching and learning activities and assessment practice.

Some questions to use when using the templates as a planning tool

It is important to be familiar with the essential knowledge, core skills and attitudes set out in the templates when discussing the following prompt questions. These questions can be used as part of planning meetings or as prompt questions for individual teachers reflecting on their annual or short-term planning. Ideas for how the competences can be developed through a programme, subject or project can be recorded on the templates for future use or for sharing with others. The templates are easier to use in electronic format in order to allow for cutting and pasting and expanding the relevant tables. This also facilitates their sharing with others.

- Which of the competences fits best with our programme/subject/project?
- What aspects of those competences can we incorporate into our annual/lesson/project plans?
- Looking at the descriptors of the Essential knowledge, Core skills and Attitudes for the relevant competences, what teaching and learning and assessment approaches can we incorporate to support students to develop these competences?
- Are there ways that we can bring a number of these aspects of the competences together to enrich students learning? For example, are there aspects of the Entrepreneurship competence, The Personal, Social and Learning to Learn Competence or the Digital Competence that could be incorporated into your subject or project planning?
- When thinking about assessment approaches that you will take, what assessment approaches could you take that will strengthen to competences that you are focusing on?

Literacy competence

Literacy is the ability to identify, understand, express, create and interpret concepts, feelings, facts and opinions in both oral and written form, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to communicate and connect effectively with others in an appropriate and creative way. Development of literacy forms the basis for further learning and further linguistic interaction. Depending on the context, literacy competence can be developed in the mother tongue, the language of schooling and/or the official language in a country or region.

Essential Knowledge *Students know about*	**Where in our school/my classroom?**
• A broad range of vocabulary	
• Functional grammar	
• The functions of language	
• The main types of verbal interaction	
• A range of literary and non-literary texts	
• Different styles and registers of language	
• How language and culture vary in different contexts	
Core skills *Students should be able to*	**Where in our school/my classroom?**

• Communicate as a listener, speaker, reader and writer, in a variety of situations	
• Monitor and adapt their own communication to the requirements of the situation	
• Use and distinguish different types of texts, including digital texts	
• Search for, collect and process information and to use aids	
• Formulate and express their oral and written arguments in a convincing way appropriate to the context	
Attitudes *Students value*	**Where in our school/my classroom?**
• A disposition to critical and constructive dialogue	
• Aesthetic qualities and are willing to strive for them	
• Interacting with others	
• The impact of language on others	
• Using language in a positive and socially responsible manner	

Multilingual competence

This competence defines the ability to use different languages appropriately and effectively for communication. It broadly shares the main skill dimensions of communication of literacy: it is based on the ability to understand, express, and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts according to one's wants or needs. As appropriate, it can include maintaining and further developing mother tongue competences. A learner's level of proficiency will vary between the four dimensions and between the different languages.

Essential Knowledge *Students know about*	**Where in our school/my classroom?**
• An appropriate range of vocabulary	
• Functional grammar	
• The main types of verbal interaction	
• Different styles and registers of language	
• How language and culture vary in different contexts	
• The role of language in their own and other cultures	
• Societal conventions	

Core skills *Students should be able to*	**Where in our school/my classroom?**
• Understand spoken messages in the foreign language	
• Initiate, sustain, and conclude conversations	
• Read, understand and produce texts, including digital texts, appropriate to their needs	
• Use tools appropriately and engage with languages formally, non-formally and informally	
• Monitor and adapt their own communication to the requirements of the situation	
• Appreciate how cultural differences influence language use and communication	
Attitudes *Students value*	**Where in our school/my classroom?**
• Learning new languages	
• Cultural diversity	
• The role of languages in learning about their own and other cultures	
• Intercultural communication	
• Respect for each person's individual linguistic profile	
• Respect for the mother tongue of persons belonging to minority groups and those with a migrant background	

Mathematical competence and competence in science, technology and engineering

Mathematical competence is the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations. Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentations (formulas, models, constructs, graphs and charts).

Competence in science refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world, in order to identify questions and to draw evidence-based conclusions. Competences in technology and engineering are applications of that knowledge and methodology in response to perceived human wants or needs. Competence in science, technology and engineering involves an understanding of the changes caused by human activity and responsibility as an individual citizen.

Essential Knowledge Students know about	**Where in our school/my classroom?**
• Numbers, measures and structures	
• Basic operations and basic mathematical presentations	
• Mathematical terms and concepts	
• An awareness of the questions to which mathematics can offer answers	
• Basic principles of the natural world	
• Fundamental scientific concepts, theories, principles and methods	
• Science as a process for the investigation of nature	
• Technology and technological products and processes	

• The impact of science, technology, engineering and human activity in general on the natural world	
Core skills Students should be able to	**Where in our school/my classroom?**
• Apply basic mathematical principles and processes in everyday contexts at home and work, including financial skills	
• Follow and assess chains of arguments	
• To reason mathematically	
• Understand mathematical proof	
• Communicate in mathematical language	
• Use appropriate aids, including statistical data and graphs	
• Use and handle technological tools and machines	
• Investigate nature through controlled experiments	
• Use and handle scientific data to achieve a goal or to reach an evidence-based decision or conclusion	
• Be able to recognise the essential features of scientific inquiry	
Attitudes Students value	**Where in our school/my classroom?**
• The respect for truth	
• The willingness to look for reasons	

• The willingness to assess validity of reasons	
• Critical appreciation and curiosity	
• Interest in ethical issues and respect for both safety and sustainability, in particular as regards scientific and technological progress in relation to oneself, family, community and global issues	

Digital competence

Digital competence involves the confident, critical and responsive use of, and engagement with digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, digital content creation (including programming), safety, (including digital well-being and competences relating to cyber security), and problem solving.

Essential Knowledge *Students know about*	**Where in our school/my classroom?**
• How digital technologies can support communication, creativity and innovation	
• The opportunities, limitations, effects and risks associated with digital technologies	
• The general principles, mechanisms and logic underlying evolving digital technologies	
• The basic use and function of different devices, software and networks	
• Validity, reliability and impact of information and data made available by digital means	
• Legal and ethical principles involved in engaging with digital technologies	

Core skills *Students should be able to*	**Where in our school/my classroom?**
• Access, use, filter, process and evaluate digital content	
• Create, program and share digital content	
• Manage and protect information, content, data and digital identities	
• Use digital tools to produce, present and understand complex information	

• Recognise and effectively engage with
  ○ software and devices
  ○ artificial intelligence and robots	

• Use digital technology to support their creativity and to collaborate with others towards personal, social or commercial goals	
Attitudes *Students value*	**Where in our school/my classroom?**
• Applying a reflective and critical thinking approach	
• Being curious, open-minded and forward looking	
• Using an ethical, safe and responsible approach to the use of digital content and tools	
• Engaging in communities and networks for cultural, social and/or professional purposes	

Personal, social and learning to learn competence

Personal, social and learning to learn competence is the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one's own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, support one's physical and emotional well-being, empathise and manage conflict.

Essential knowledge *Students know about*	**Where in our school/my classroom?**
• The components of a healthy mind, body and lifestyle	
• Codes of conduct and rules of communication for social participation	
• Inclusion and equality	
• The learning process and learning strategies	
• Their own competence development needs and various ways to develop competences	
• How to search for the education, training and career opportunities and guidance or support available	
• Management of time and information	
• Motivation, confidence and self-discipline	
Core skills *Students should be able to*	**Where in our school/my classroom?**
• Identify their own capacities, focus and set goals	
• Motivate themselves	

• Deal with complexity	
• Critically reflect and make decisions	
• Learn and work autonomously and collaboratively	
• Organise and persevere with their own learning, and evaluate and share it	
• Self-assess	
• Develop resilience and confidence to pursue and succeed at learning throughout their lives	
• Seek support when appropriate and effectively manage their learning, their career and their social interactions	
• Cope with uncertainty and stress	
• Communicate constructively and collaborate in teams	
• Negotiate effectively and express and understand different viewpoints	
• Empathise with others, show tolerance and create confidence	
Attitudes *Students value*	**Where in our school/my classroom?**
• Looking after their personal, social and physical well-being	
• Learning and working collaboratively	
• Problem solving	
• Being assertive	
• Integrity	
• Intercultural awareness and communication	
• Diversity	
• Showing respect to others, overcoming prejudice and compromising	
• Seeking opportunities to learn and develop in a variety of life contexts	

Civic competence

Civic competence is the ability to act as responsible citizens and to fully participate in civic and social life, based on understanding of social, economic and political concepts and structures, as well as global concepts and sustainability.

Essential Knowledge *Students know about*	**Where in our school/my classroom?**
• The concepts of democracy, justice and equality	
• Citizenship and civil rights, including the Charter of Fundamental Rights of the European Union and international declarations	
• Contemporary events	
• The main events and trends in national, European and world history	
• Aims, values and policies of social and political movements	
• European integration	
• Climate and demographic change at global level and their underlying causes	
• Diversity and cultural identities in Europe, and the world	
• The European common values (Article 2 of the Treaty on the European Union and the Charter of Fundamental Rights of the European Union)	
• Multi-cultural and sociology-economic dimensions of European societies, and how national cultural identity contribute to the European identity	

Core skills *Students should be able to*	**Where in our school/my classroom?**
• Engage effectively with others in the public domain	
• Display solidarity and show interest in solving problems affecting the local and wider community	
• Reflect critically and creatively on community activities	
• Participate constructively in community activities	
• Participate in decision-making at local, national and European levels, in particular through voting	
• Access, have a critical understanding of, and interact with both traditional and new forms of media	
Attitudes *Students value*	**Where in our school/my classroom?**
• Human rights and equality	
• Being responsible and constructive	
• Belonging to one's own locality, country, the EU and Europe and the world	
• Democratic principles	
• Participating in democratic decision-making	
• Social and cultural diversity	
• Gender equality and social cohesion	
• Sustainable development	
• The values and privacy of others	
• Intercultural communication	
• Being responsible for the environment	

Entrepreneurship competence

Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity critical thinking, and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or commercial value.

Essential Knowledge *Students know about*	**Where in our school/my classroom?**
• Different contexts and opportunities for turning ideas into action in personal, social and professional activities and understand how these arise	
• Planning and managing of projects, including processes and resources	
• How the economy works	
• Social and economic opportunities and challenges facing an employer, organisation or society	
• Being financially literate: managing personal finance, savings, investment and borrowing	
• Ethical principles	
• Their own strengths and challenges	
Core skills *Students should be able to*	**Where in our school/my classroom?**
• Use their imagination within creative processes and innovations	
• Think strategically and problem solve	

• Manage projects: plan, organise, manage, lead and delegate	
• Make financial decisions relating to cost and value and estimate the cost of turning an idea into a value-creating activity	
• Plan, put in place and evaluate financial decisions	
• Cope with uncertainty, ambiguity and risk as part of making informed decisions	
• Work autonomously	
• Collaborate with others	
• Identify their own strengths and limitations	
Attitudes *Students value*	**Where in our school/my classroom?**
• Taking initiative	
• Being proactive and forward-looking	
• Courage and perseverance in achieving objectives	
• Being motivated and determined	
• Others' ideas	
• Empathy and taking care of people and the world	
• Being responsible and ethical	

Cultural awareness and expression competence

Competence in cultural awareness and expression involves having an understanding of, and respect for, how ideas and meaning are creatively expressed and communicated in different cultures and through a range of arts and other cultural forms. It involves being engaged in understanding, developing and expressing one's own ideas and sense of place or role in society in a variety of ways and contexts.

Essential Knowledge *Students know about*	**Where in our school/my classroom?**
• Local, national, European and global cultures and expressions, including their languages, heritage and traditions, and cultural works of art[2]	
• How these cultural expressions can influence the ideas of the individual and others	
• The different ways of communicating ideas between creator, participant and audience within written, printed and digital texts, theatre, film, dance, games, art and design, music rituals, and architecture, as well as hybrid forms	
• Their own developing identity within a world of cultural diversity	
• The role of arts and culture as a way to both view and shape the world	

[2] Painting, photography, film, sculpture, music, literature, theatre, dance, opera, crafts, design, architecture,…

• The importance of aesthetic factors in daily life	
Core skills *Students should be able to*	**Where in our school/my classroom?**
• Express and interpret figurative and abstract ideas, experiences and emotions with empathy in a range of arts and other cultural forms	
• Enjoy/ appreciate works of art	
• Express themselves through different media - using/improving one´s innate capacities	
• Identify and realise opportunities for personal, social or commercial value through the arts and other cultural forms	
• Engage in creative processes, both as an individual and collectively	
Attitudes *Students value*	**Where in our school/my classroom?**
• Participating in cultural experiences	
• Diversity of cultural expression	
• An ethical and responsible approach to intellectual and cultural ownership	
• Being curious about the world and imagining new possibilities	
• Artistic self-expression and participation in cultural life	