

# The Geysir Geothermal Park

## Iceland's First Tourist Attraction



### What is a Geyser?

A geyser is a hot spring that spouts jets of steam and hot water into the air. The term geyser comes from the Icelandic word 'geysir' meaning 'to gush'. Geysers are formed from holes in the earth's surface that run deep into the earth's crust. The holes are heated by Iceland's mantle plume. The mantle plume in Iceland is approximately 2,880km in depth the plume heats rocks in the lower lithosphere, resulting in heating rocks close to the Geysir Geothermal Park. Water fills the holes from rivers & streams and is heated deep underground, when the water reaches 121°C pressurised jets of steam shoot out of the holes towards the earth's surface forming a geyser:

### The Great Geysir

The Great Geysir is the original geyser and was formed in the 13th Century when an earthquake jumbled up the underground hot springs and caused them to gush. Great Geysir is known to shoot boiling hot water as high as 70 metres high. The Great Geysir increases and decreases activity, and it has been like this for centuries. In 1915 Great Geysir stopped after an earthquake.

### Strokkur

Strokkur is the most active hot spring (geyser) in the geothermal park. Strokkur erupts every 7-8 minutes and erupts to around 20 metres high. The bubbling turquoise water is a spectacular sight. In the geothermal park there are also hot pools, fumaroles and smaller geysers all heated by the tectonic activity below.

**INTERESTING FACT:**  
Geologists forced Great Geysir to erupt in 1981 using soap.

### Tourism

Iceland receives around 2.3 million visitors each year. The Geysir Geothermal Park is one of the first tourist hotspots in Iceland, with millions of visitors each year. Tourism has many positive and negative impacts on locations such as geyser geothermal park.

#### Benefits of tourism

The positive impacts of tourism for Iceland are that it brings many jobs in the tourist industry for Icelanders such as, tour guide, hotelier, chefs, bus drivers etc. The creation of jobs benefits Iceland and its economy through taxes and the circulation of money. Another benefit is improvements to airports, roads, and public convenience facilities, which not only benefit tourists but Icelanders too. The Geysir Geothermal Park as benefited from improved roads, a new visitors centre, souvenir shop and restaurant. This in turn created jobs for Icelanders local to Great Geysir:

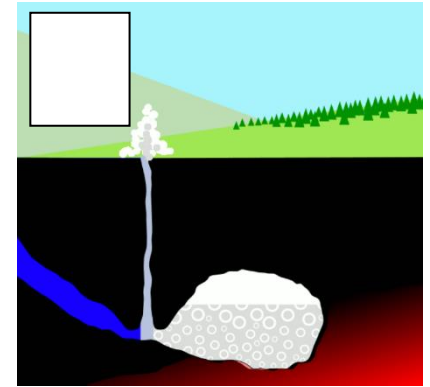
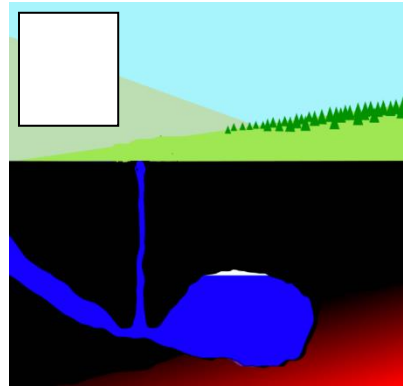
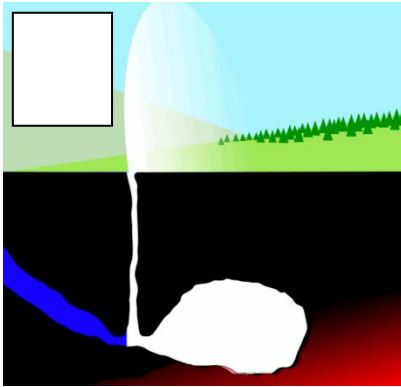
#### Problems of tourism

However, tourism also has negative impacts on local levels. The negative impacts of tourism are footpath erosion, overcrowding, wildlife disruption, litter, noise pollution, ugly buildings, traffic (congestion) and seasonal jobs. Geysir Geothermal Park has a high amount of footfall every year; which will cause a large amount of footpath erosion on the unique geological landscape. Litter dropped by tourists can become an issue and become an eyesore for locals and other tourists.

### Key Vocabulary

**Geyser, Mantle Plume, Management strategies, Tourism, Footpath erosion, congestion, hot spring, Earths Structure.**

Label the diagrams with the correct number from the statements below – The formation of a Geyser

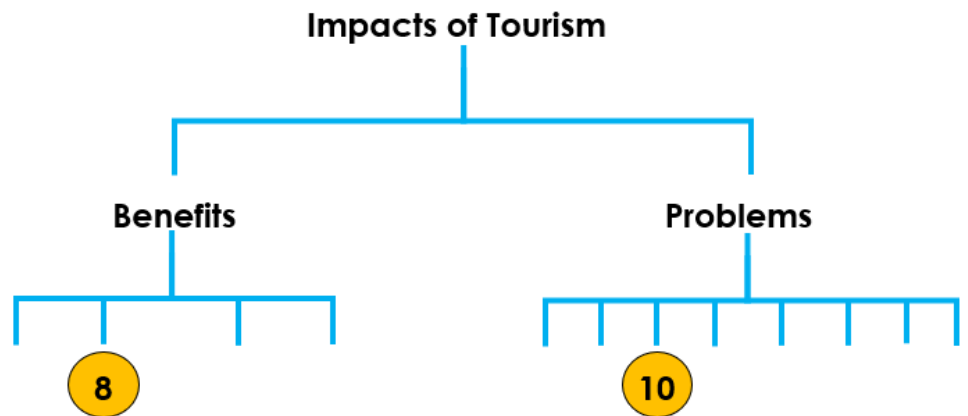


Deep holes in the Earth's crust fills with cold water from a stream or river.	<b>1</b>
The water deep underground is heated by the hot rocks and begins to boil. The hot rocks are heated by the mantle plumb underneath Iceland.	<b>2</b>
The water temperature reaches 121°C causing pressurised jets to shoot out of the holes towards the Earth surface to form a geyser.	<b>3</b>

### Impacts of Tourism

Sort the impacts of tourism into benefits and problems.

1. Footpath erosion
2. Money
3. Overcrowding
4. Jobs
5. Seasonal jobs
6. Traffic Congestions
7. Improvements
8. Attractions
9. Wildlife disruption
10. Litter
11. Noise pollution
12. Ugly Buildings



Explain four impacts of tourism on Iceland. (Benefits or Problems)

**Money**




**Decision making exercise (DME):** The problems associated with tourism in Iceland outweigh the benefits tourism brings. 'To what extent do you agree?'