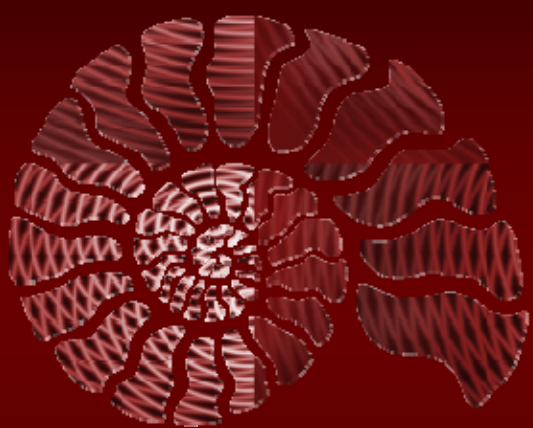


GEOschools

GEOSCIENCES TEACHING in Austria



GEO
SCHOOLS

EN

2011



GEOSCIENCES TEACHING in Austria

Fritz Steininger, Krahuletz Museum, Eggenburg - Austria

Obligatory educational policy in Austria

Obligatory school is beginning at the age of 6 years for all kids after their 6th birthday. Lasting for 9 years in the following types of school, as there are:

4 years of primary school (= Grundschule / Volksschule)

4 years of secondary school which it is divided in Austria into two school-types:

Main School (= Hauptschule)

Gymnasium (Lower grade = Unterstufe of the so called **Allgemein Höhere Schule = AHS** = 4 classes)

if you continue after 4 years in an Gymnasium (AHS) for another 4 years till to the matura (= Abitur) you also have done the 9th year of the obligatory school (= 5th class of the Gymnasium)

If you visit the Main School (= Hauptschule) and you do not change into the Gymnasium, you have to go to school for another year – the 9th year. This obligatory 9th year is called “Polytechnical Year” and has to be done in the Main School (= Hauptschule)

That means:

Primary School:

1st grade from 6 to 7 years

2nd grade from 7 to 8 years

3rd grade from 8 to 9 years

4th grade from 9 to 10 years

Secondary School:

5th grade from 10 to 11 years

6th grade from 11 to 12 years

7th grade from 12 to 13 years

8th grade from 13 to 14 years

9th grade from 14 to 15 years

Future:

There is a political discussion now to change the Main School (Hauptschule) into a so called “New Gymnasium” (= neue Mittelschule) – there you can also pass the 9th school year.

Another political discussion going on is if the obligatory school should be extended till you are 18 years of age – that would mean everybody has to pass to a gymnasium sort of school.

Secondary School: optional weekly hours / per grade (Main-School and Gymnasium):

There is no explicitly named geosciences subject in Austrians teaching plans.

However, geosciences subjects are explicitly taught in 3rd and 5th grade in the subject “Biology and Environment” and enclosed in the subject “Geography, Trade and Industry”.

For all five grades there are books from different authors, I have screened some of these books and you will find the geoscience subjects which are recommended for teaching.

1st Grade:

“Geography, Trade and Industry” 2 hours per week

“Biology and Environment” 2 hours per week

2nd Grade:

“Geography, Trade and Industry” 2 hours per week

“Biology and Environment” 2 hours per week

3rd Grade:

“Geography, Trade and Industry” 2 hours per week

“Biology and Environment” 2 hours per week

4th Grade:

“Geography, Trade and Industry” 2 hours per week

“Biology and Environment” 2 hours per week

5th Grade (gymnasiums only):

“Geography, Trade and Industry”	2 hours per week
“Biology and Environment”	2 hours per week

Secondary School: Total hours per week in Geography and Biology:

(Inclusive the 5th grade in gymnasiums)

“Geography, Trade and Industry”	10 hours per week
“Biology and Environment”	10 hours per week

Teaching contents related to geosciences:

There are different books which can be used; here we have extracted only those which have been proposed by the ministry of education.

1st Grade:

“Geography, Trade and Industry” 2 hours per week

Geoscience related subjects: natural hazards like earthquakes & volcanism; chapters on coal-mining iron-ore and natural oil and gas.

Climate

Topography and maps

“Biology and Environment” 2 hours per week

Geoscience related subjects: there are no related subjects.

2nd Grade:

“Geography, Trade and Industry” 2 hours per week

Geosciences related subjects: there are no related subjects.

“Biology and Environment” 2 hours per week

Geosciences related subjects: there are no related subjects.

3rd Grade:

“Geography, Trade and Industry” 2 hours per week

Geoscience related subjects: landscapes in Austria; general deposition of sediments, general about folding, general cross-section through Austria from North to South showing the larger geologic units.

“Biology and Environment” 2 hours per week

Chronostratigraphic table: shown are the chronostratigraphic terms, radiometric ages, main animals and plants;

Evolution of the earth and evolution of life on earth “the 10 essential steps”;

What are fossils (states of preservation);

Characteristic fossil from Precambrian to Cretaceous and from Carboniferous to Recent; Lexikon of fossils;

Stratigraphy: determining the age by superposition or biostratigraphy;

Evolution of mankind from Sahelopithecus to Homo sapiens; evolution of the brain (“Out of Africa”);

Planet Earth: plate tectonics and position of continents through time;

From minerals to rocks, main type of rocks, Lexikon of rocks;

Minerals: different possibilities to test and describe a mineral, forming of minerals

Geologic evolution of Austria from Pangea onwards with geological map of Austria and discussion of the main geological units (Bohemian Massif, Molasse, Flysch Calcareous Alps, geological windows = Tauern window)

Ice ages and young volcanoes in Austria

Soil – zones and life in soil

4th Grade:

“Geography, Trade and Industry” 2 hours per week

Geoscience related subjects: there are no related subjects

“Biology and Environment” 2 hours per week

Geoscience related subjects: there are no related subjects

5th Grade (gymnasiums only):

“Geography, Trade and Industry” 2 hours per week

Geoscience related subjects: there are no related subjects

“Biology and Environment” 2 hours per week

Earth position in the Kosmos: age of Kosmos, emerging of the Kosmos, galaxies, Milky Way, planets and asteroids

The Earth: a cosmic body: hydrosphere, atmosphere

The moon

Meteorites and comets

Construction of the earth (all different layers); Crust (oceanic, continental)

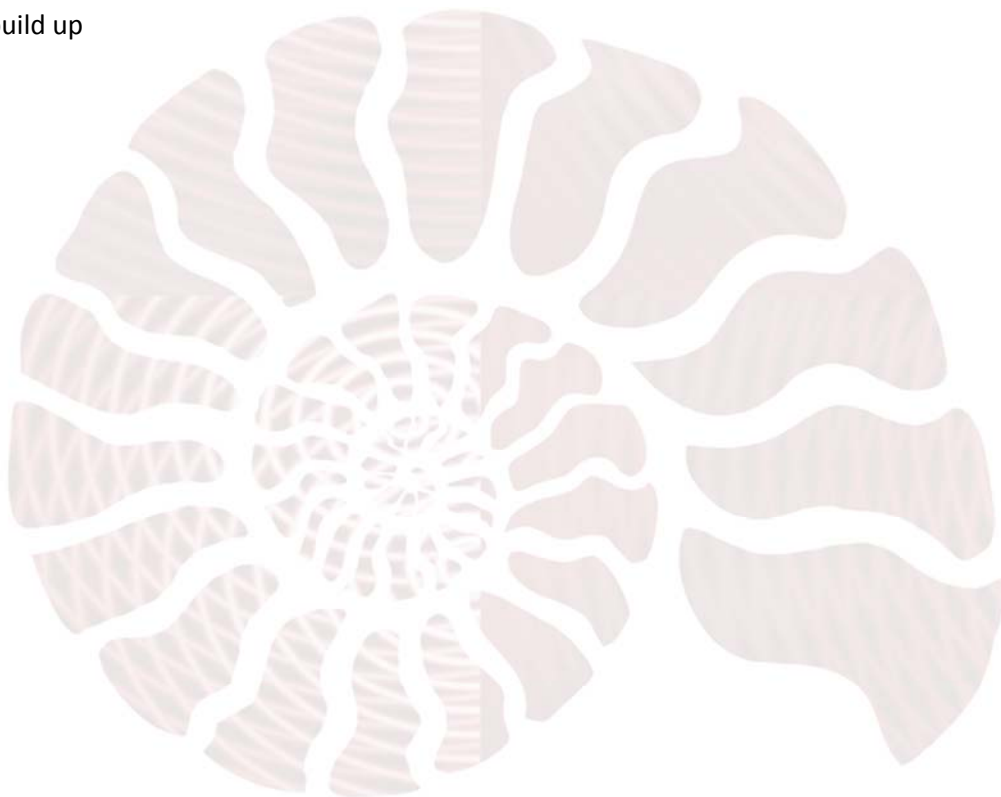
Plate tectonics and building of mountain ranges

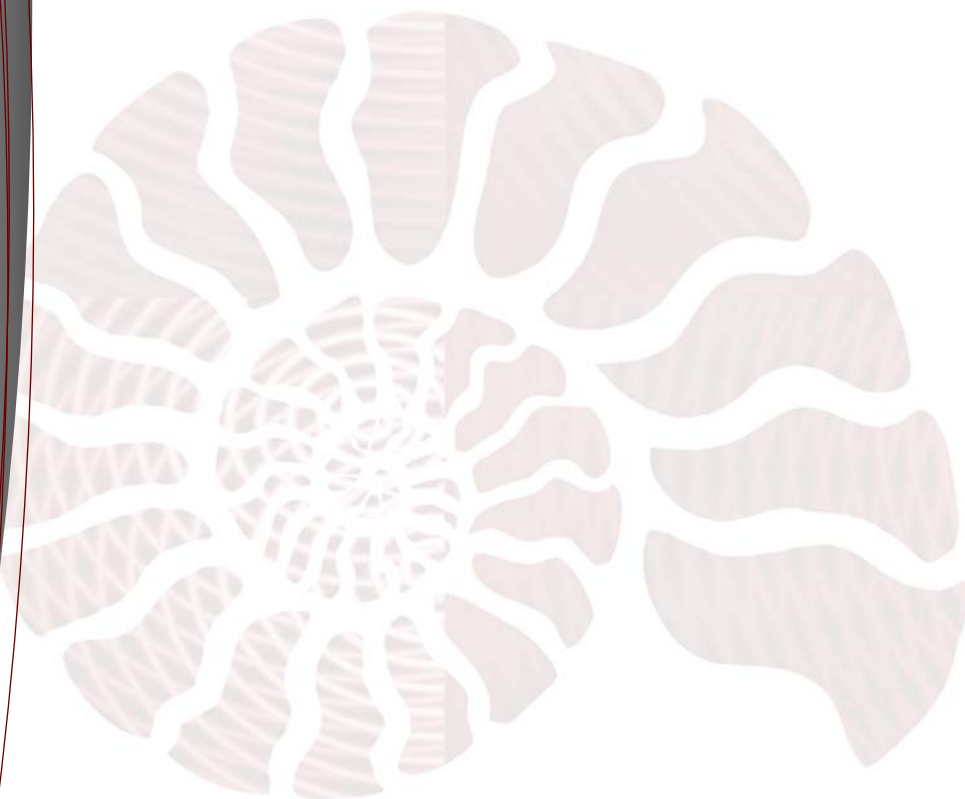
Rocks: rock building minerals, silicates; Magmatites, sedimentary rocks, metamorphic rocks, weathering and erosion; types of raw material etc.,

Geology of Austria including all main zones, ice ages, mining etc.

Geological map of Austria

Soils types and build up





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Executive Agency



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