

South Baltic WebLab Module 1: History of The Baltic Sea

Age: 14-19

Subjects: Sciences, Biology, Geography, Bilingual classes

Time /Part	Contents	Work mode	Material
1./2. 90 min.			
Introduction 15 min	<p>Start with the video: The sunken forest</p> <p>T: Why are there pine trees in the Baltic Sea?</p> <p>S:</p> <ul style="list-style-type: none"> - It was not a sea but land in the past - Sea level must have changed - <p>T: We want to deal with the history of the Baltic Sea in the next lessons. Why do you think it is important to know something about its history?</p> <p>S: Because we only can find out what will happen in the future / consequences of climate change if we understand how and why things changed in the past.</p> <p>Question: How can we / scientists find out about what happened in the past?</p> <p>Hypotheses:</p> <ul style="list-style-type: none"> - sediments - DNA - old bottom water - bedrock 	Class	Video in Module; Headphones
Intro part of module 20 min	<ul style="list-style-type: none"> - Episodes from the history - Geological history – some background facts - How sediments are built up and how you take sediment samples 	Ind.	Module (Introduction)
10 min	<p>Preparation for the three labs</p> <p>All the students should know what's going on in the three labs (Table on labs on the the blackboard)</p>		Blackboard /Whiteboard Table on labs.
Working in labs 45 min	<p>All students start with an introduction in the Sediment lab. Then the students encounter three doors and split up to work in three different labs:</p> <ul style="list-style-type: none"> - Sediment lab - Palaeontology lab - Dating lab <p>Preparation of the presentations (taking notes, their results on their protocol)</p>	Group Work	Three labs in the Module; Worksheet Protocol (in English only).

Time /Part	Contents	Work mode	Material
3./4. 90 min			
Presentations (30 min.)	While students are listening, they should note down important facts (conclusions or techniques) + add results for protocol.		Worksheet Protocol (in English only).
5 min.	Further preparation for the quiz: Module: What can you learn from the data	Class (teacher presents slides)	Module (three slides)
Quiz 15 min.	Students do the quiz individually	Ind.	
Discussion 10 min	Discussion results (quiz). Pose questions about what we did not learn. Do we know: <ul style="list-style-type: none"> • why the (Baltic Ice) Lake turned into a sea 11 600 years ago? Where did the salt water enter and why? • why water level dropped so much that pine trees could grow in what is now the Hanö Bay? • why the pine forest was drowned again? • why the Baltic is a brackish sea today? 		
History as we know it today (15 min)	The History of the Baltic Sea (Module). Ask students to note down important characteristics and processes.		
Future (ideas) 15 min.	Class discusses possible future changes (caused by land uplift) with help of simulations.	Class (S+T)	Module part: Simulating the future