

Environmental Education in the 2022 National Curriculum of Korea

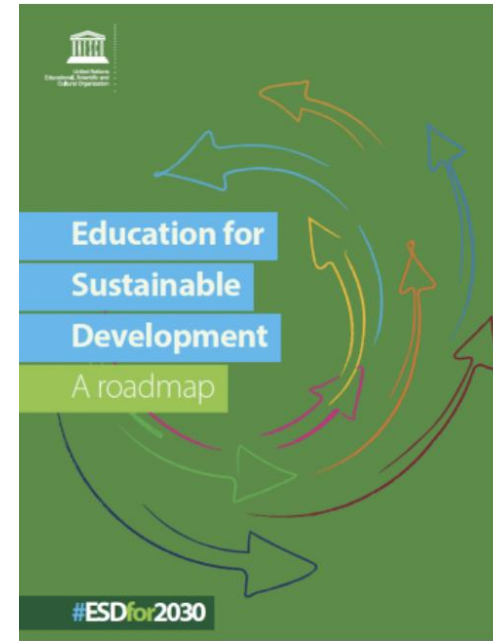
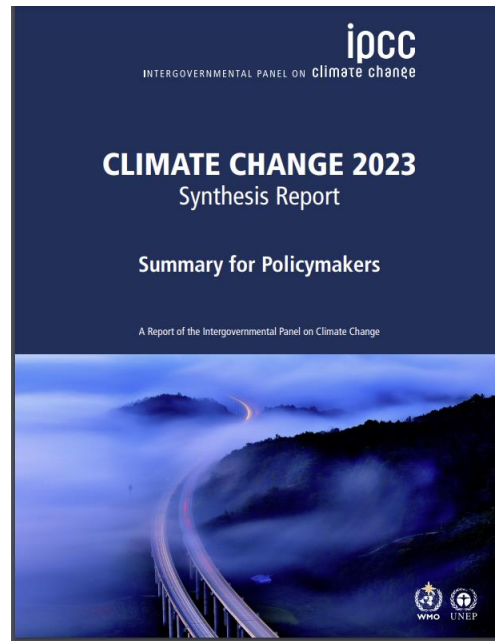
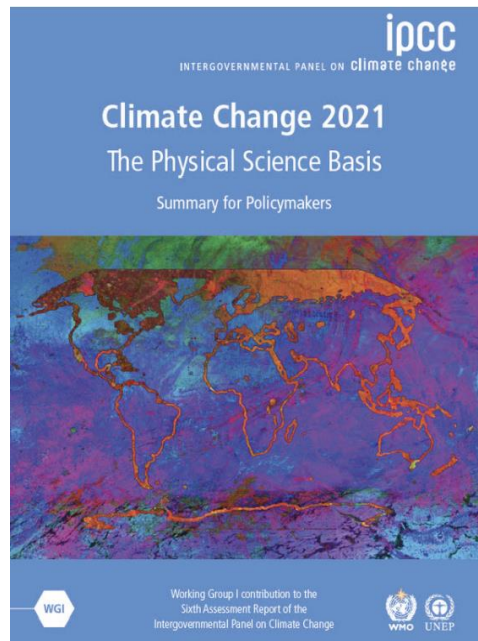


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Climate Crisis: A Problem for the Present Generation, Not the Future Generation



- IPCC (2021), IPCC (2023), UNESCO (2020), OECD(2019).

Recent legal and institutional changes for EE/ESD in Korea

- **Framework Act on Education**

- **Article 22-2 (Climate change environment education)** In order to respond to climate change, etc. occurring worldwide, it is obligatory for the state and local governments to establish and implement necessary policies so that all citizens can receive ecological transformation education. [2021.9.24. This article is newly established]

- **Framework Act on Carbon Neutrality and Green Growth to Respond to the Climate Crisis** (Enacted on September 24, 2021)

- Article 67 (Support for Green Life Movement, Education and Promotion)

- **Framework Act on Sustainable Development** (Enacted on January 4, 2022)

- Article 28 (Education and Public Relations on Sustainable Development)

Recent legal and institutional changes for EE/ESD in Korea

- **Act on the Vitalization and Support of Environmental Education**
(Abbreviation: Environmental Education Act) (partially revised on June 10, 2022)
 - Article 10 (Support for Environmental Education in Schools, etc.)
 - Article 10-2 (Implementation of School Environment Education)
[This article is newly established on June 10, 2022][Enforcement date: March 1, 2023]
 - Article 11 (Designation of Excellent Environmental Education Schools)
 - Article 12 (Support for Teachers, etc.)
- **Ordinance on Environmental Education in Schools by 17 Municipal and Provincial Offices of Education (2015-2022)**
- **Basic Plan for Environmental Education in Schools by 17 Municipal and Provincial Offices of Education (2022-2023)**

Basic Plan for Environmental Education in Schools

by 17 Municipal and Provincial Offices of Education (2022-2023)

Categories	Contents	Institutions
Education operation support (budget support, curriculum development /provision, etc.)	<ul style="list-style-type: none"> • Operation of various research and pilot schools (ecological conversion education research school, carbon neutral pilot school, school forest practice school, etc.) • Operational support for various environmental education programs • Development and dissemination of teaching materials for convergence classes in connection with the curriculum • Support for activities and club activities for ecological exploration 	17 municipal and provincial offices of education
Capacity building (training and consulting, etc.)	<ul style="list-style-type: none"> • Promotion of capacity building training for school administrators and teachers • Development of training programs and promotion of research • Promotion of capacity building education for parents • Promotion of workshops related to environmental education • Operation of a consulting group related to the operation of environmental education 	Seoul Metropolitan Office of Education and 11 other offices of education
Building systems for collaboration (network, committee, etc)	<ul style="list-style-type: none"> • Operating various councils related to school environmental education • Promotion of activities in connection with organizations related to environmental education 	Seoul Metropolitan Office of Education and 13 other offices of education
Establishment of foundation (creation of facilities, designation of institutions, etc.)	<ul style="list-style-type: none"> • Promotion of campaigns to raise eco-friendly awareness • Promotion of environmental education-related events • Operating an online platform related to environment and climate education • Designation and establishment of environmental education operating institutions (centers, education centers, etc.) 	Seoul Metropolitan Office of Education and 8 other offices of education

Directions of the 2022 National Curriculum

Directions for 2022 National Curriculum Revision (MoE, 2021.11.24)

Background

- It was promoted to innovate Korean education system so that Koreans can grow into **'leading people with inclusiveness and creativity'** by **cultivating basic literacy and capacity** to actively respond to future society, such as digital transformation, climate change, and school age population decline.
- **"A better future, education for all"** was emphasized.
- Under the vision of **'Curriculum with the People'**, a wide public opinion collection system and a cooperative management system (governance) were established, and the main points of the general discussion were developed and opinions were collected.

Key comments from the field

- **(Students)** want to learn about artificial intelligence at school, use computers well in relation to information is seen as a future response, need to develop courses that reflect individual interests and interests and courses to prepare for careers
- **(Parents)** need sustainable education such as strengthening systematic career and school education, empathy and mutual cooperation, and ecological transformation.
- **(Teachers)** want discussions, cooperative classes, real life and experiential classes, etc., expansion of autonomy in the curriculum, etc.
- **(Experts)** emphasized the need to respond to future changes, the importance of digital literacy, and the need to cultivate learner initiative and community values.

Directions for 2022 National Curriculum Revision (MoE, 2021.11.24)

The main direction of revision

- Develop a curriculum that strengthens the capacity to respond to future changes and the cultivation of basic knowledge.
 - Reflect ecological transformation education and democratic citizenship education for a sustainable society in all subjects.
 - Strengthen basic digital knowledge and expand information education as core competencies for future generations.
 - Strengthen education for all by supporting students with various characteristics, such as underachieved students, students with special needs, and multicultural students.
- Strengthen student-tailored education, such as the high school credit system, that supports the growth of learners.
 - Introduce a career-linked semester for career linkage and school life adaptation during the school level transition period.
 - Restructure the curriculum and expand the right to choose subjects to strengthen students' inquiry capabilities.
 - Implement a high school customized curriculum based on the high school credit system.
 - Vocational high schools restructure specialized subjects and expand the number of credits that students can complete independently.

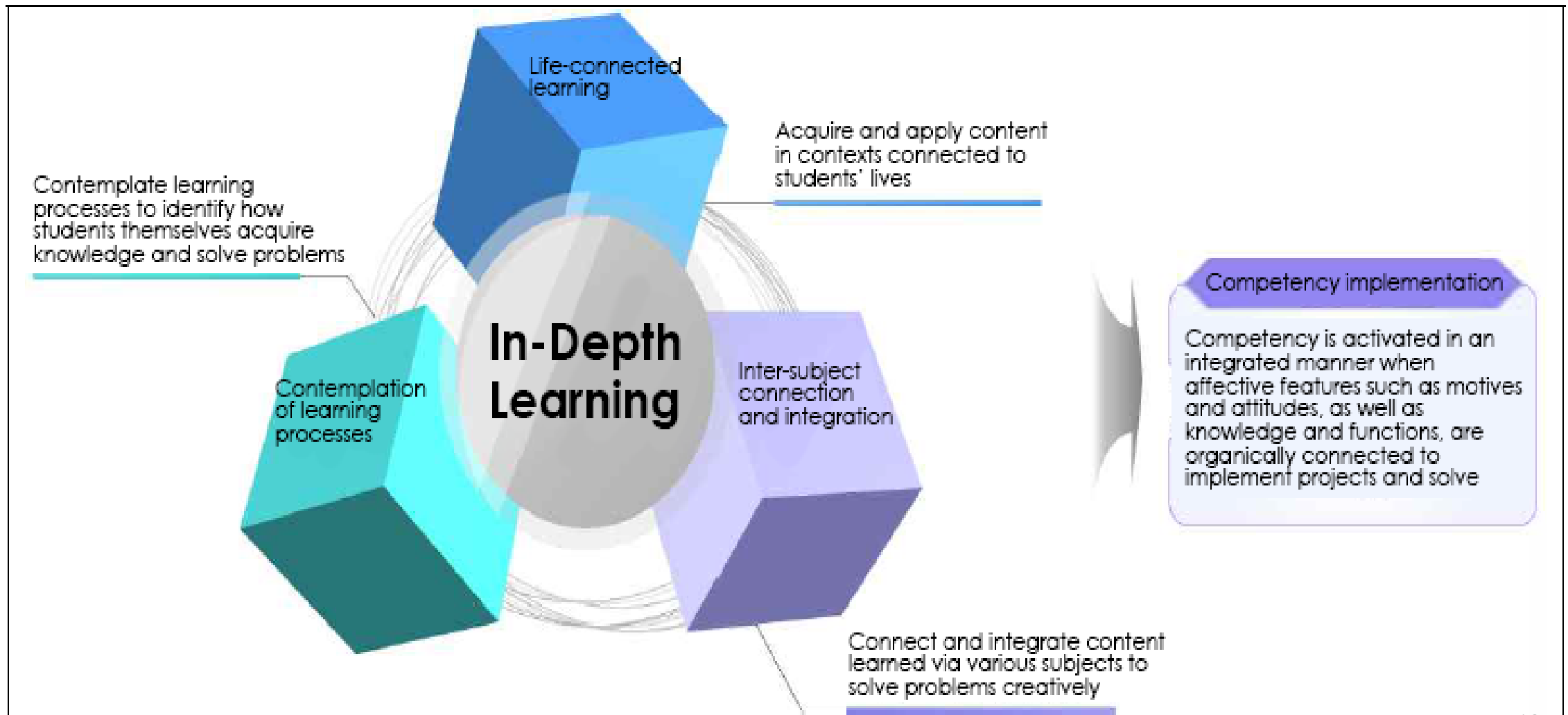
Directions for 2022 National Curriculum Revision (MoE, 2021.11.24)

The main direction of revision

- Strengthen the autonomy of the school curriculum that supports and promotes autonomous innovation in the field.
 - Establish grounds for local curriculum by province and expand curriculum autonomy for the introduction of autonomous school hours, development and operation of various elective courses, etc.
 - Improve the flexibility of elementary and middle school curriculum operation, such as reinforcing play and physical activities in elementary schools and improving management plans for free semesters in middle schools.
- Suggest the direction of curriculum development for in-depth learning in connection with students' lives.
 - Aim to revise the subject curriculum for competency development. Emphasis is placed on in-depth learning, linkage and integration between subjects, learning in connection with life, and reflection on the learning process.
 - Improve teaching, learning, and evaluation by optimizing the amount of learning, cultivating critical thinking, and focusing on inquiry.
 - By the second half of 2022, the subject curriculum for capacity development linked to the general guidelines will be confirmed and announced.

Directions for 2022 National Curriculum Revision (MoE, 2021.11.24)

The main direction of revision



Directions for 2022 National Curriculum Revision (MoE, 2021.11.24)

Contents for Ecological Transformation Education

Areas	Details
Perspectives and attitudes toward the relationship between humans and the environment	The meaning of the environment and the interrelationships of its elements
	Perspectives on the relationship between humans and the environment
	Ecosensitivity and Environmental Responsibility
	Citizens living together in the environment
Exploring issues of global ecosystem and climate change	Exploring the characteristics of the global ecosystem and climate change
	Exploring the connection between ecosystems and human society
	Exploring issues of the climate crisis and environmental and social issues
Practices and Engagement for Ecological Transformation	Exploring and practicing changes in the social system to respond to the climate crisis
	Suggesting and practicing science and technology for a sustainable society
	Engaging and practicing ecological transformation in daily life and lifestyle.

General Guidelines for 2022 National Curriculum (MoE, 2022)

Major contents of General Guidelines

- Revision focus

Based on the educational ideology and human image that Korea's national curriculum has pursued, it focuses on **cultivating core competencies required by the future society** to grow into **leading people with inclusiveness and creativity**

- Human image to pursue

Based on the ideology and educational purpose of Hongik Ingan, it proposed a self-directed person, a creative person, a cultured person, and a person who lives together.

- Core competencies

Self-management competency, knowledge information processing competency, creative thinking competency, aesthetic sensitivity competency, cooperative communication competency, community competency

Characteristics of the 2022 revised curriculum document system (Min, 2022.6.24)

Systematic Table of Curriculum Contents

- Core idea:
As a big idea set at the domain level within the subject, 'a key statement of the contents that can be generalized through learning in the domain while encompassing the domain'
- [Knowledge/Understanding], [Process/Skill], [Value/Attitude]

	Meaning
Knowledge· Understand ing	<ul style="list-style-type: none">• Including the specific contents to be known through subject learning and the contents of understanding them• The content elements, concepts, and principles to be known and understood in the subject area are stated, but the method of presentation can be different for each subject.
Process ·Skill	<ul style="list-style-type: none">• It refers to the process of thinking and inquiry used to acquire knowledge, and procedural knowledge specific to the subject.• A specific ability that enables the understanding and application of knowledge and, as a result of learning, students must be able to do with the subject matter. However, the process/function is not the same as the subject competency.
Value· Attitude	<ul style="list-style-type: none">• It means unique values and attitudes that can be cultivated through curriculum activities.• It refers to the attitudes related to the subject matter acquired in the process of learning the subject and the value acquired by those who have learned and internalized the subject.

Environmental Education in the 2022 National Curriculum

- **Education for environment and sustainable development as one of 10 crosscutting learning themes** including safety and health education, character education, career education, democratic citizenship education, human rights education, multicultural education, unification education, Dokdo education, economic and financial education
- **Ecological Transformation Education** (with digital literacy education and democratic citizenship education) as one of requirements of the country and society integrated into all subjects
- **'Environment' as one of selective subjects**
'Environment' for middle school students 'Environment and Ecology' for high school students
- **'Climate Change and Environmental Ecology'** as one of selective courses in Science
'Climate Change and Sustainable Society' as one of selective courses in the Social Studies

Directions of revision and Overview of the design of the 2022 Environment Curriculum

Direction of revision of the 2022 Environment Curriculum

Direction of revision

- **Connect-Explore-Engage** as a Design Principle for Environment Curriculum
 - To set the design principles for the 2022 revised environmental curriculum, the 2015 revised curriculum revision data (Kwon et al., 2015a, 2015b) and foreign curriculum materials related to environmental education were investigated.
 - Connect-Explore-Engage as a design principle (WDPI, 2018)
 - Connect refers to various levels of connection, such as the connection between the environment and humans, between humans and individuals, between individuals and society, between components of the global ecosystem, and between the global ecosystem and human society. The beginning of environmental education begins with a meeting for this connection, students' understanding, awareness, and affection for the relationship between people and places is enhanced, and students' environmental literacy is enhanced and the sustainability of the community can be pursued.
 - Connect-Explore-Engage is applied to the large areas of environmental subjects, such as environment and human (connect), environmental system (explore), environmental issues and issues (explore), climate crisis and climate action (explore, engage), sustainability and civic engagement (engage).
 - Each area is composed so that these principles can be linked in each area.

Direction of revision of the 2022 Environment Curriculum

Direction of revision

- **Emphasis on complexity** and **integrative approaches**
 - Exploration of the environment and understanding of environmental issues and issues are very complex and include various elements.
 - Environmental subjects should consider various aspects such as environment, society, economy, politics, and culture, and it is necessary to consider all natural science, humanities, social science, and artistic approaches in an integrated manner. In particular, when it comes to real-world issues based on complexity, such as climate change and COVID-19, an integrated approach is key.
 - Continuing the purpose of the 2015 revised environmental curriculum, the 2022 revised environmental curriculum emphasizes the complexity of environmental problems and issues, and takes an integrated approach.

Direction of revision of the 2022 Environment Curriculum

Direction of revision

- Aiming for [Education for Sustainable Development](#)
 - Life and future based on environmental sustainability in environmental education is the ultimate goal of environmental education, and sustainable development education is a key element for this.
 - Environmental sustainability in the real world is closely linked to social and economic sustainability, and personal and social change are essential to realizing a sustainable future through sustainable living.
 - In Education for Sustainable Development 2030 (ESD for 2030), big transformation for a sustainable society and future is emphasized, individual transformation, social transformation, and new The application of technology (new technology) is proposed, and action plans for this are being discussed (UNESCO, 2020).
 - The 2022 revised curriculum was intended to reflect these discussions.

Direction of revision of the 2022 Environment Curriculum

Direction of revision

- Understanding **the climate crisis** and emphasizing **climate action**
 - Addition of 'Climate Crisis and Climate Action' Unit: As climate change has emerged as an important environmental issue that threatens the sustainability of the earth, the Korean government declared 2050 carbon neutrality, and various social, economic, and environmental areas related to climate change Efforts are implementing.
 - Key ideas of 'Climate Crisis and Climate Action': 'Climate change is occurring globally and has a significant impact on Earth's ecosystems and human activities.', 'The climate crisis is caused by human activities, and the impacts and damages appear differently depending on the region and group.', 'To overcome the climate crisis, it is necessary to plan and practice climate action in all areas of society.'
 - In this unit, the contents of climate change and climate crisis, the impact and damage of climate change, the relationship between climate crisis and biodiversity, greenhouse gas emissions and climate crisis, and climate action will be dealt with, and from this, empathy for climate change and human Responsibility, participation in climate action, and commitment to practice

Direction of revision of the 2022 Environment Curriculum

Direction of revision

- Emphasis on competencies including **systems thinking**
- Competencies in the 2015 revised environmental curriculum: environmental sensitivity, environmental community spirit, introspection/insight ability, creative problem-solving ability, communication and conflict resolution ability, and environmental information utilization ability (Ministry of Education, 2015).
- Competencies in the 2022 revised environmental curriculum: setting environmental sensitivity, systems thinking competency, cooperation and community competency, communication and conflict resolution competency, creative problem solving competency, and environmental information utilization competency.
- ‘Systems thinking competency’: A frame of mind that recognizes the environment as a complex unit system and understands the entire system through the interaction of its components. The dynamics and changes of the environmental system are approached structurally and integratedly through systems thinking.

Direction of revision of the 2022 Environment Curriculum

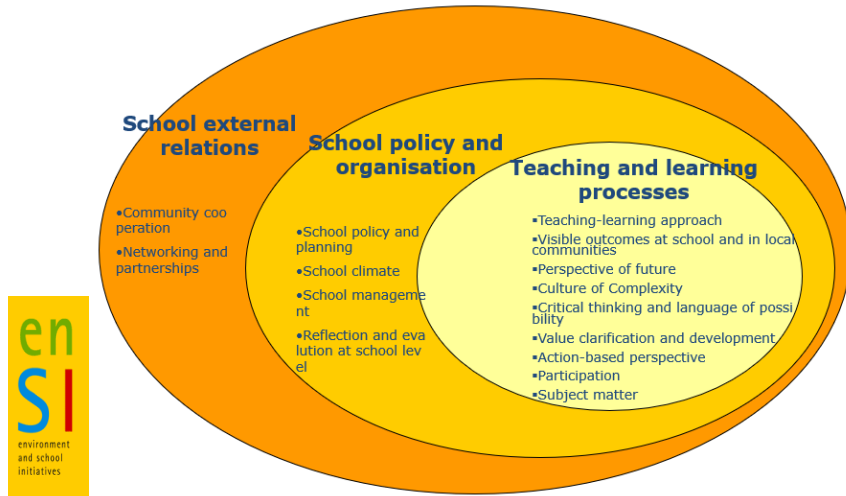
Direction of revision

- Avoidance of duplication of content and optimization of learning contents
- Environmental subjects set as elective subjects at the middle and high school level can raise the possibility of overlapping contents with other school levels, overlapping contents with other subjects at the same school level, and overlapping contents between middle and high schools in the same environment.
- The 2022 revised environment and curriculum seeks to emphasize the environment, unique content, and interdisciplinary approach in middle and high schools, while avoiding duplication of content between school levels and between subjects as much as possible and reducing learning content.
- Efforts were made to avoid duplication of content within the domain. The human-environment domain emphasizes the connection between humans and the environment, and the environmental system domain understands environmental systems at various levels and understands them based on systems thinking. In the field of environmental issues and issues, they are explored through local and global cases and issues. The middle school level deals with environmental issues, and the high school level focuses on analyzing and understanding environmental issues.
- Efforts to be differentiated from 'Climate Change and Environmental Ecology' and 'Climate Change and Sustainable World', which are set as high school elective courses for science and social studies.

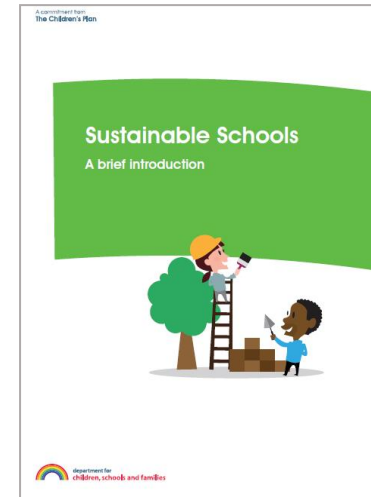
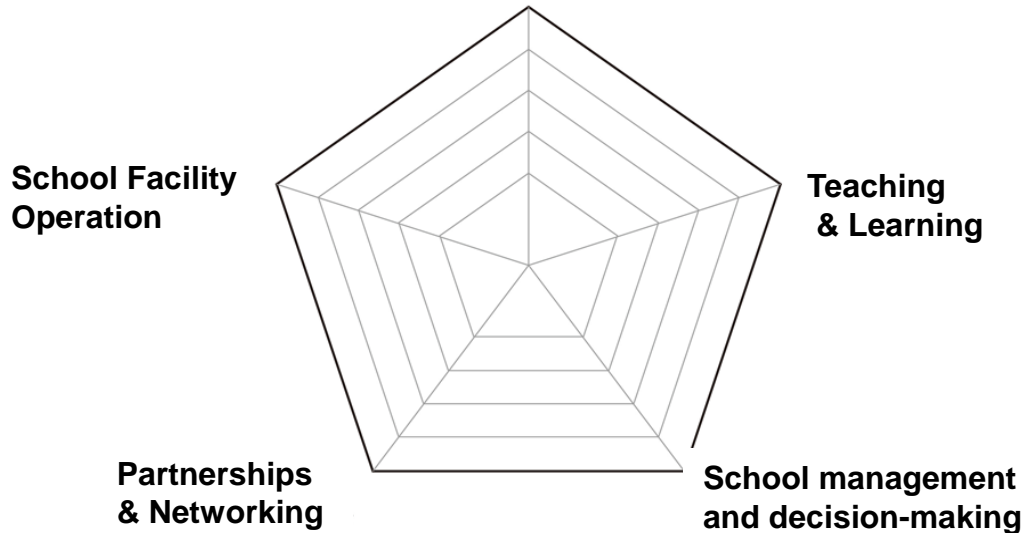
Overview of 2022 Environment Curriculum Design



Whole-School Approach for the real Transformation



Contents of Education



• Source : Breiting *et al.* (2005), Lee & Kim (2016), DCSF(2006).

Thank you ! 감사합니다.