

## Block 1

## Learning Sustainability from the Vikings NORSE ADAPTATION

### EXERCISE

## E

### Norse Adaptation

<b>Subject</b>	History
<b>Level</b>	difficult
<b>Duration</b>	60 minutes

### Learning Opportunity

Competences	Detailed description
Scientific competences	The exercise allows the pupils to verify their own experience with scientific evidence.
Social and civil competences	The pupils reflect on desired and unwanted effects of adjustment measures taken in order to cope with climate change and developments in the global economic context. Thereby it helps developing the attitude to consider action as a learning process, a necessity in order to act in a context of complexity, ambiguity and insecurity.

### Overview

Min.	Topic	Tasks for the pupils	Tasks for the teacher	Material
15	Adjustment made during the simulation (Exercise D)	Reflect on, what they have done or could have done, when changes appeared in the simulation	Provide questions for each of the changes	Picture cards with changes
20	Adjustment of the Norse	Read about the adjustment measures of the Norse, write down adjustments and unwanted side-effects	Provide material	Text fragments (Material E 1) A4 paper/ picture cards in 3 colours for each group and one set with the categories "What did change for the Norse?", "How did the Norse react to the changes?", "What have been unwanted effects or missed opportunities?"
10	Present results	Present the adjustments made in the different periods	Structure the table on the board, eventually providing correct information	Tape or magnets
15	Conclusions	Describe links between the different factors involved in the end of the settlements	Explain concept map and provide the key words	Large paper. Board markers

## Outline

### STEP 1

The students reflect on the adjustments, which they made or could have made in the simulation (Exercise D). The following questions are discussed:

1. How did you react to the first bad year in 1110?
2. What has been your reactions to the encounter with the Inuit in 1235? What did you do after Inuit attacks in 1385?
3. What did you do when pasture quality decreased due to cooling climate from 1260?
4. How did you adjust when a serious drop in population occurred in 1260/1285, with low-status farms having an unsustainable level of people?
5. What did you do to adapt when demand for walrus ivory declined and it came to two successive periods of no trade in 1260 and 1285?
6. How did you react to the declining number of tools available after 1285?
7. What did you do when the increasing sea ice made hunting more dangerous in 1360?

Regarding all incidents, the students may reflect what they wanted to achieve as well as unwanted side-effects.

### STEP 2

The class is separated into 8 groups. Each group receives one of the texts about the Norse adaptation measures (Material E 1). When reading the text, they should mark with different colours what has changed, how the Norse reacted to these changes and what have been unwanted effects or missed opportunities, which might have finally caused the end of the settlements. The extracted information should be written on the A4 papers/ picture cards in the respective colour:

- State in one sentence the changes that occurred for the Norse on Greenland.
- Describe the adjustment measures taken by the Norse.
- Explain unwanted side-effects or missed opportunities.

Please ask the students to write a maximum of two bullet points for each part. The groups need about 15 minutes for this task.

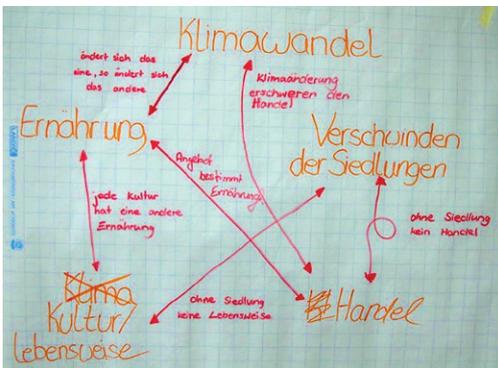
### STEP 3

All results are compiled in one table on the board.

What has changed for the Norse?	How did the Norse react to these changes?	What have been unwanted effects or missed opportunities?
...	...	...

When calling the groups to present, you may use certain aspects of the texts:

- The group whose text mentions the absence of cereal agriculture.
- The group whose text mentions the court system.
- The group whose text mentions the source of Inuit folktales.
- The group whose text mentions the analysis of human bones and waste heaps.
- The group whose text mentions the 'Hanse traders'.
- The group whose text mentions axes of whalebone.
- The group whose text mentions communal boat drives.



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Picture 1: Example from a workshop in school

#### STEP 4

To finalise working on the historical Greenland materials, the pupils should produce a concept map about the relations between the different factors involved in the end of the Viking settlements.

Therefore they are provided with six key-words: 'climate change', 'trade', 'food supply', 'power distribution', 'cultural orientation' and 'end of the Norse settlements'. It is their task to draw links between them and to explain the nature of the linkage.

#### Alternatives

Depending on the level of the students competences there are variations for the exercise:

- The students receive cards of the table of solutions (Material E2). It is their task to sort these cards with the description of changes, the adaptation measures as well as cards with desired impacts and unwanted outcomes, so that they gain an overview on measures and related desired impacts and outcomes.
- The pupils receive the table of solutions with some blank fields and the cards with missing descriptions. It is their task to complete the table.