

The Route

This map is to show you where to stop, and not as a replacement for a full map. You still need to bring a map with you on this hike.



Welcome to the Oeschinensee Eco Hike. This scenic hike will take you from Kandersteg Village up to the Alpine lake Oeschinensee using the gondola and returns hiking down the marked footpath (UK terrain 0). Along the way this guide will show you some of the many things that make up this area's unique history and geograpy, all of which make it an important part of the Jungfrau-Aletsch UNESCO World Heritage Site.

Safety:

This hike is in an Alpine Environment; extreme weather conditions are possible, and so your group should be well prepared for all types of weather. Please note that these route descriptions are not a replacement for map reading. Always carry a map and know how to use it. Maps are available for hire from Reception. The group leader must ensure that a Route Card has been filled out and left in Reception.

Info:

Oeschinensee Gondola Single tickets (buy at KISC reception):
SFr. 7.20 / 14.40 (child / adult)

In this booklet you will find that *hiking route information is in italics* whereas information about the area is in normal text..
Enjoy your hike!



Route:

From the centre (1185 m) walk along the main road down to the village. Turn right immediately after the tourist office. Follow the road on the right side of the Oeschibach stream and you will arrive at the bottom gondola station.

1. Pear Shaped Mountains.

As you ride up on the gondola, one of the first things you might notice is the mountain on the left. This is Bire which is 2,502 metres high. Bire in Swiss German means 'Pear', as the locals say this mountain is the shape of this fruit. What do you think?

Bire is also one of the most reliable locations for finding Edelweiss. This white flower only grows high up on sunny, rocky slopes. In the past men risked their lives to collect these to prove their dedication to their lovers. Thankfully such extreme deeds are no longer expected! Its petals are thick and covered in dense hairs. These protect it from damage from sunlight, which it is more exposed to as it lives at such high altitudes.

From the gondola station, take the hiking path in front of you. There are a few different paths to take, but all will lead you on a 20 minute walk through the forest and eventually down to Oeschinensee.

2. A forest full of creatures.

The pine forest you are walking through provides a perfect habitat for many wild animals, not just the abundant cows you see around! Don't forget to look up too, as many of these animals will also be found on the higher slopes above you.



The old Oeschinen chairlift in the 1950's. A ride for the brave!



Edelweiss flowers: pretty, but worth the effort?

Carry on hiking down path 17, as it takes you through the wood.

7. Small Beetles, Big Problems

Have a look around you at the pine trees. Do you see any brown, dying trees? These are due to a problem affecting a lot of the world, caused by a very small pest: the bark beetle. This small beetle is no larger than a grain of rice but has caused major destruction in many forests around the world. The beetles dig through the bark and into the tree, making tunnels into which they lay their eggs. Upon hatching, each larva burrows around under the surface of the bark, feeding on the live bark tissue as it goes around.

Usually, this process helps the forest. Old and dying trees are killed off faster, clearing areas of forest for new trees to grow. Healthy trees also have defences to stop bark beetles from attacking, such as creating sap or wax to trap the beetles. However, when there is a large number of beetles, even healthy trees are overwhelmed and killed. Large areas of forest in Switzerland have been killed off by such infestations. Climate Change is only making this problem worse, as warm temperatures allow the beetles to move into much larger areas of forest than previously possible.



10 years of Bark Beetle damage. You will see how quickly this insect ruins forests. It will take decades for this forest to recover.

Path 17 will eventually join up with the River, and take you back to Kandersteg Village. We hope you enjoyed your hike, and learned some interesting facts along the way!

Stop for a moment at this junction of the hiking paths, do you notice the hut? Read on to find out what this building is!

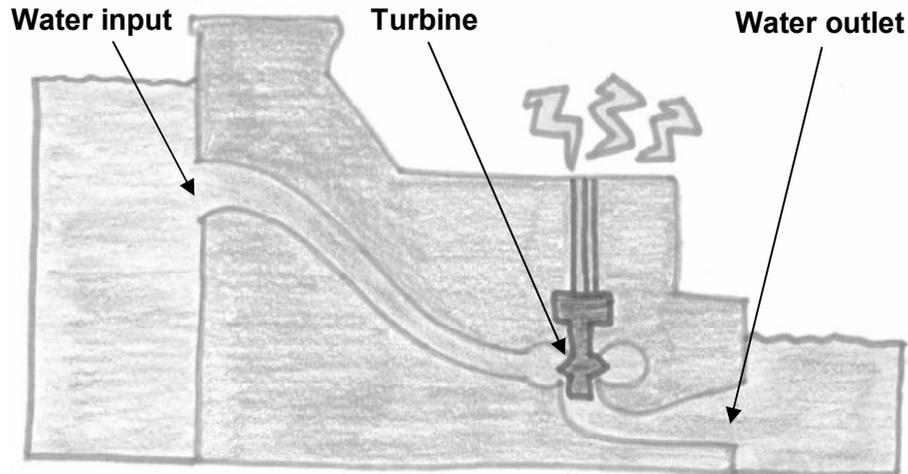
6. The Electrifying Lake

Not only does Oeschinensee make for a fantastic destination for tourists, it also provides lots of practical benefits for the village too.

Firstly, the lake supplies the village of Kandersteg with all the drinking water it needs. The water is simply filtered and UV treated before it reaches our taps, making for some of the cleanest tap water in the world.

The lake also has another, much more vital purpose: it produces all of our electricity! In 1903 a group of local men built a small hydro-electric plant, using the underground outflow from the lake to generate a small amount of electricity for the village. The second phase, the central power station in the centre of the village was completed in 1995. Another large station was built later, together providing 85% of the electricity consumed by the village. In times of high flow, they produce more than 100% of the village's power needs!

This machinery gets very hot when producing electricity, and so more water is used to cool it down. This water is then used to fill the village pool, making for a free, eco way of heating the pool!



Making electricity with water. Water flows from the lake down an underground pipe to the power plant. In the plant it is forced through a small pipe, making it flow faster. This water drives a turbine, producing electricity.

Red Squirrel (*Sciurus vulgaris*)

This small mammal is about 40cm long, and easily distinguished from grey squirrels by its long hairy ears, and orange-brown colour. It uses its long tail for balance when it is jumping around in the trees. In summer it spends its time hiding food in trees ready to survive the winter. In Kandersteg they can be very dark, almost black in colour.



Alpine Marmot (*Marmota marmota*)

The marmot is a large rodent, about 50cm long. Marmots live in large family groups, in complex burrows, with dedicated living and toilet areas. You will often see a marmot standing up on his legs, looking out for predators to warn the group about. They can be seen anywhere between 800-3200m.



European Pine Marten (*Martes martes*)

This mammal is about the size of a cat, but has a long slender body and bushy tail. They have dark brown hair and a cream coloured 'bib' of fur under their neck and belly. They live mostly on their own, marking their territories with faeces. They are mainly seen in the evenings, when they come out to hunt.



Wood Ant (*Formica rufa*)

You will definitely see these, as the forest floor is covered with their nests! These ants mostly make their nests on top of rotting tree stumps, making large piles of pine needles on top, and burrowing deep below the soil. Wood ants live in large colonies of up to 400,000 individuals all working together to collect food, build their nests and protect them. During Winter, the ants retreat deep into the centre of their nest, living on food reserves and limiting movement. As spring comes, the ants come out again, and aggressive battles happen between ant colonies, as they once again establish their territories.



Cross-section of Wood Ant nest.

In pink you see the chambers where eggs are laid and ants live, as well as the many tunnels connecting them. The nest extends from the pile of needles, through the tree trunk and deep into the soil below.

Continue along the path, and the view of Oeschinensee should start to appear. Stop here and enjoy the view!

3. Glaciers

Have a look up to the mountains above Oeschinensee. You will see that glaciers hang down from almost all of these peaks. These glaciers are very old: they have been around since at least 20,000 years ago, when the amount of glacial ice was highest. At this point in time, almost all of Switzerland was buried under glaciers, with only the highest peaks poking out of the ice. As the world has slowly warmed since then, glaciers around the world have slowly retreated leaving behind the wide open valleys like that in which Kandersteg lies.



Mountains and glaciers. Some of the largest peaks in the Bernese Oberland stand guard over Oeschinensee.

Unfortunately, in recent decades, the rate at which glaciers are melting has increased rapidly. Since the 1970s, Europe has lost over 50% of its glacier coverage, and this loss shows no signs of slowing. As of 2009, Only 3 out of 95 Swiss Glaciers were staying the same size or growing.

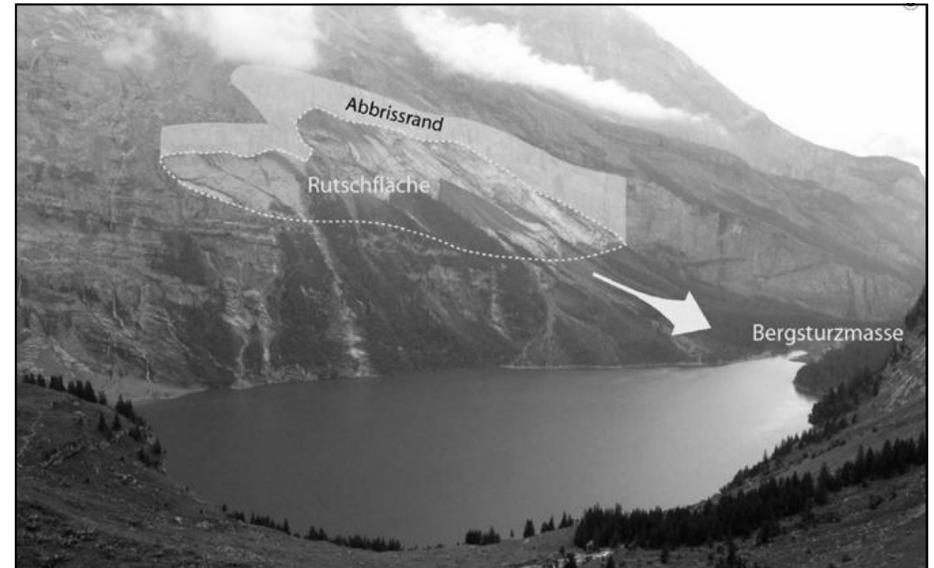
The Fründen Glacier, highlighted above, is one of the most accessible glaciers in the area, and Scouts have been visiting it almost since KISC opened in 1923. Today, we still take KISC guided groups here, teaching them glacier travel and rescue skills.

Walk to the eastern shore of the lake, and you will pick up the hiking path (#17) to the village. This path loosely follows the river Oschibach down through the woods back to the village.

5. A rocky birth

Looking at Oeschinensee, it is easy to think it has been like this for millions of years, but this is not so. When you think that the Alps were formed about 20-30 Million years ago, Oeschinensee is staggeringly young, having been formed by a massive rock fall only 4,500 years ago!

4,500 ago there was no lake here, and this was simply the end of another valley, just like the end of the Kandertal valley, where KISC is located. However the huge rockfall, which you can see below, created a wall of rock, allowing the lake we see today to form.



The origin of the rock fall which created the lake. This huge rock fall, and creation of Oeschinensee occurred almost in recorded human history!

Due to a weakness in the underlying rock (Rutschfläche), over 50 million m² of rock came crashing down, forming a huge dam (Bergsturzmasse). That's enough rock to fill 20,000 Olympic swimming pools! If you look to your right when facing Oeschinensee, you can see where this rock came from. A similar, even larger rockfall came down into where the village of Kandersteg now lies. You will notice that the normally flat valley floor is covered in small hills - these are the left overs of this second rockfall!

Follow the footpath for a short while further and you should drop down to the shores of Oeschinensee. Here is a perfect stopping point, or for a wander around the shores of the lake

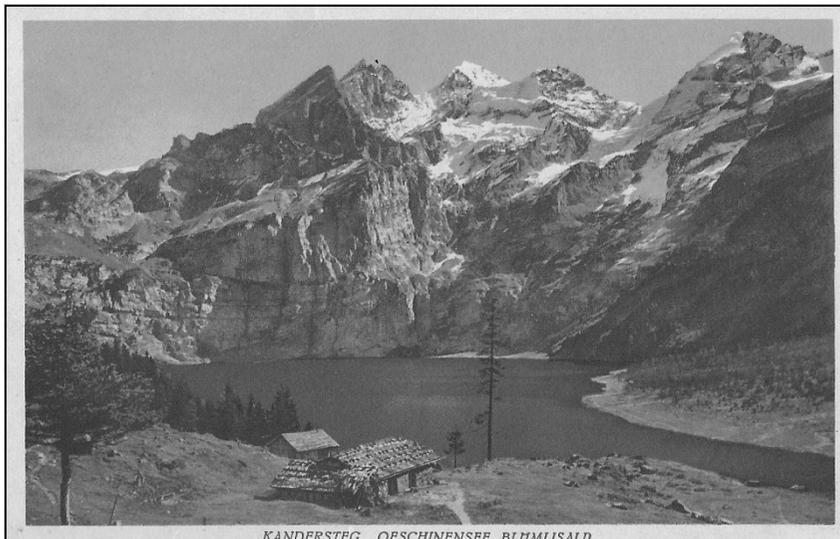
4. The Blue, Blue Lake

You will notice that the lake has a very bright blue-green colour, but where does its colour come from? There are two processes at work:

The first process happens in all water. Normal clear water absorbs the red end of the light spectrum, but reflects back to the observer the green-blue end. This is why most big bodies of water like the sea look slightly blue. But Oeschinensee's colour is much brighter than most lakes!

The brightness of its colour comes from the mighty glaciers that hang high above the lake. As glaciers grind down the rocks underneath them, they create a fine sediment called rock flour. This rock flour flows down with the waterfalls and floats suspended in the lake. There it reflects back the lake's natural blue colour, making it seem a lot brighter than usual. This rock flour also absorbs some of the blue light too, and giving the lake its turquoise colour. Simple!

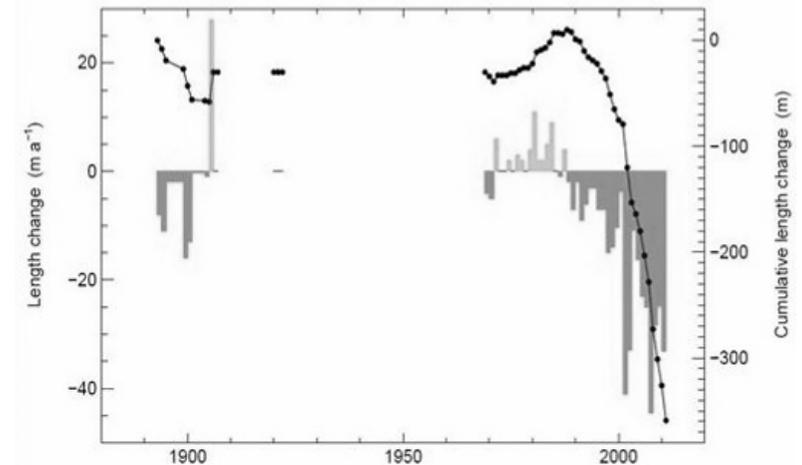
The lake has been a tourist attraction for 100s of years, and was a regular feature of guide books from the 1800s. It has been described by Victorian writers as 'a perfect gem', to 'strike an overpowering sensation of awe' and to be 'a scene not surpassed by any other in the Alps'.



KANDERSTEG. OESCHINENSEE. BLUMLISALD

A postcard view of Oeschinensee from 1925.

Something the scouts on this glacier may not realize is the dramatic change of the Fründen glacier over the years. 30 years ago, the glacier reached right up to the hut itself, making it easy to simply walk out of the hut and onto the ice. In the past decades the ice has melted and retreated, leaving behind piles of rocks called moraine. Now you have to walk down and across this moraine for a while until reaching the glacier. Such dramatic ice loss is happening also to our biggest glacier, the Kanderfirn, as you can see below.



Glacial ice loss of Kanderfirn from 1893-2011. For most of the measured past, the glacier has stayed the same length. It is only since the 1990s that it started retreating, and has lost already about 300m of length!



The Fründenhütte, with Fründen Glacier behind to the left.