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# Implementing Education for Sustainable Development in School

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# Extract from a reflection of a student

*“The children were great, they got stuck in, discussed the theme with me and asked critical questions. I was completely surprised by the potential that lies within children. It was for this reason that I got engaged in the discussions and the children’s questions. In my opinion, it is in exactly such moments that learning and understanding happens.”*

# Sequence

- Introduction
- Background of our elaborations
- Understanding of SD and ESD
- Goals and contents of an ESD
- Interdisciplinary teaching
- Exercise
- Didactical principals of an ESD
- Take-home message

# Where do the results come from?

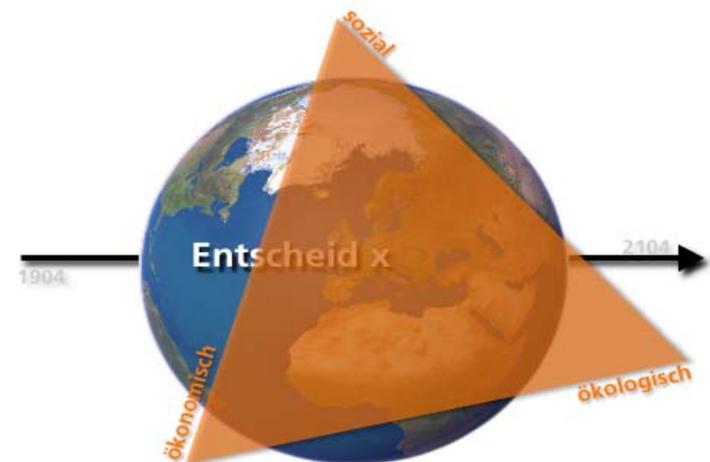
- Research project: “Education for a sustainable development – Pedagogical concept and implementation in class” (financed by the Swiss National Fund and by the Teacher Training Institute in Berne (PHBern))
  - Inter-Faculty Office for Coordination for General Ecology (IKÄO), Institute for Pedagogy (Department for Educational Psychology / IEW), Berne University
  - 2001-2007
- Experiences from our work as teacher trainer in the field of ESD and interdisciplinarity



# Sustainable development

One can aim at a development, “where present needs are satisfied without the risk of future generations being unable to satisfy theirs.” (Hauff 1987, p.46)

The realisation that economic, socio-cultural and ecological problems cannot be overcome separately, that only a complete overall view is adequate, is the central element of the sustainability concept.



# Education for sustainable development

- is not merely directed at protecting the environment from damages or preserving nature, but is also directed at development and changes;
- is not only prohibitive or austere but is also tempting—it calls for creativity and activity;
- does not stir up fears but points out perspectives as well;
- is not confined to ecology but includes economy and politics, too, and takes culture into consideration;
- does not stick to local perspectives, but operates on a global frame of reference;
- is interested in analysing social relationships and development alongside the action in one's own everyday life. (Huber 2001, p.78)

# Demands of a ESD

- The educational objectives of an ESD
- The criteria for the choice of content and direction
- The didactical Principals of an ESD

# Higher aim of an ESD

... is to enable pupils to take part in the process of sustainable development and to put them in a position where they are able to make complex decisions and to reach well-founded positions. In addition, they should be conscious of the importance of sustainable development and they should recognise the fact that we are all responsible when it comes to socio-cultural, economic and ecological development. This aim will be called “shaping competence” and it relies on bringing together various sub-competencies.

# Where does the journey lead to?

Concrete learning objectives from the lessons with the “Apple” theme for 2nd/3rd class

Shaping the chosen sub-competencies

What should the pupils be able to do when leaving School?

The pupils realise that the various ways of producing and selling apples have Different ecological, economical and socio-cultural effects (whether local or global).

They know the relevant ecological, economical and socio-cultural mechanisms on local, national and global levels and are aware of their interrelation.

The pupils can assess their own visions as well as those of others, but also assess current development trends in relation to SD. They can discuss interdisciplinary Problems about unsustainable development and understand its consequences.

# Where does the journey lead to?

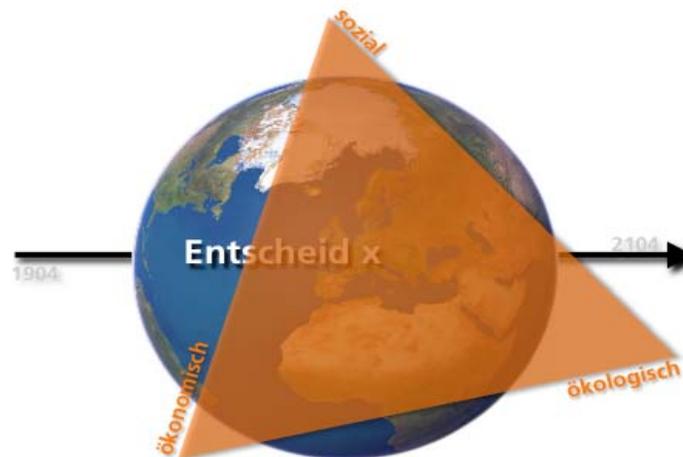
Concrete learning objectives from the lessons with the “Apple” theme for 2nd/3rd class	Shaping the chosen sub-competencies	What should the pupils be able to do when leaving School?
<p>The pupils can describe the different interests that are under consideration with reference to apple production and trading. At the end, they are able, from the different interests, to describe the conflicting aims.</p>	<p>They are able to distinguish Between conflicting and Harmonious aims, between relevant targets in relation to the idea of sustainability, and between the interests of the communities and those specific to the stakeholders.</p>	<p>They are able to distinguish between conflicting and harmonious aims, between relevant targets in relation to the idea of sustainability, and between the interests of the communities and those specific to the stakeholders.</p>

# Where does the journey lead to?

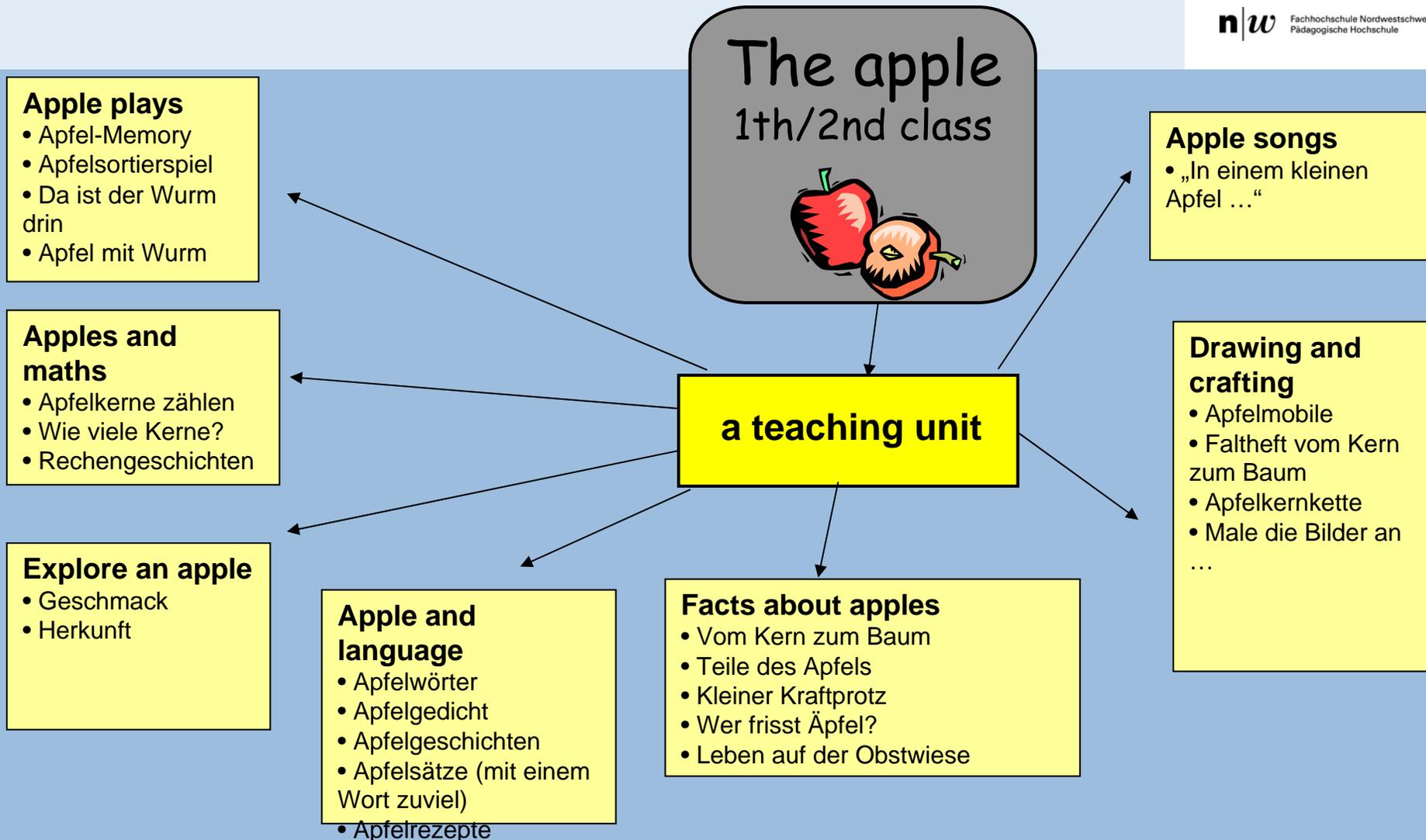
Concrete learning objectives from the lessons with the “Apple” theme for 2nd/3rd class	Shaping the chosen sub-competencies	What should the pupils be able to do when leaving School?
<p>The pupils understand that they themselves observe the world from a given point of view and from that, they make an assessment (for example what is important when buying apples) and are ready to place this in relation to others and to question it.</p>	<p>They can assess the range of their own knowledge and are ready to place and to question their own opinions in relation to those of others.</p>	<p>The pupils can reach wellfounded decisions, despite conditions of insecurity Opposition and incomplete knowledge, that meet the requirements for SD.</p>

# Criteria for choice and orientation of the content

- Local and global dimensions
- Long-term consequences and changes in the spheres of action
- Socio-cultural, economical and ecological aspects
- Based on a wider and more varied information



# Interdisciplinary learning in practice



# Interdisciplinarity

- *Interdisciplinarity* is a form of scientific cooperation between people from at least two different disciplines, which orientates itself on common questions and which is geared towards providing cognitions for mutually defined goals.
- An *interdisciplinary approach* is appropriate whenever questions or problems cannot be approached sufficiently within the disciplinary boundaries.

# Interdisciplinary teaching

Following the requirements concerning interdisciplinary working, one can sum up interdisciplinary teaching (in terms of subject integration) as follows:

- The learning exercises have to make sense from a disciplinary view as well as contributing to the clarification of a connective interdisciplinary question.
- The topic should be chosen and the classes should be designed in such a way that knowledge, perspectives, “dogmas”, conceptualization and cognitive methods of multiple disciplines/subjects are required and need to be related to one another.

# A complex problem is at the centre

- Theme: Apple / Human activity: Nutrition  
What is a “good” apple? Apples from South Africa or from Switzerland or Germany, respectively? Apples grown on standard trees or half standard trees?
- Theme: Bear, wolf, beaver and others / Human interests: Safe settlement areas, preserving biodiversity  
Should bear, wolf, beaver, etc. be re-introduced?
- Theme: Quality of life / Human activities: Life, work, culture  
Is town X a town where living conditions are good? Which criteria are decisive?  
When, taking into account sustainability, should one live in the city or in the country?

# Exercise part 1: Definig a overriding question

- In pairs, choose a keyword (energy, globalisation, forest, chocolate etc.) and develop 1 **complex, overriding** question that fulfills the criteria for the choice of topics in terms of an ESD.
- *Local and global dimensions*
- *Long-term consequences and changes in the spheres of action*
- *Socio-cultural, economical and ecological aspects*
- *Based on a wider and more varied information*
- You have 10 minutes for this assignment!

# Exercise part 2: Peer review

Get together with another group and present your questions to each other. Discuss the questions with help of the following ones:

- Is the question a complex one?
- Can the question be associated with the student's everyday life?
- Does the question fulfill the theme criteria of an ESD?

You have 15 minutes in total for this assignment!

# Overview of the didactical principles

## *Specific didactical principles of ESD*

- Connected learning
- Vision orientation
- Participatory orientation

## *General didactical principles of ESD*

- Action and reflection orientation
- Accessibility
- Linking factual with social, self-referential and method-orientated learning

# Connected learning

Considering consequences takes place with help from the following fields:

- The connection of “present-day and future”
- The network of ecological, economic and socio-cultural dimensions
- The local and global connections

In class, the connections of the different perspectives must be explicit and instructive.







# Vision orientation

- This optimistic approach must also determine the ESD lessons—therefore, it is orientated towards a desired model of the future, towards a vision.
- The fundamental question is no longer, “What do we have for present-day problems and how can we solve them?” but rather, “What are our wishes for the future, what future is possible and how can we achieve this desired future?”
- The pupils question the realisation of visions and taking this into consideration, they examine together joint social aims. For this, it is often helpful, to employ methods, which will encourage innovate creative ideas and solutions (e.g. creative techniques).

## Exercise 2: Take-home-message

- Please write down three findings that are important to you as a take-home-message: This can also be in form of ideas, examples etc. for class.
- Afterwards, share your thoughts with your neighbour and complement your take-home-message if necessary.















**Thank you for your attentiveness!**