ENSITE

Environmental Socio-Scientific Issues
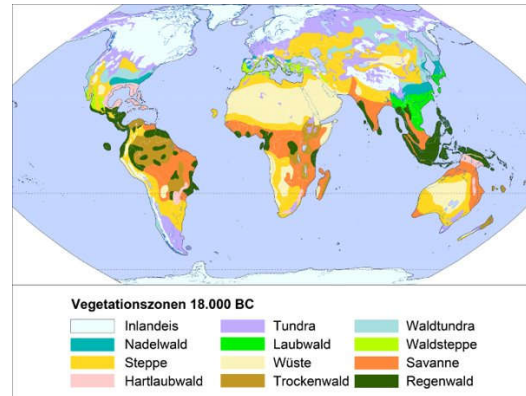in Initial Teacher Education

IO11: SCAFFOLDING

AIMS OF THE SCAFFOLDING MODULE

This module presents and offers activities for teacher education intended to equip prospective teachers with the knowledge and skills to use and develop scaffolding frameworks, that support lower secondary students in dealing with open complex problems. Student teachers learn about scaffolding frameworks using the example of *forest* - an *SSI* with numerous references to the life experiences of future science teachers and their future students.

They focus on the following topics

- *Forests* and site
- *Forests* in change
- *Forests* and climate change

Vegetationszonen 18.000 BC

Inlandeis	Tundra	Waldtundra
Nadelwald	Laubwald	Waldsteppe
Steppe	Wüste	Savanne
Hartlaubwald	Trockenwald	Regenwald

DIMENSIONS OF FORESTS

Forests are very suitable as *SSIs* because they are a good example for discussing both environmental and social challenges.

→ Ecological dimension: *Forests* are complex ecosystems that provide habitats for many animals and plants, preserve biodiversity and bind greenhouse gases

→ Economical dimension: *Forests* form economic areas. The production of renewable raw materials marks the beginning of a value chain and creates jobs.

→ Societal: *Forests* support human health and provide services to our society, such as protection, recreation and the provision of livelihoods. In return, we all bear the responsibility for preserving its resources.

→ Cultural: Our history and culture shaped the *forest* and was shaped by it. Numerous fairy tales, folk legends and art are inspired by the *forest*.

TEACHING AND LEARNING METHODS

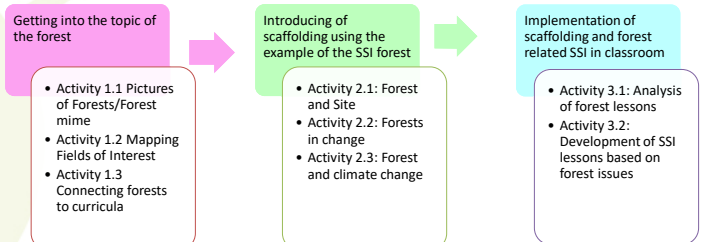Step by step, students are familiarised with scaffolding

→ Working out the connection between *forest* and site

→ Exploring how appearance and distribution of *forests* changed in earth history

→ Understanding the links between *forests* and climate change

→ Planning own lessons using *scaffolding* techniques and *forest* related *SSI*

→ Implementation in classroom

MODULE STRUCTURE

Getting into the topic of the forest
- Activity 1.1 Pictures of Forests/Forest mime
- Activity 1.2 Mapping Fields of Interest
- Activity 1.3 Connecting forests to curricula

Introducing of scaffolding using the example of the SSI forest
- Activity 2.1: Forest and Site
- Activity 2.2: Forests in change
- Activity 2.3: Forest and climate change

Implementation of scaffolding and forest related SSI in classroom
- Activity 3.1: Analysis of forest lessons
- Activity 3.2: Development of SSI lessons based on forest issues

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