

The Alps are a hotspot of biodiversity and are home to an impressive number of insect species. It is estimated that there are around 30,000 different insect species in the Alps. This diversity includes a variety of beetles, butterflies, bees, wasps, flies and many other insects, all of which play an important role in the Alpine ecosystem. These insects interact closely with Alpine flowers, engaging in essential pollination activities that sustain the rich floral diversity of the region and essential for keeping nature diverse. Their importance lies for example in sustaining ecosystems and providing essential resources for other species. But climate change and habitat loss pose serious challenges, putting their balance at risk. Let's dive together into the fascinating world of alpine flowers and their pollinating insects, not only learning intriguing facts but also discovering them in nature. 🌸🐝

(Not all activities are appropriate for all ages, please adapt the activities accordingly.)

1) Icebreaker Activity

To introduce the theme and help young people get to know each other, each participant introduces himself/herself (first name, age...). Afterwards we suggest you have a round where you ask the young participants what do they know about Alpine Flowers and Insects, what do they connect with them, do they have a favorite flower and/or insect?:

2) Insect Safari

Insect watching is a great activity for children and teenagers. Whether you're on an alpine meadow, in a mountain forest, in a brook bed or even higher up on rocks and scree, you can discover and observe insects everywhere. Many insects can be seen with the naked eye, but for a closer look, you can examine them with a magnifying glass or a small jar. How many different insects can you identify? How do the insects differ from each other, and what do they all have in common?



3) Alpine Flower Expedition

During spring and summer, the mountain meadows burst into a colorful display of blossoms. Across the Alps, diverse flowers flourish depending on factors like altitude, exposition, soil composition and surroundings (e.g. alpine meadows vs. mountain forests). What kind of flowers can you spot? By using a field guide, you can identify each one by name and delve deeper into their features.

This activity also offers the opportunity to thematize that some plants are protected and therefore must not be ploughed! Discuss together reasons why plants might be protected and look around to see if you might even discover protected plants on site.



4) Insects in Danger

Discuss various threats to insects such as climate change, pesticides, light pollution, habitat loss. How do these dangers affect insects and how can they be minimized or prevented? What can we do to slow down insect decline?

5) Imagine a World without Insects

Imagine a world without insects: what would it look like? What problems would arise for ecosystems and thus humans? Discuss this together, and additionally, two pictures can be drawn: one depicting a mountain landscape with insects and another showing a mountain landscape without insects. How do they differ?

6) Mountain Habitat Talk

In the mountains, a unique climate prevails, differing not only from the valleys but also varying significantly with altitude and exposition. Winters can be long, cold, and snow-rich, while summers are brief, resulting in a shortened vegetation period. Additionally, mountain regions can be windy, and sunlight intensity increases with elevation. Despite these seemingly challenging conditions, the mountains harbor a diverse world of flowers and insects.

Engage in discussions with children and teenagers about the specific challenges that insects and flowers face in mountain environments, as well as how they have adapted to these conditions. For instance, many flowers boast brightly colored, eye-catching blossoms designed to attract as many insects as possible during the short vegetation period.

Additionally, the discussion can be expanded by including the aspect of climate change: Flowers and insects have evolved over centuries to thrive in alpine conditions. However, with climate change, they are now at risk. Rapid temperature increases pose a threat, as flowers and insects cannot adapt as quickly. On the other hand, there are also species that can benefit from warmer temperatures, at least in the short term. What are the risks (and chances) for species and alpine ecosystems as a whole?

7) Profile for Flowers and Insects

Create profiles for individual flowers and insects that you observe: describe various features and facts such as color, habitat, or size, and include a sketch. Then, discuss the different profiles together, where you'll likely discover a wide variety of flowers and insects. Are there any flowers and insects that seem perfectly matched, like puzzle pieces that fit together?

8) Meet a Local Beekeeper

Through this encounter, you'll delve deep into the world of honeybees, gaining insights into the remarkable honeybee itself, its significance to our ecosystem, and the intricate process of honey production and processing by the beekeeper. Explore the challenges and adversaries that bees face along their journey and discuss how honeybees and wild bees differ.

Additionally, a honey tasting session could be the chance to try different flavors of honey and to appreciate the work of these hardworking pollinators as well as beekeeper's craftsmanship.



9) Memory Game

Prepare a memory game featuring insects and flowers native to the region ahead of time. This game can be enjoyed in the evening at the hut or during a break. In addition to the fun of matching and learning, it provides an opportunity to discuss the species in detail. For example, you can talk about where each flower or insect can be found during the day, adding a layer of real-world exploration to the game.

10) Flower and Insect Storytelling

After a day filled with various activities and inputs, it's beneficial to reinforce what has been learned and experienced. For example, children and teenagers can engage in role-playing games where they embody flowers and insects, reflecting on the relationship between blossoms and pollinators, as well as the challenges they face. Alternatively, storytelling can take place through short stories, comics, paintings, etc., which can then be shared with the group. These creative endeavors not only solidify understanding but also encourage imagination and artistic expression.

11) Bingo

Create bingo cards with images of different insects and flowers occurring in the region where your event takes place. As participants observe the surroundings, they mark off the corresponding images on their cards. This activity can be started at the beginning of the event and carried out throughout the whole event as side activity. It will highlight the diversity and spatial distribution of flowers and insects to the children.



12) Nighttime Observations

Organize an evening activity focused on observing nocturnal insects like moths. Use UV lights to attract moth and discuss their unique characteristics.

After spending the day observing, it's worth taking another look for insects at dusk or during the night. During these times, you may encounter entirely new or different species. For instance, you might discover fireflies illuminating the darkness, and if you use a lamp, you're likely to attract moths. This adds a new dimension to your exploration, offering the chance to witness nocturnal creatures and their unique behaviours.



13) Exploring Alpine Herbs

In the Alps, a rich tradition of using flowers and herbs for medicinal purposes has persisted for centuries. Plants like Arnica and Plantain have been valued for their healing properties. Beyond medicinal uses, edible Alpine plants such as wild herbs and flowers can add unique flavors and nutrients to salads and other dishes. Learn during a guided herb walk to identify and responsibly gather medicinal and edible plants while discussing their historical uses and modern applications. Additionally, during the activity sustainable harvesting practices, ensuring that only abundant species are collected and that protected plants are left undisturbed to preserve biodiversity can be discussed.



14) Building an Insect Hotel

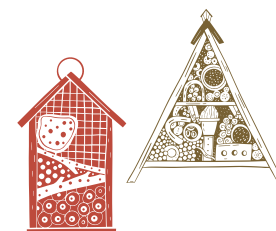
Join together to build a large insect hotel or form small groups to create multiple insect apartments. As a team, think about which species might move into your hotel and consider the building methods, materials, and structures that are essential for the insects. In this frame you can also discuss the difference between wild bees and honeybees, e.g. regarding their habitat and hive. There are many different types of wild bees, many of which are endangered e.g. due to habitat loss. Perhaps your hotel will soon become a haven for these wild bees.

This activity encompasses several steps: drafting a design sketch, discussing the various insects and their needs, selecting appropriate building materials, and finally, constructing the insect hotel. By working together, you can create a welcoming home for many beneficial insects.

Nesting aids can be constructed in different variations and sizes. The more different structures your hotel has, the more likely it is that many different insect species will move in. Dead deciduous tree trunks offer a very good nesting opportunity. The trunk should be thoroughly dry, otherwise a smooth, clean hole is hardly possible. Remove the bark from the wood and drill the holes (diameter 0.2 - 1 cm, depth 5 - 12 cm) across the grain into the side of the trunk. Also make sure there is enough space (at least 1 - 2 cm) between the drill holes to avoid cracks. Drill the holes as precisely as possible so that no wood fibers protrude into the interior! Also bundles of hollow plant stems with a diameter of 2-10 mm and a length of 8-20 cm can be used. A closed end is always necessary, i.e. always cut the stems behind the nodes (thickenings) so that the rear end has a natural closure.

After construction, the work is not yet done, because even the most beautiful plant hotel is not attractive if the surroundings are not right. So, think about where best to place your hotel. Factors such as food sources or exposure to the weather should be taken into account.

It is useful to prepare materials for this activity in advance.



15) Building a Beetle World

Beetles contribute to the preservation of habitats in various ways. They are not only important pollinators but also decompose dead wood, aiding in the formation of humus in mountain forests.

If your activities take you into the mountain forest, you can create an adventurous beetle world. Beetles prefer to live in the basement where it is light-protected and slightly cooler. To accommodate them, dig a "cellar" about 30 cm deep, which you can then fill with various materials found in the forest, such as dead wood, cones, and leaves. Above this, you can build a pyramid using branches and dead wood, providing beetles with a sunny and warmer resting place.

During this activity, you may observe various beetles, adding to the adventure. Moreover, particularly during the excavation of the pit and on the basis of the excavation material, the role of beetles in the decomposition of dead wood and thus the formation of humus can be discussed. Furthermore, this activity requires less effort and materials compared to building an insect hotel.

16) Listening to Nature

Find a quiet spot, close your eyes, and listen to your surroundings. What can you hear? Perhaps the buzzing and humming of various insects flying by? Can you distinguish different species? Are there other sounds you notice? What is the connection between these sources of sound and insects and flowers? For example, birds for which insects are an important source of food or cowbells/cows helping to maintain the Alpine meadows, thus enabling a meadow full of flowers, and their dung being important for many insects.

