SDGs and school culture in Finland

Anna Maaria Nuutinen

RCE Helsinki Metropolitan

The main values of basic education

Four main values:

- Each student's uniqueness and right to a good education
- The importance of humanity, general knowledge and ability, equality and democracy
- Cultural diversity as richness
- The necessity of a sustainable way of living

(Halinen, 2017)

School culture promotes a sustainable way of living

The goal is to build a school culture that promotes

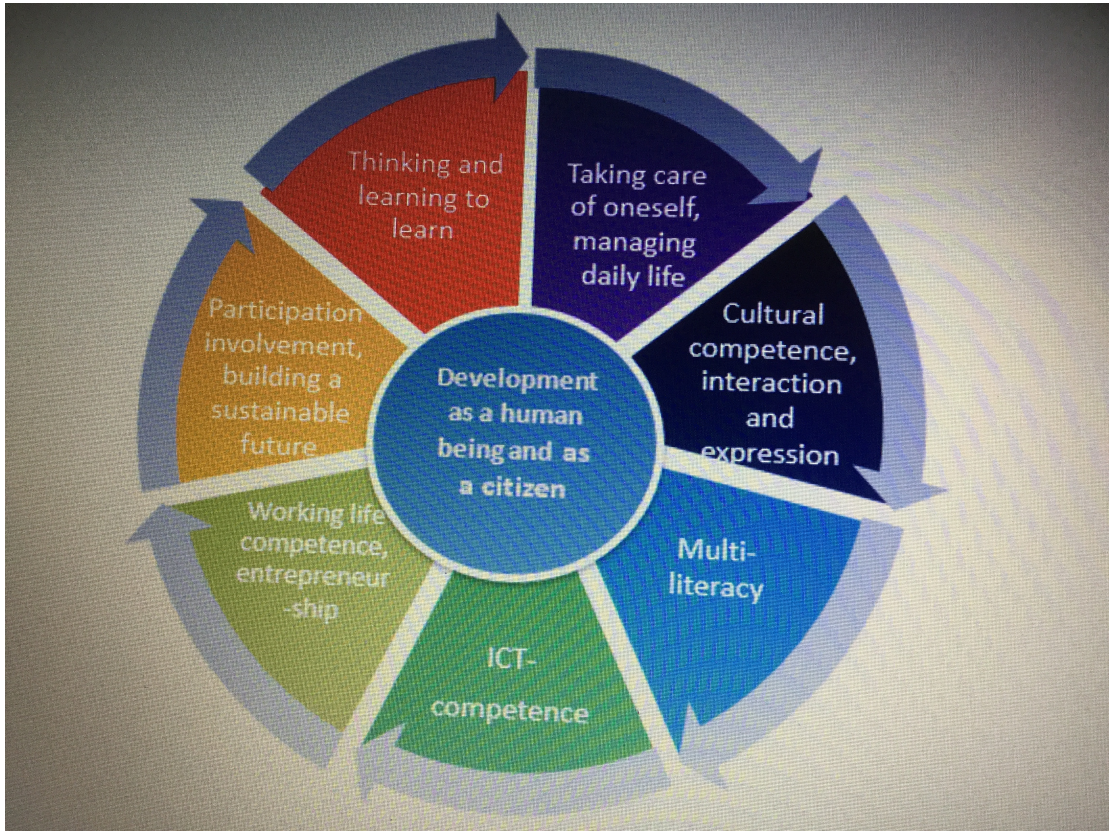
- well-being, social interactions, students' participation, influence and activities in the own school, at home and in society as a whole as well as creation of safe, equitable and friendly learning environments, and encouraging a joy in discovery and learning.
- for economic and ecological sustainability in everyday life, saving energy and water , sorting and recycling waste, reducing consumption, as well as biodiversity protection in natural environment.
- for cultural sustainability, including an understanding of human cultural history, traditions, multiculturalism and issues of fairness and tolerance.

Encounters – for sustainable lifestyle –project at Keinumäki School, Espoo, (Affolter, & al.,2018)

Participation, involvement and building a sustainable future

A changing society demands more
and more transversal competences.
Therefore it is important that each subject
promotes transversal competences:

- knowledge
- skills
- values
- attitudes
- will (to action)



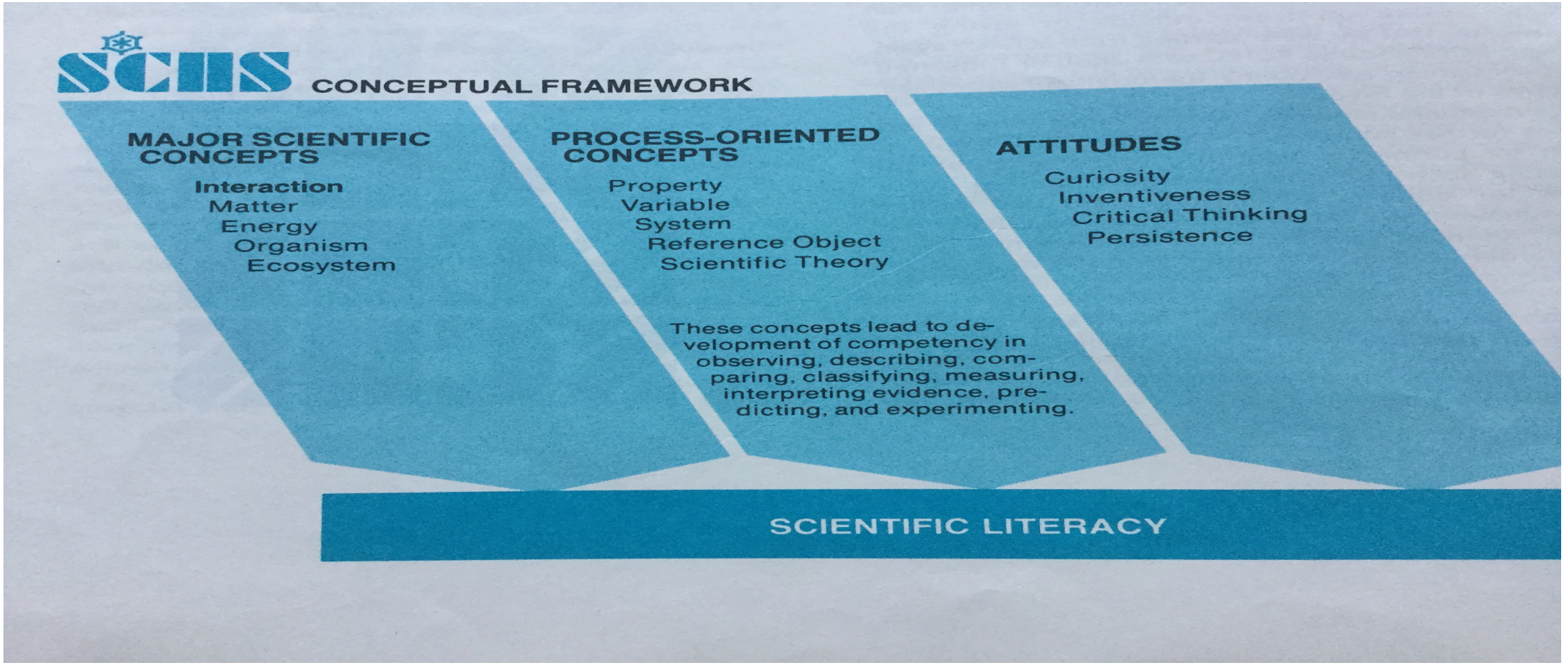
https://www.oph.fi/download/190839_aiming_for_transversal_competences.pdf

SCIS (Science Curriculum Improvement Study)

Basic knowledge, investigate experiences, and attitudes are integrated and balanced

- The SCIS program is intended to affect the ways children think and develop their thinking skills. It is expected to influence how children reason and make decisions about challenges they face as teenagers and adults. Such thinking and decision-making will determine their responses of personal and societal issues: how to care of my health and wellbeing, should I vote for or against the use of coal as an energy source of my community.
- Through investigation, scientists' understanding of nature advances from simple hypotheses to complex theories. At the same way children's thinking advances from the concrete to the abstract as they accumulate experiences and ideas. Children learn more effective techniques for observing and testing nature and becoming scientifically literate (Thier & al.,1978).

In the **SCIS** program basic knowledge, investigate experiences, and attitudes are integrated, balanced and developed through the children's involvement with basic scientific concepts (interaction, matter, energy, organism and ecosystem), process-oriented concepts (property, variable, system, reference object, scientific theory), and challenging problems for investigation.



(Thier & al.,1978).

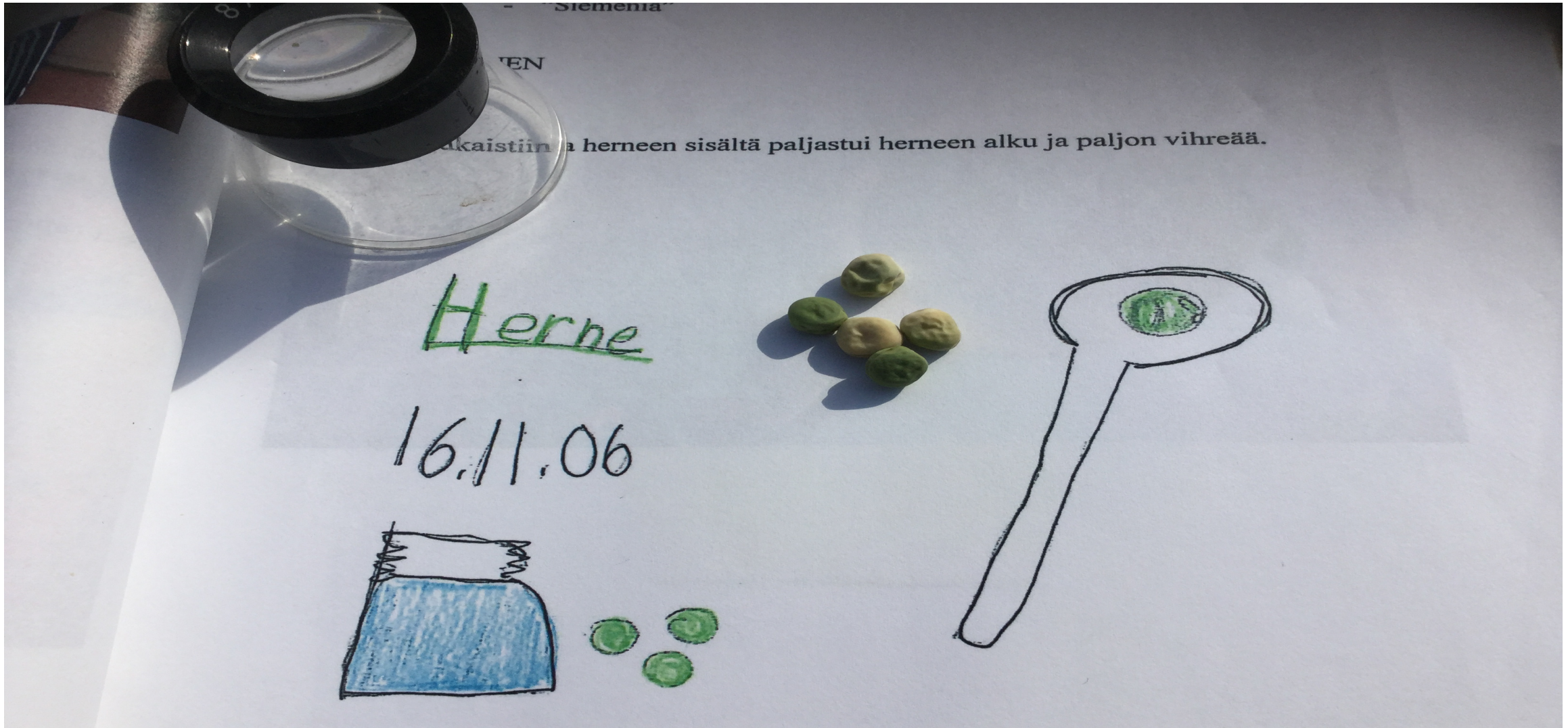
SCIS structure and units

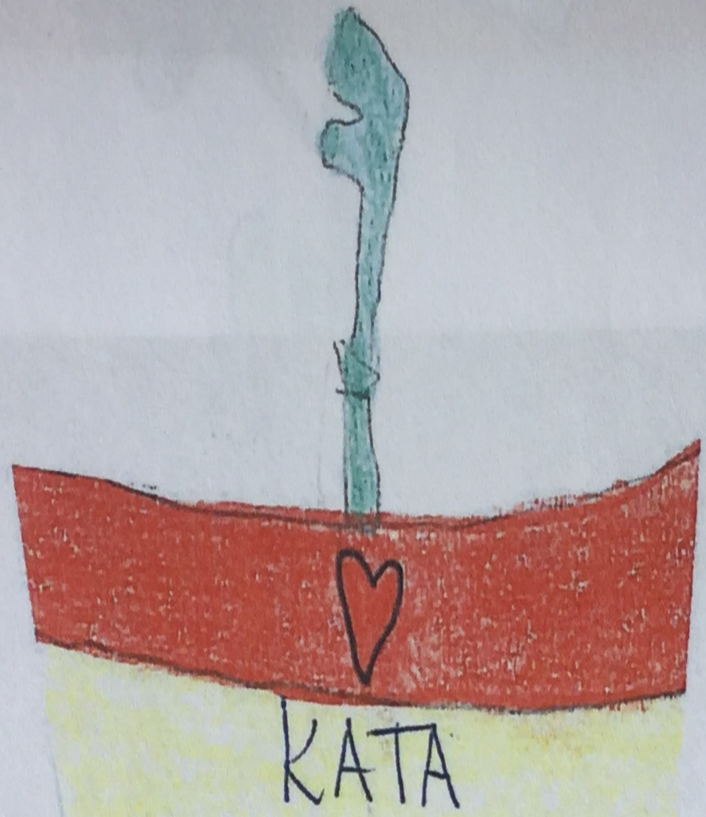
BEGINNINGS for kindergarten and early childhood education

	Life/Earth Science Sequence	Physical/Earth Science Sequence
1	ORGANISMS	MATERIAL OBJECTS
2	LIFE CYCLES	INTERACTION AND SYSTEMS
3	POPULATIONS	SUBSYSTEMS AND VARIABLES
4	ENVIRONMENTS	RELATIVE POSITION AND MOTION
5	COMMUNITIES	ENERGY SOURCES
6	ECOSYSTEMS	SCIENTIFIC THEORIES

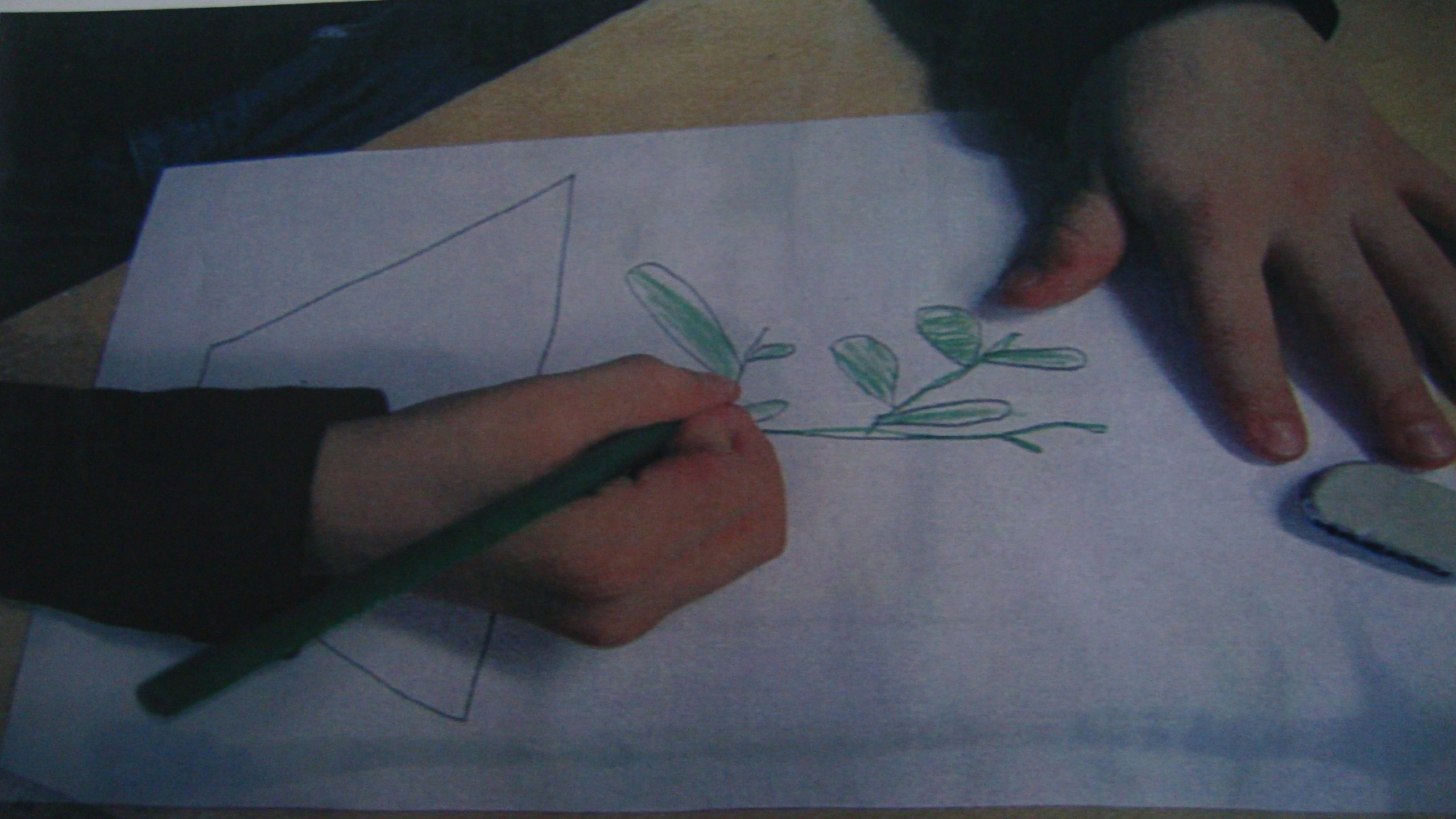
Life/Earth Science Sequence: Life Cycles

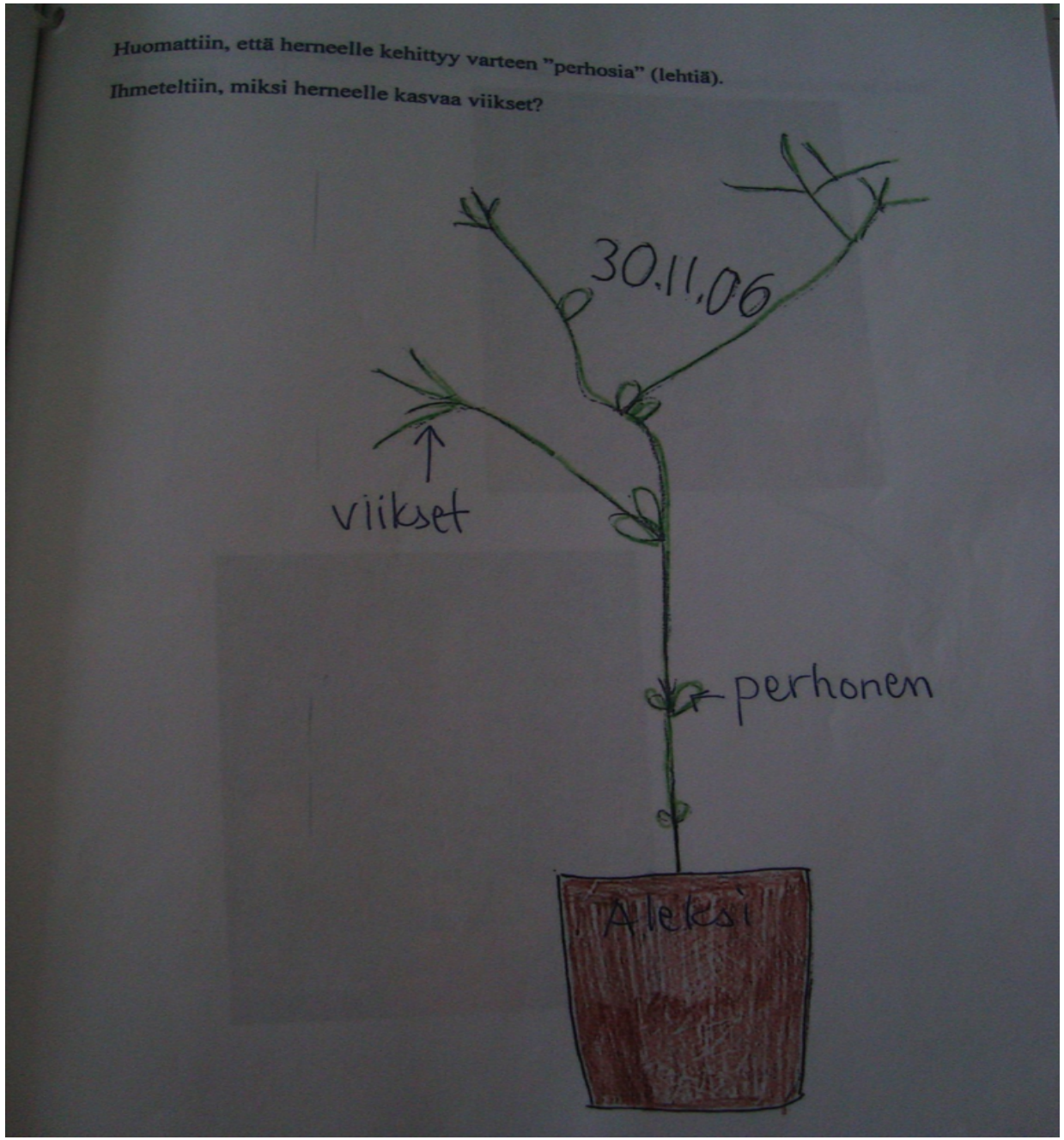
The learning starts from the challenging problem: What is inside the pea seeds?



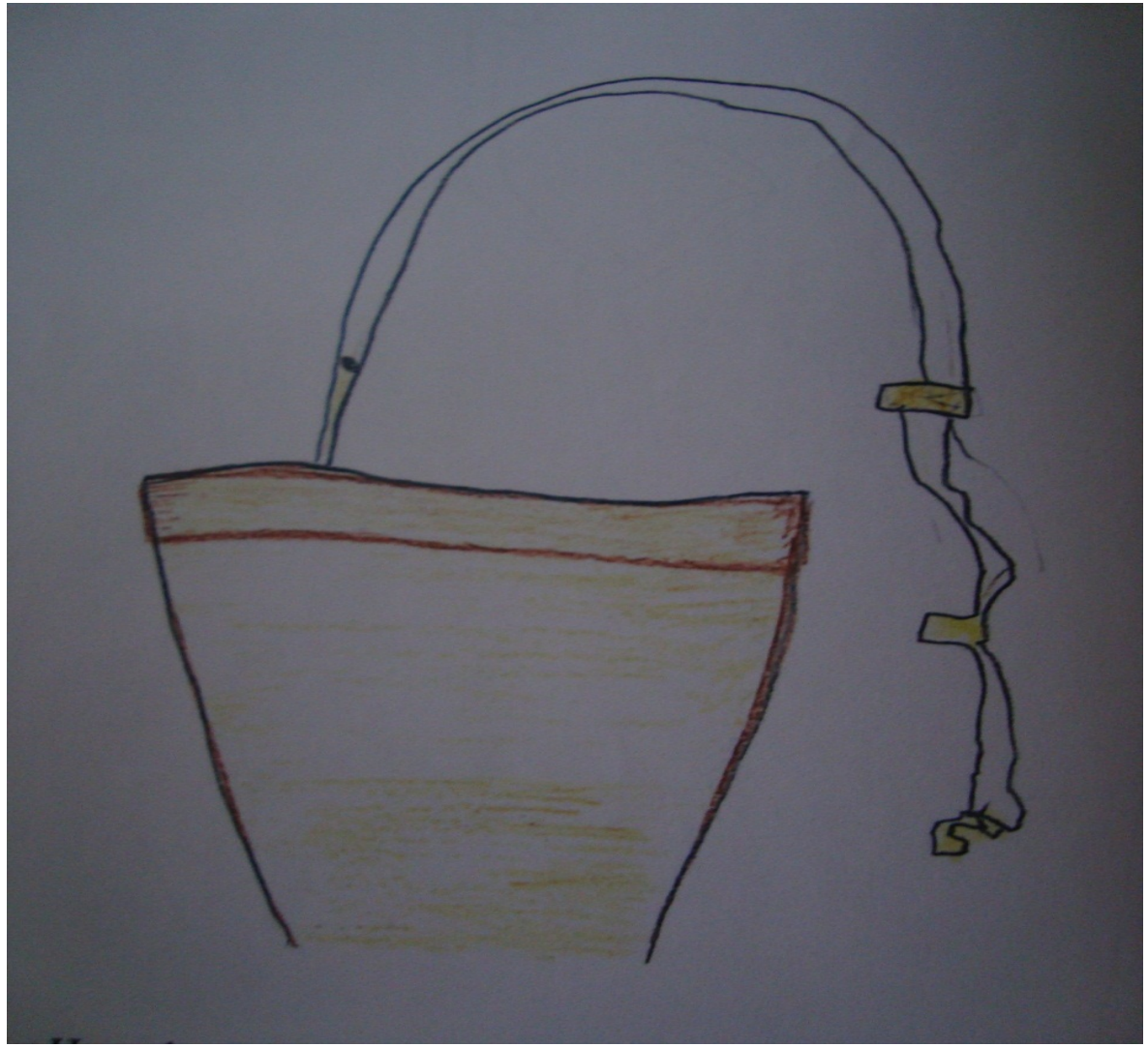

KATA


Joel

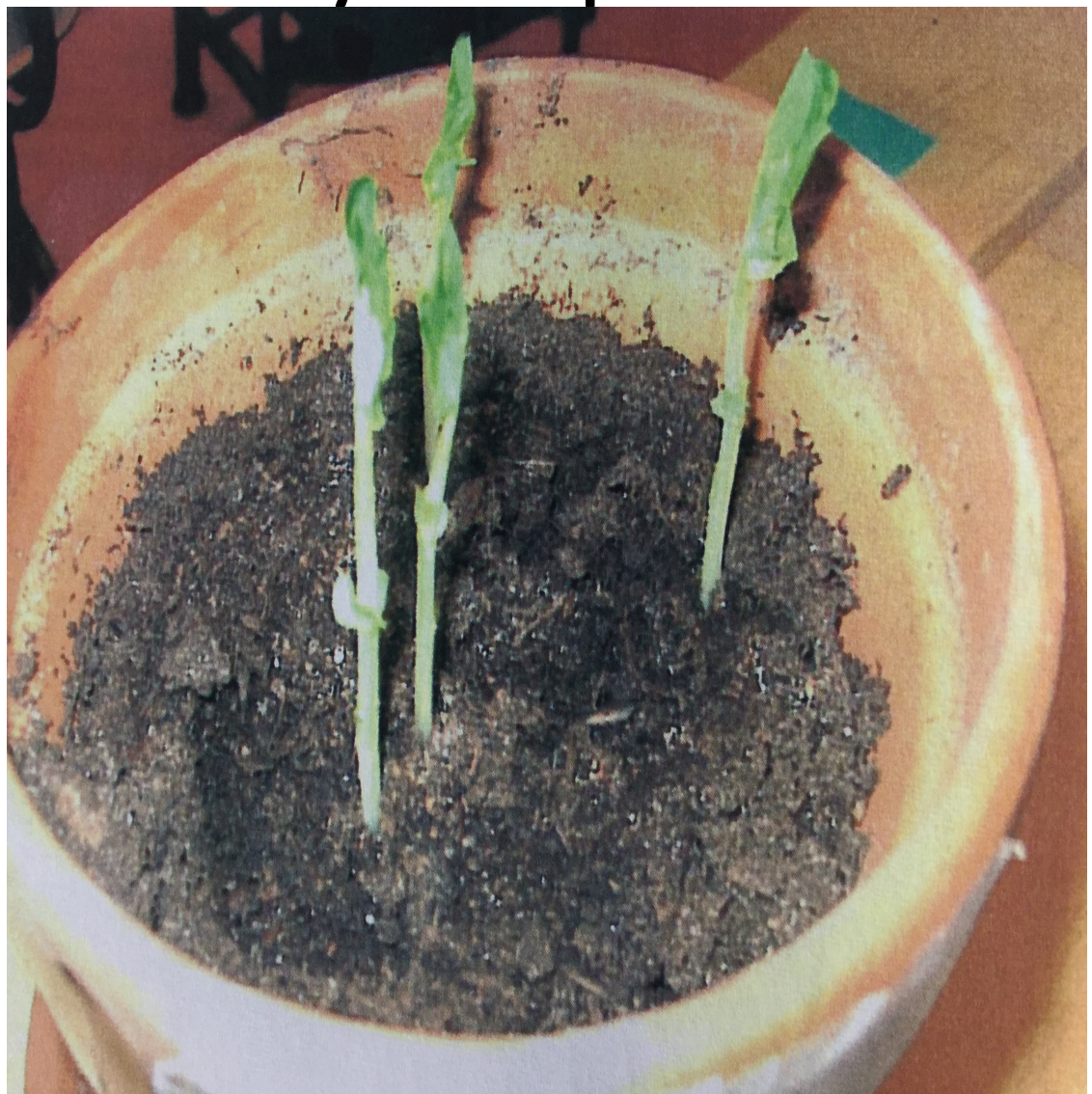




At Christmas holiday all peas died even if we made the best watering systems to them.

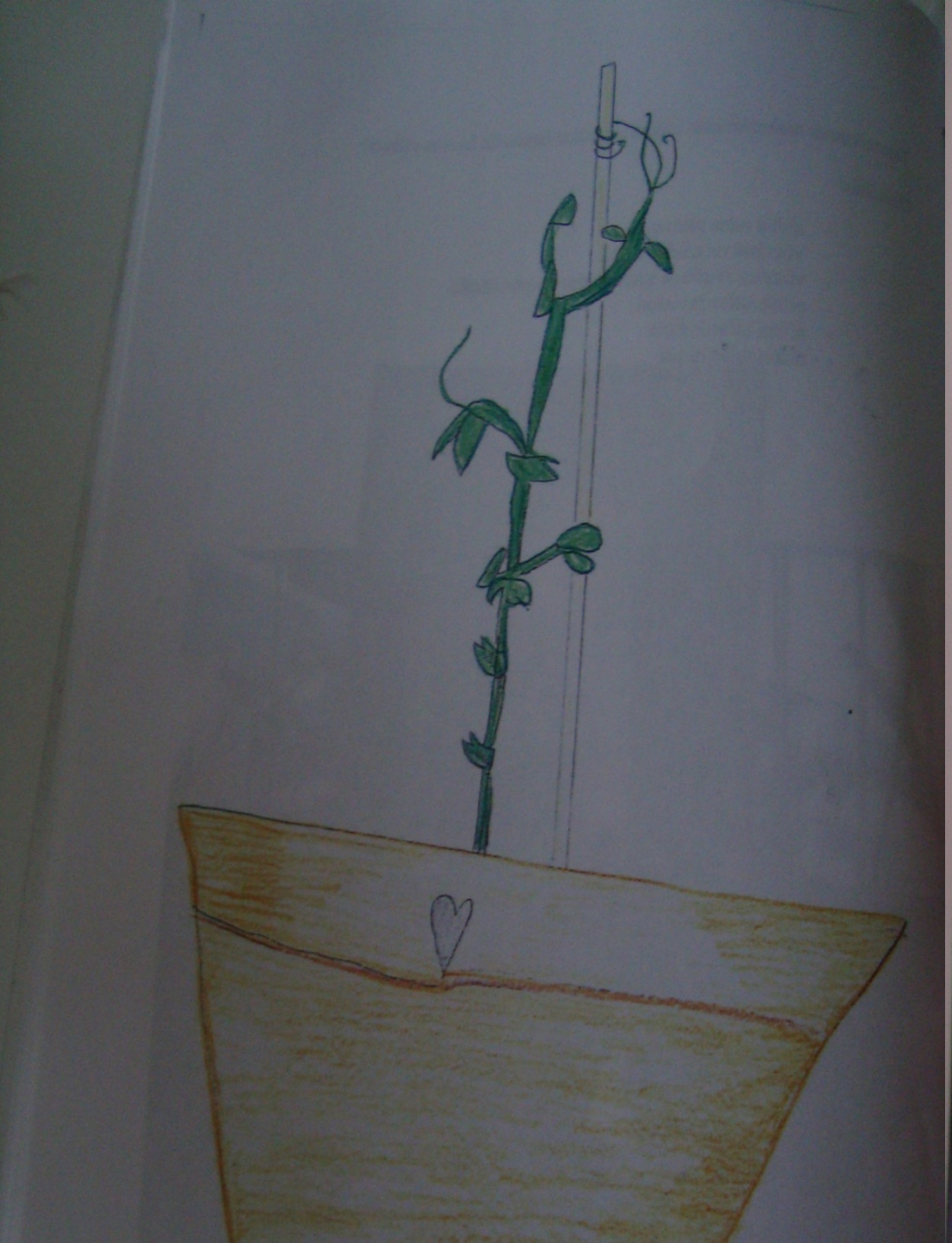


Pupils began to investigate peas concentrating why the peas have different kind of parts.



Hernetaulukko

pvm.	pituus	huomioita
30.1.	12.cm	1viiksi
1.2.07	17.cm	1viiksi
6.2.2007	20.cm	4viiksi
9.2.2007	20.cm	5viiksi...
14.2.2007	22 cm	7viiksia



& al.,

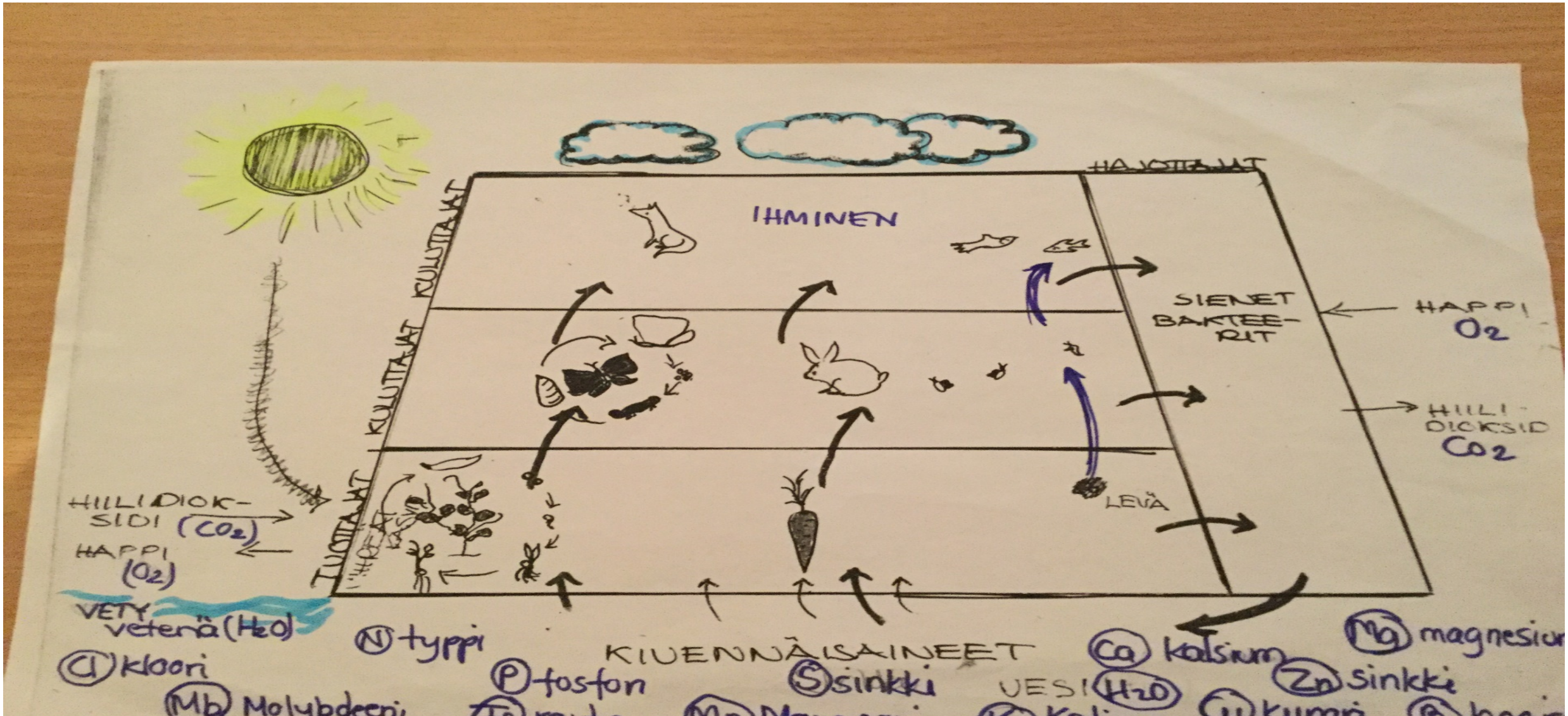
From seeds to plants

Objectives

- To conduct experiments with plants illustrating development and growth
- To arrange illustrations of plants in various stages of development in order from seed to adult
- To find, plant, and successfully grow different kind of seeds

Ecosystems &Energy Sources

"The earth does not belong to man, man belongs to the earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself." (Seattle)



References

Affolter, C., Varga, A. (2018): ENVIRONMENT AND SCHOOL INITIATIVES Lessons from the ENSI Network – Past, Present and Future. Publisher: Environment and School Initiatives, Vienna and Eszterhazy Karoly University, Budapest.

https://ensi.org/global/downloads/Publications/438/Lessons_from_the_ENSI_Network.pdf

Halinen, I. (2017). The conceptualization of competencies related to sustainable development and sustainable lifestyles. IBE/ 2017/WP/CD/08.

http://www.ibe.unesco.org/en/blogs/curriculum-sustainability-conceptualisation-competencies-related-sustainable-development-and

Thier, H., Karplus, R., Lawson, C.A., Knott, R. & Montgomery, M. (1978). The Rand McNally SCIS Program. Teachers Guide. Parts: Life Cycles, Energy. Chicago: Rand McNally & Co.

General Aspects of Basic Education Curriculum Reform 2012-2016 Finland https://m.youtube.com/watch?v=KY_LZJkEo28

New national core curriculum for basic education

https://www.oph.fi/english/curricula_and_qualifications/basic_education/curricula_2014

Visby Conference 2016

http://swedesd.uu.se/digitalAssets/573/c_573074-l_1-k_presentation-irmeli-halinen.pdf

RCE Helsinki Metropolitan **marinuutinen@gmail.com**