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TOPIC: Hot springs and their use

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**PROJECT: Comparison of energy potencial of Iceland and the
Czech Republic**

DATE: 1/ 8/2021 – 31/ 8/ 2022

Hot springs

- Hot springs are most often found on the ridge of tectonic plates
- Tectonic plates diverge – this causes geothermal activity – and this causes hot springs to rise
- Located throughout Iceland
- Around hot springs – frequent construction of geothermal power plants





Characteristic

- Hot springs are groupings of water, most often streams and streams that are heated by geothermal energy.
- Rozdělení podle teploty
 - lukewarm – up to 35 °C
 - warm – up to 42 °C
 - horké – nad 42 °C
- Water is often enriched with minerals
 - sulfur, calcium, potassium, magnesium, sodium...
 - zdraví prospěšné minerály

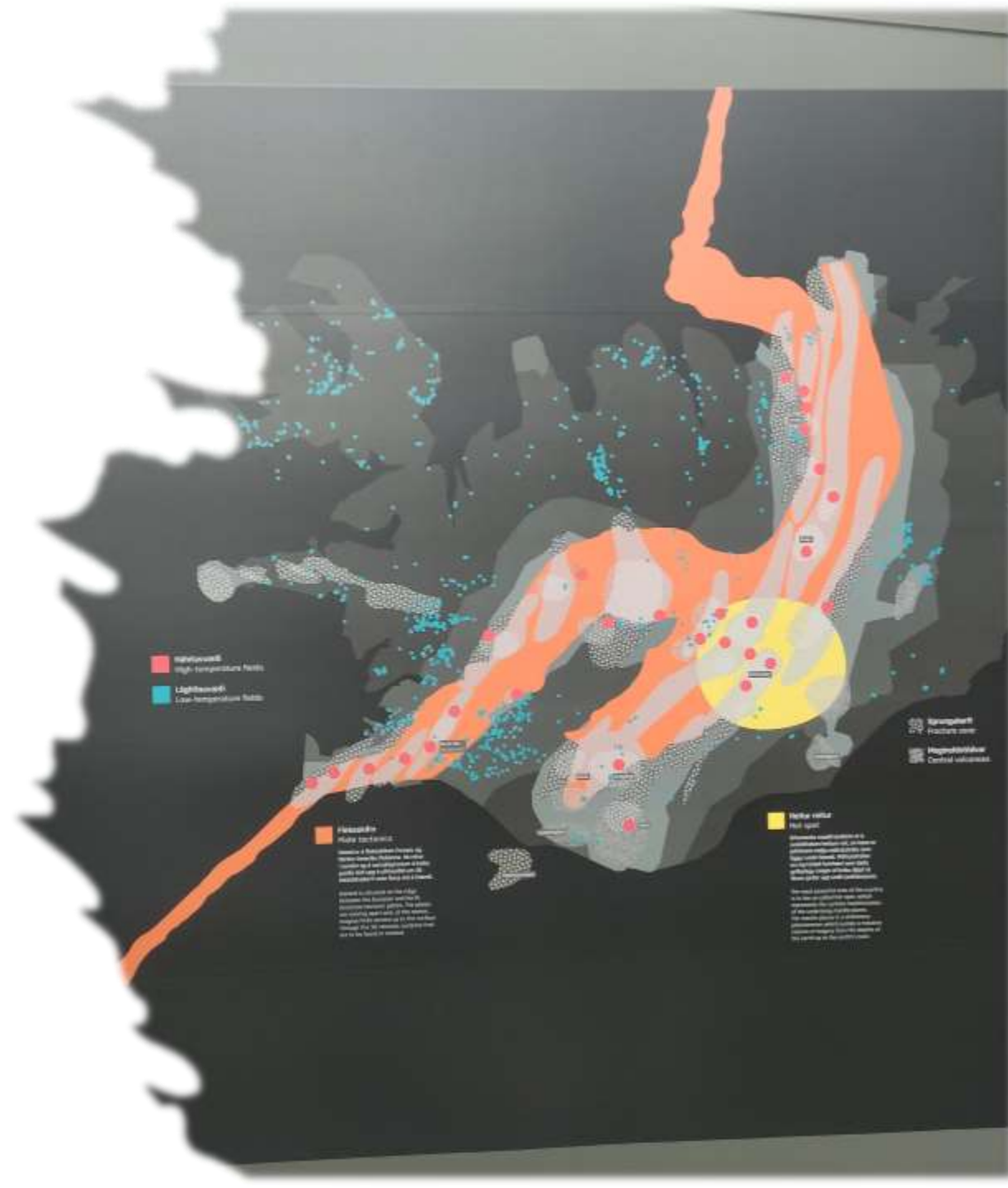
Occurrence

- Located in tectonically active places
- Permanent natural formation of hot springs in Iceland
- Important places with hot springs
 - Around Hveragerði
 - Around the river Hvítá

Iceland – lies on the ridge of two tectonic plates

High tectonic activity

Creation of new natural hot springs



Okolí Hveragerði

- Hellisheiði's largest geothermal power plant
- One of the largest areas of tectonic activity in Iceland
- Hot springs rise in the mountains – designed for relaxation
 - water temperature – 38-43 °C
- Geothermal park in Hveragerði
 - water temperature – more than 90 °C



Uplatnění

- Bathing and relaxation
 - natural hot springs
 - artificially created geothermal baths
 -
- Use in life
 - propulsion of geothermal power plants
 - domestic heating
 - pavement heating
 - ...



Minerály v horkých pramenech

Each mineral in hot springs has its own special properties for relaxing or treating parts of the body:

- Sulfur – treats respiratory problems and skin inflammation
- Calcium – promotes blood circulation and increases oxygenation
- Potassium – supports skin health and helps get toxins out of the body
- Magnesium: Helps cleanse acne and cavities and leaves beautiful skin
- Sodium: Helps reduce the lymphatic system, reduces pain and inflammation on the joints



Natural hot springs

- Hot springs in the mountains
 - relaxing purposes – people go to the hot springs to relax and bathe (some calmly every day)
 - water has about 40 °C
 - The temperature around the springs is approximately 5 °C
 - has a lot of minerals in it that help to relax and partially heal the skin (eczema)
- Geysers





Geothermal baths

- Hot geothermal baths
 - very popular in Iceland
 - designed for relaxation and health improvement
 - Blue Lagoon, Fontana, ...
 - water is drawn here from hot springs
 - there are hot water pools and often a cold-water pool



Blue Lagoon

- The most famous and largest geothermal spa in Iceland
- Water in the Blue Lagoon
 - mineral, geothermal seawater
 - water is pumped from a depth of about 2000 m from below the surface of the earth
 - water is enriched with silicon dioxide, algae and minerals – it provides healing and rejuvenating abilities
 - In Blue Lagoon, the water is constantly being explored by scientists who are examining the purity and quality of the water

Heating

- Domestic heating
 - most households are heated by a hot water heat pump supplied from geothermal power plants
- Pavement heating
 - in winter, it is heated by hot water and pavements against frost
 - Iceland has an excess of energy and therefore can afford it





***Thank you
for your
attention***