# EXCALIBUR Evening B

**05022025**

**Sustainability:**

**Examples to themes Food/Nutrition (1), Health/Well-being(2) & Spare time(3)**

**2. Health & Well-being**

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For: German teachers

Beate & Laura

# Health & Well-being

- **Well-being** is important for us humans.
- Our well-being contributes to our **physical and mental health**.
- Health and well-being are i.e. one of the three **interdisciplinary topics in the curriculum in Norway.**
- It‘s also a theme which concerns us all.

# Sustainability through well-being

- A sustainable world consists of numerous aspects that concern different levels.
- There are factors on micro-, meso-, and macrolevel.
- People, their condition and their ideas and values either contribute to sustainability - or work in the opposite direction.

# Important terms: please research and discuss them

**Wohlbefinden - Well-being** **Glück - Happiness**

**Selbstfürsorge - Self-care** **Ausgeglichenheit - Balance**

**Achtsamkeit - Mindfulness** **Selbstwertgefühl - Self-esteem**

**Lebensqualität - Quality of life** **Erholung - Relaxation**

**Gesundheit - Health**

**Stressbewältigung - Stress management**

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# How do you understand these terms? (Choose possibly a few terms)

**What is for you:**

- **Well-being Being happy**
- **Self-care Balance**
- **Mindfulness Good self-esteem**
- **Quality of life Relaxation**
- **Health**
- **Stress and stress management**

# Individually: What improves your well-being?

- Make a list about everything that improves your well-being.

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# GW: Compare in the group

Please discuss. What do you do concretely, to feel as comfortable as possible? How important are e.g. the following things?

*A positive attitude / Sleep / Gymnastics / Sport / Healthy food/ Nature / Animals / Friends / Family*

**GW: Compare in the group**

What is your attitude towards intoxicants (tobacco, alcohol, drugs)?

*Addiction / addicted / dependent*

# GW: Compare in the group

What about your media habits?

Screen time / mobile phone dependence / smartphone addiction / social media / media addiction / computer game addiction / sleep disorders / blue light from devices

# Project examples:

- **Sustainable hospitals** were a topic chosen by the learners themselves for building in *Minecraft* and *Minetest (Luanti)* in the Excalibur project

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# Materials for a sustainable hospital project:

Hospitals are vital facilities, but they are also major energy consumers and emitters of greenhouse gases. Sustainable construction is therefore crucial in order to minimise the environmental impact while ensuring optimal healthcare. In this project, we will be looking at aspects of sustainable hospital construction.

# Aspects to consider in ecological hospital construction

- Energy efficiency: Use energy-efficient appliances and systems.
- Renewable energies: Utilise solar energy, wind power and other renewable energy sources.
- Reduce water consumption: Use water-saving appliances and systems.
- Waste management: Implement an efficient waste management system that minimises the amount of waste and promotes recycling.
- Building materials: Choose environmentally friendly and sustainable building materials.
- Ventilation and air conditioning: Plan efficient ventilation and air conditioning systems that reduce energy consumption.

- Sustainability
- Energy Efficiency
- Greenhouse Gas Emissions
- Renewable Energy
- Waste Management
- Water Consumption
- Air Conditioning
- Ventilation
- Building Materials
- Resource Conservation

## You can find information from i.e. the following sources:

- **Articles and studies**: For example, articles that deal with sustainable construction and the energy efficiency of hospitals.
- **Organisations**: The German Sustainable Building Council (DGNB), which provides information and certification for sustainable building.
- **Practical examples**: For example, the new ‘Green Hospital’ in Göppingen, which was built according to the principles of sustainable development.

## Finding relevant information – more tips for research

- Compare what you already know about the theme.
- Where did you get this information?
- What criteria do you normally use to select your sources of information? Describe.
- Please search for information for relevant data retrieval criteria, e.g.
- https://educational.fi/en/mediawatch/

## Preparing the 3D building project

- What knowledge do you have in relation to the task: to build a functional and purposeful hospital in the 3D world - this prototype could also be transferred to the real world in the future.
- What additional information is needed?
- Where can you find it?
- Identify new sources, including those provided by the teacher.
- What improvements to the current situation are necessary and can be achieved through the development of hospitals?
- According to your new sources, what are the most important things when planning a sustainable hospital (what is the most important thing to recycle, what comes next...)? From which sources did you learn this?

- Which innovative research results can be found, e.g. on the websites/publications of universities and researchers in your own country, internationally, e.g. on the websites of research groups at foreign universities, Google Scholar, ResearchGate, Academia.edu?
- Why is not all research so reliable, even if it gains the trust of freely available information on the Internet? What are the criteria for reliability of scientific research?
- What are the most important conclusions? How do we transfer them to our 3D structures?

## Examples of possible search terms for research:

- Sustainability in hospital construction - Baden-Württemberg's first ‘Green Hospital’ is being built in Göppingen
- Pacura Med – Sustainability in hospital
- Ärzte.de - Improving sustainability in hospitals
- DGNB - Sustainability in hospital construction
- CareElite - Green Hospitals
- Eco-Friendly Healthcare: 10 Ways Hospitals Can Go Green
- Green care: Implementing sustainable practices in healthcare
- IHF3Options for decarbonizing hospitals

# Hospitals can be made more sustainable through various architectural measures:

- **Energy efficiency:** The use of energy-efficient systems and technologies, such as LED lighting and intelligent heating, ventilation and air conditioning (HVAC) systems, can significantly reduce energy consumption
- **Renewable energy:** The integration of solar, wind and other renewable energy sources can reduce the need for fossil fuels and reduce the carbon footprint
- **Water management:** The use of water-saving technologies and the reuse of water can minimise water consumption
- **Waste management:** The amount of waste can be reduced through effective recycling programmes and the reduction of disposable items
- **Sustainable building materials:** The use of environmentally friendly and sustainable building materials, such as recycled steel and wood, can reduce the environmental impact of construction
- **Healing Architecture**: Designing spaces that promote the physical and mental well-being of patients and staff can also contribute to sustainability. This includes the use of natural light, good ventilation, acoustically effective materials and an unobstructed view of nature
- **=> These measures not only contribute to sustainability, but can also lower operating costs and reduce the environmental impact.**

## Other aspects that could possibly be taken into account when planning and building:

For hygiene reasons and to prevent new infections, many disposable items and materials are needed in hospitals, and their carbon footprint is large.

The development of new disinfection methods for hospitals is important to prevent infections and improve hygiene. The use of UV radiation is a promising method that has been investigated and applied in various ways.

Please research further possibilities.

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***Thank you very much for your interest!!!***

**Contact:**
**excalibur.project[at]outlook.com**
Laura Pihkala-Posti, Tampere
Beate Lindemann, Tromsø