

The forest - a diverse habitat

Biodiversity and species diversity

Species diversity means that there are **many different animals and plants in a particular place**. Imagine a river like the Walchenbach or the Enns. Not only fish and ducks live there, but also many other creatures such as trees, birds, butterflies and even small animals such as beetles or worms. The more different animals and plants there are, the greater the species diversity.

But it's not just about how many animals and plants there are, but also about how evenly they are distributed. If there were only a lot of ducks and spruce trees, but hardly any other animals or plants, then the diversity would not be so great.



And then there is the term **biodiversity**. This means that **all living creatures such as animals, plants and even small microbes live together and influence each other**. They all form a team and have an important role to play in keeping the environment healthy. So when we talk about biodiversity, we mean the big picture, how all living things live together and how important it is that there are many different species.

Why is species diversity important?

Species diversity, i.e. many different animals and plants in one place, is important for us humans because it **helps to keep our environment strong and healthy**. When there are many species, the habitat is more stable and better protected from change. From the smallest fungus to the largest animal - they all contribute to keeping our ecosystem stable.

Our forests are a great example of a place with a lot of species diversity. They are home to countless animals and plants that help and care for each other.

In addition, small creatures such as insects, bacteria and fungi help to decompose dead material. This releases important nutrients, which in turn help other living organisms to grow and thrive - including us humans.

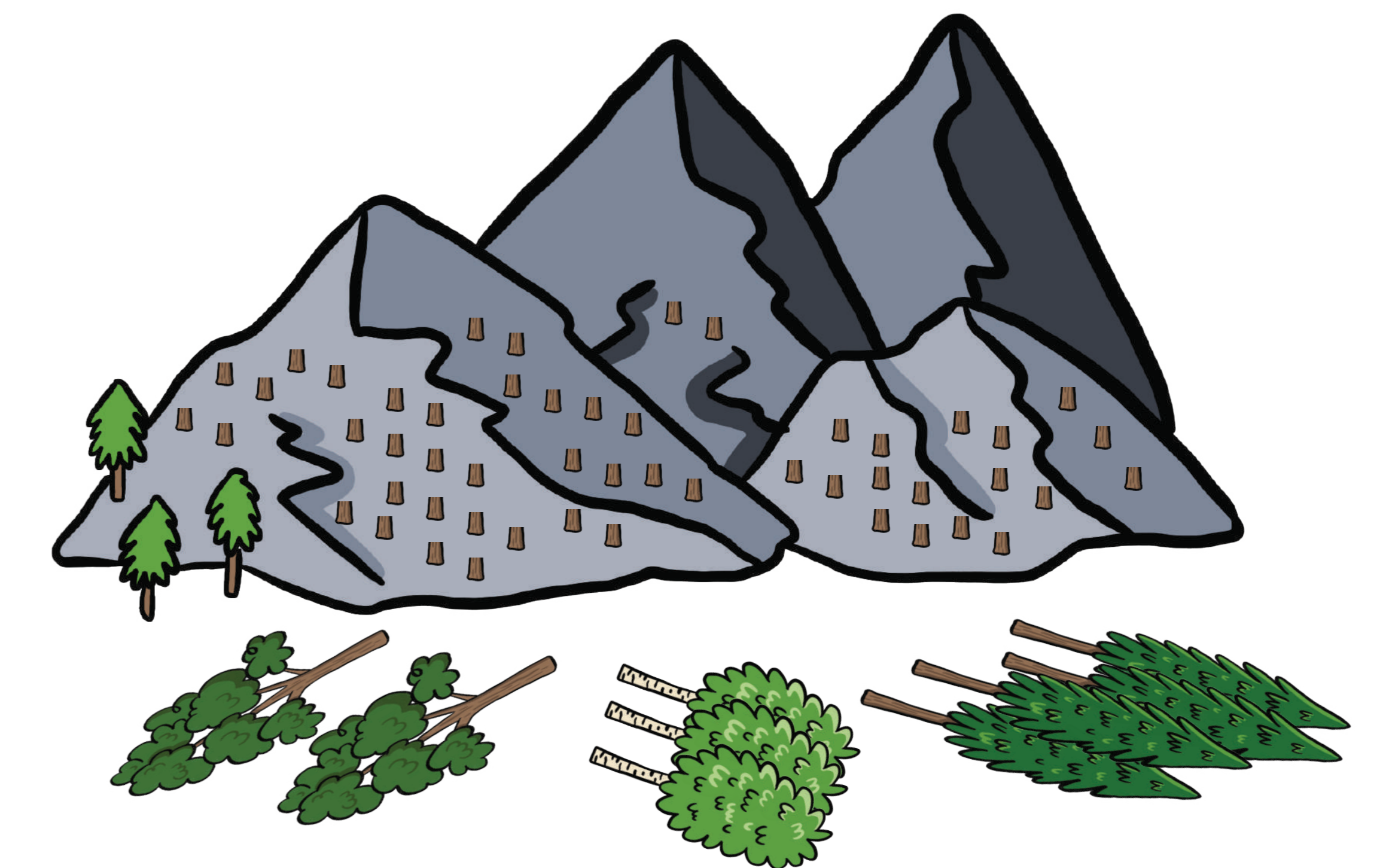
A healthy forest is habitat for many plants, animals and fungi. It is an important component of our ecosystem.



Is the ecosystem in danger?

Unfortunately, some people do things that harm the ecosystem!

For example, when they deforest rainforests or set fires to make room for new fields. Even if we catch too many fish or use too much land for agriculture, this can cause problems. As a result, many animals and plants lose their habitat and are in danger. **Maintaining sustainable forest management in Austria is therefore very important!**



The climate is also changing all over the world. It is getting warmer and warmer. This can be difficult for many animals and plants because they cannot adapt so quickly.

Some of them may have to move to other areas in order to survive, or they may even become extinct. This is bad for the diversity of animals and plants and ultimately also for us humans.

Further information can be found in the Naturpark Sölktaier exhibition:

"Climate winners? Climate losers! How are our animals and plants coping with climate change?" at Großsölk Castle.

Scan the QR code.



The project Waldschutz Öblarn and the Wassererlebnis Öblarn are funded by the Federal Ministry of Agriculture, Forestry, Regions and Water Management, the Province of Styria and the European Union as part of the Rural Development Programme (LE 14-20 / ELER).

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Preserving biodiversity helps the forest

Important measures

If a forest provides a habitat for many different **creatures**, it is strong and can cope better with changes, for example when the climate changes. But sometimes parts of this diversity are lost, for example when new plants (**neophytes**) or animals (**neozoa**) that do not belong there enter the forest.

When this happens, important things in the forest can get mixed up. For example, some animals may not be able to find enough food, certain plants may not be able to grow properly or native species may be displaced. It is therefore important to protect native species and preserve plant and animal diversity.

We can do certain things to achieve this. For example, we can make sure that **different types of plants and trees** grow in the forest and that we don't cut down all the trees at once. We also leave **trees that have died (so-called dead wood)** in the forest so that small animals can live there. We also **avoid toxic chemicals** that can harm the animals and plants in the forest.



By taking care of the forest and allowing it to develop naturally, we help to keep it healthy and home to many different animals and plants. This is important so that the forest can continue to protect us and bring us joy in the future.

Help taking care of the forest and make others aware of it too!

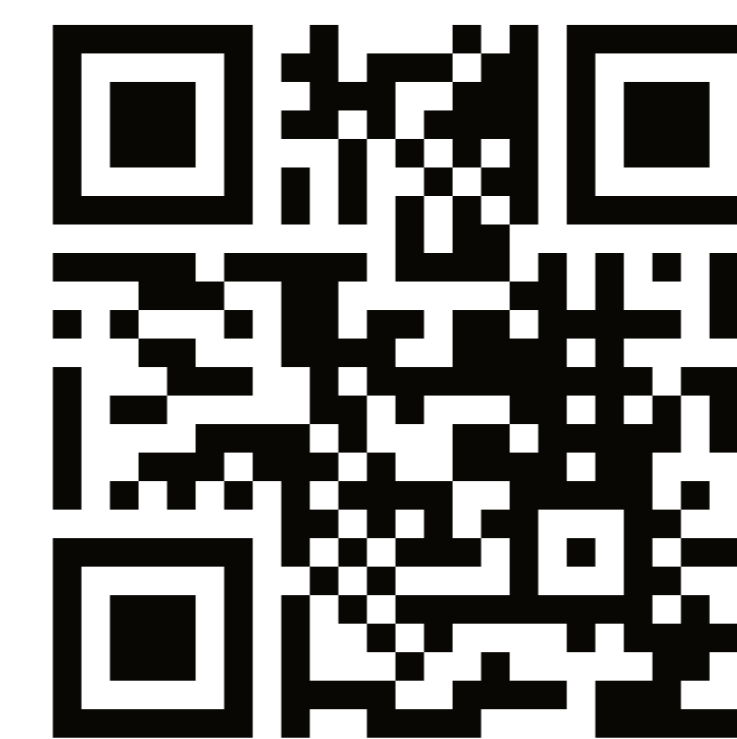


KEEP YOUR DOG ON A LEASH!
The forest is home to many animals, loose dogs frighten them.

THINGS THAT BELONG TO THE FOREST SHOULD STAY IN THE FOREST!
Do not tear out any plants and their roots and leave the animals their habitat.

DON'T THROW ANYTHING AWAY!
Did you know that a plastic bottle can take up to 5,000 years to decompose?

You will also find further guidelines on how to protect the forest along the **Themenweg Augstbach in the municipality of Altaussee.**



Scan the QR-Code.

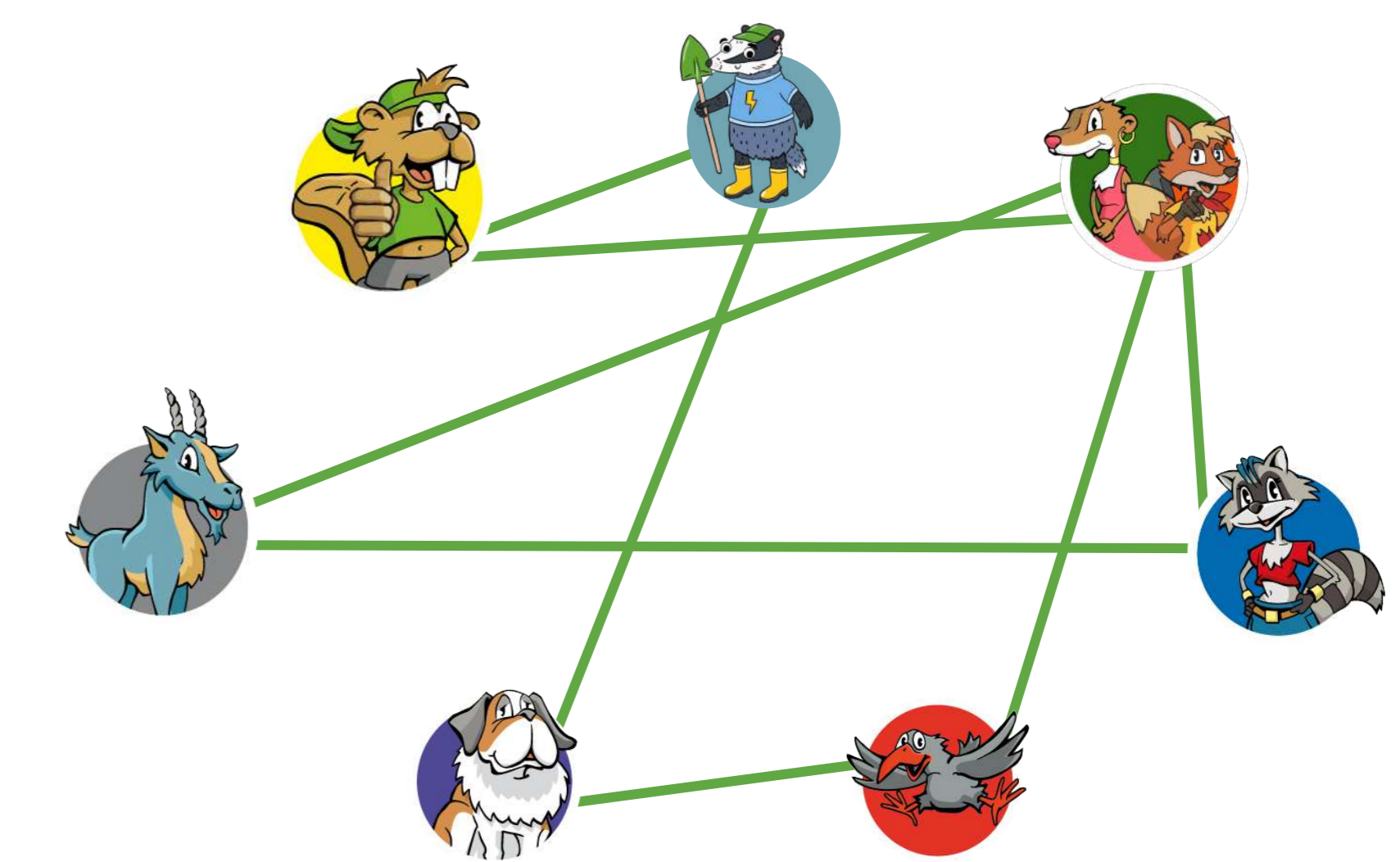
Go on a discovery tour!

At the Augelände in Öblarn you can go on a journey of discovery and investigate the animals and plants of the forest during the guided tours. **Tell your parents and friends what you have found!**



The grid of biodiversity

Build the biodiversity grid together. All players stand in a circle and receive a rope. The game leader begins and names an animal or plant - e.g: "I am a tree and I am making room for a beetle". The rope is then given to another player who then continues, e.g: "I am a beetle and I am being eaten by a bird."



Once all players have had their turn: **Test what happens if a creature in your network drops out!**

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Forest fire: causes and consequences

The forest, our habitat

Fortunately, there are plenty of forests in Austria. They cover almost half of the country. They are very important because they provide a home for many animals and plants and ensure our clean air.



The trees in the forest are also useful because we can use them for many things, such as building and heating. Forests also protect us from dangers such as storms and landslides. Forests also help to preserve the climate and stop global warming, mainly because they absorb CO2 from the air and store it in wood.

Climate change as a threat

Our earth has changed again and again over millions of years and so has the **climate**. The continents have moved and mountains have formed. Sometimes it was warm everywhere, sometimes cold. But in recent decades it has become much warmer because of us humans. This affects nature and our environment.

Temperatures have been rising all over the world since 1850, currently by an average of around 1 degree. **Here in the Alps, the temperature has risen almost twice as much, by around 2.5 degrees.** As a result, the ice at the poles and in the mountains is melting. Even more, we are already increasingly affected by heavy rainfall. Our forests are suffering from increasingly dry periods and damage.

In Europe, i.e. here in Austria, experts predict that it will rain more in winter and less in summer. There will be more rain in the north, while it will be hotter in the south. Heavy rain will increase.

This can mean that flooding sometimes occurs when it rains a lot. However, if it stays dry for a long time and gets hot, it can lead to periods of drought. This **could lead to more frequent forest fires, even in our area!**

Danger of forest fires

As less snow falls due to climate change and temperatures continue to rise, especially in summer, the soil in the forest is often very dry. This means that trees and shrubs are not supplied with enough water and dry out. The grass also remains standing in winter and becomes very dry. This increases the risk of forest fires, especially in the Alps and in eastern Austria. **In 2023, over 1 million hectares burned down in the EU - that's roughly the entire forest area of Styria!**



It is therefore important to observe the following rules in the forest: **Do not light fires**, for example campfires, candles or torches. Nobody should smoke in the forest either, because even a small spark can set the dry grass on fire.

When does a forest fire occur?

Three things are needed for a forest fire to start:

- Firstly, it needs fuel. These are things in the forest that can easily catch fire, such as dry grass, leaves, litter and branches.
- Secondly, oxygen is needed for the fire to burn. It burns particularly quickly when the air is dry or when a light, warm wind is blowing.
- And thirdly, it needs a spark to ignite the fire. This spark can come from various things and is the cause of the fire.

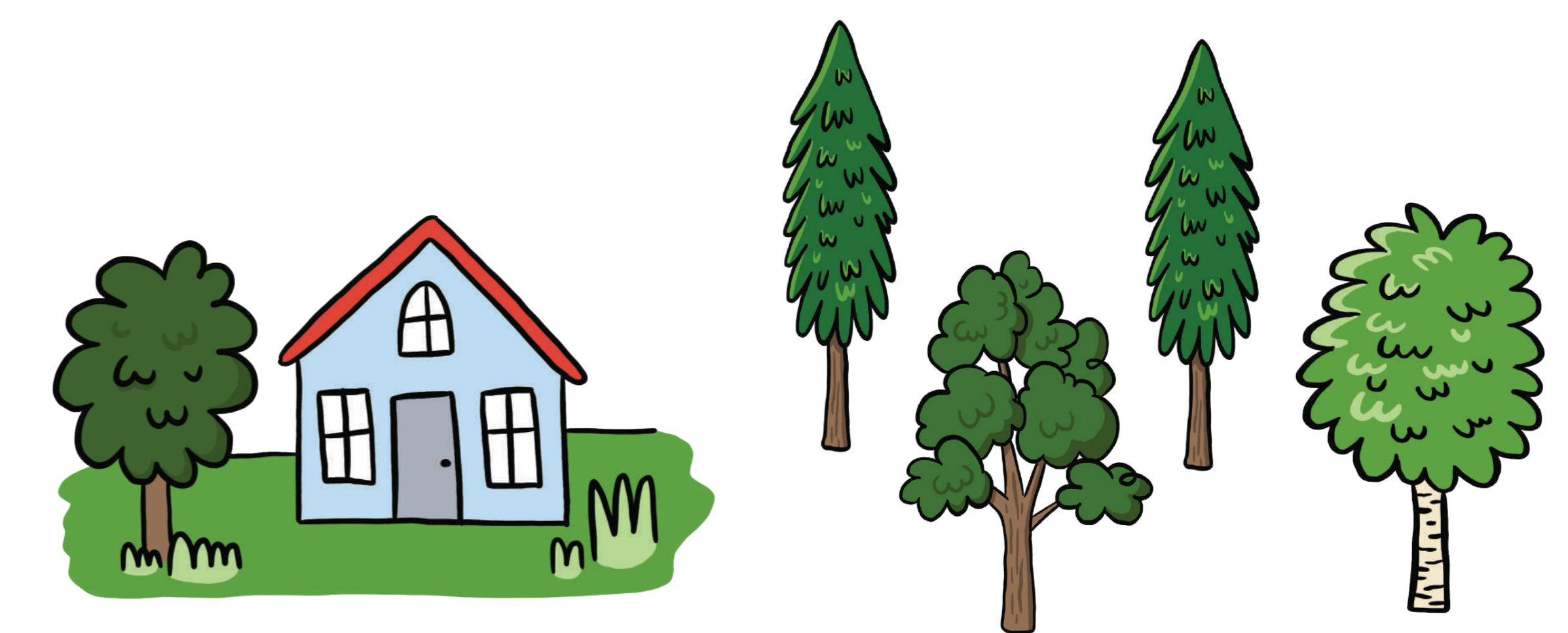
When the forest is on fire

Imagine our forest here is on fire. That would be really bad. The animals that live there would no longer have a home. The forest is also important because it protects us from dangers such as avalanches, floods and falling rocks.



If the forest is burned down, it no longer offers any protection. It would also be sad because the forest is a beautiful place that we like to visit and where we feel comfortable.

So remember to take good care of the forest and help prevent fires!



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Forest fires: control and prevention

Fighting a forest fire

When there is a fire, people call the fire brigade to help. The firefighters first have to see whether people are in danger or whether there are houses that could also be on fire. Then they look to see how far the fire has spread and whether there are ways to get to the fire.



They use various devices to extinguish the fire, such as hosepipes and fire extinguishers. Sometimes large fire engines can drive to the fire. But sometimes they need help from the air, for example with a helicopter to drop water over the fire. The firefighters work hard to stop the fire and protect everyone.

Creating awareness

Most **forest fires, around 85%**, are caused by humans. It is therefore very important that everyone is aware of how dangerous fire in the forest can be. It is of great importance that everyone learns how to behave correctly in order to protect the forests in Austria.

If we are all attentive, behave correctly and alert each other to mistakes, we can help in preventing forest fires.

Rules for forest visitors in case of forest fire danger!



No smoking!

- Do not smoke cigarettes, cigars or pipes!
- Do not throw cigarettes out of a moving vehicle!

Do not light fires in the forest, not even at the edge of the forest!

- No campfires
- No barbecue fires, not even in a barbecue
- No candles
- No party flares

Do not burn wood scraps or dry garden waste!

Do not park cars or motorbikes!

- They must not be parked on meadows, forest paths or at the edge of the forest on dry grass! The catalytic converter of a motor vehicle heats up strongly and can ignite the dry grass under the car. This can cause a forest fire!

Do not leave any rubbish in the forest!

- Glass or plastic bottles, plastic film, lighters or cans can become a source of fire.
- Do not throw rubbish out of a moving car!

Observe bans on entering forests!

Forest fires must be reported immediately to the fire brigade (emergency call 122)!

Avoiding forest fires!

Fires can start very quickly!

The project Waldschutz Öblarn gives you the unique opportunity to try out in supervised guided tours how quickly it can happen to cause a forest fire unintentionally.



Be it through carelessness during a campfire, through discarded ignition sources (e.g. cigarettes) or through hot objects. During the tour, you can try out for yourself how quickly dry grass, brushwood or leaves can burst into flames.

You can also test (sometimes together with the fire brigade) how you can extinguish the fire with our bucket sprayers.



Tell your family and friends about your experiences: Because the more aware we all are of the causes and dangers of forest fires, the better we can avoid them!

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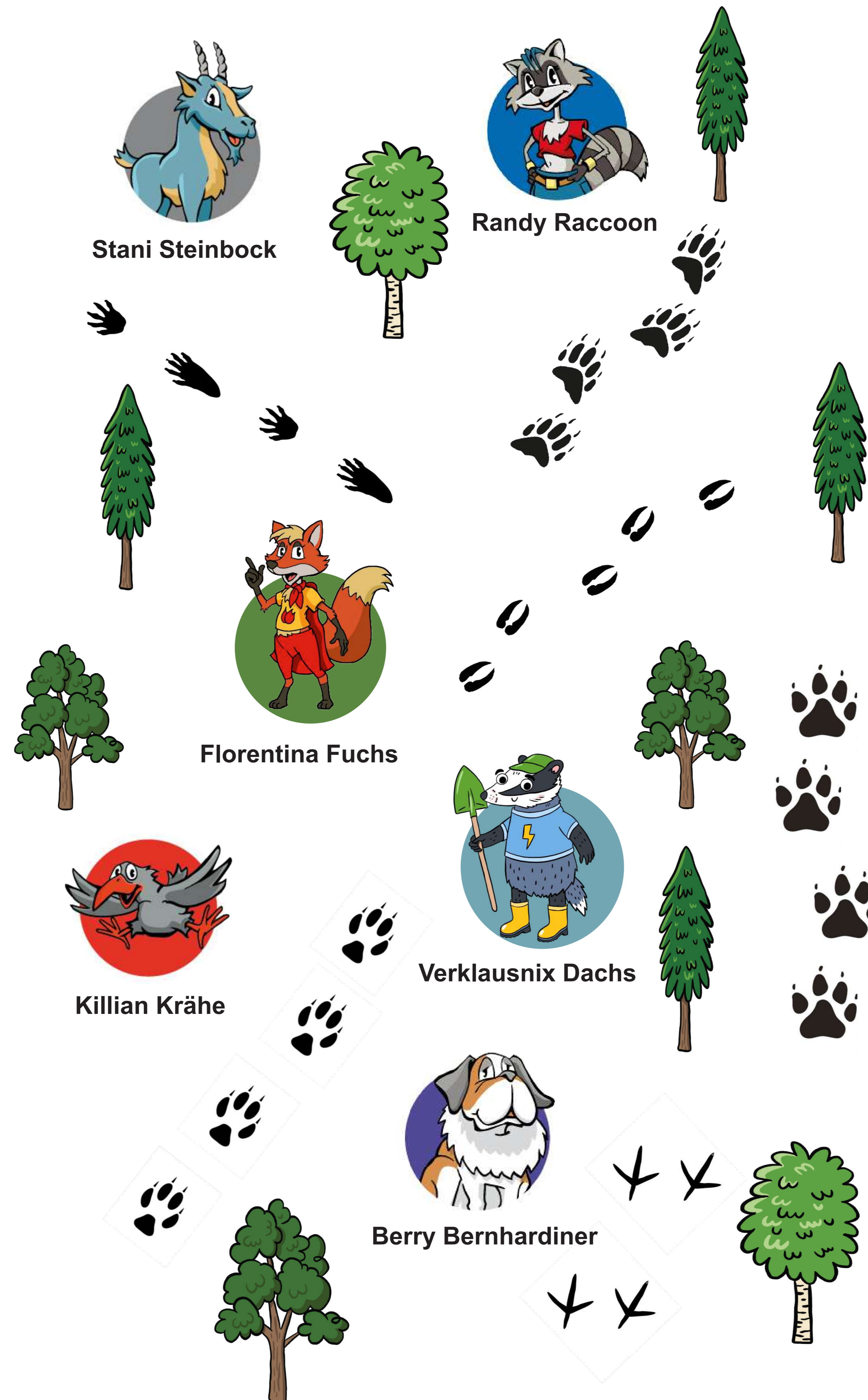


The forest as a recreational area

The forest has a recreational effect

Do you know how great the forest is? It's like a huge, green room full of secrets and adventures! Do you know why so many people like to spend time in the forest? Because it's really quiet there and you can relax. **When we are in the forest, we feel better and healthier.** The air there is particularly fresh and pure, it helps our body to recover and strengthens our immune system. Our heart and nerves are also happy when we are in the forest!

We can do lots of funny things in the forest, such as going for a walk, hiking or even cycling if it's allowed. If we take good care of the forest, it will remain strong and can offer us many more adventures.



The animals need rest too

Did you know that the forest is full of animals that often hide? Most of them are shy and run away when they see us. But you know what? Sometimes we can spot their tracks in the snow or in the muddy ground! These are like little messages they leave behind. **Can you match the tracks on the right side to the corresponding animals?**

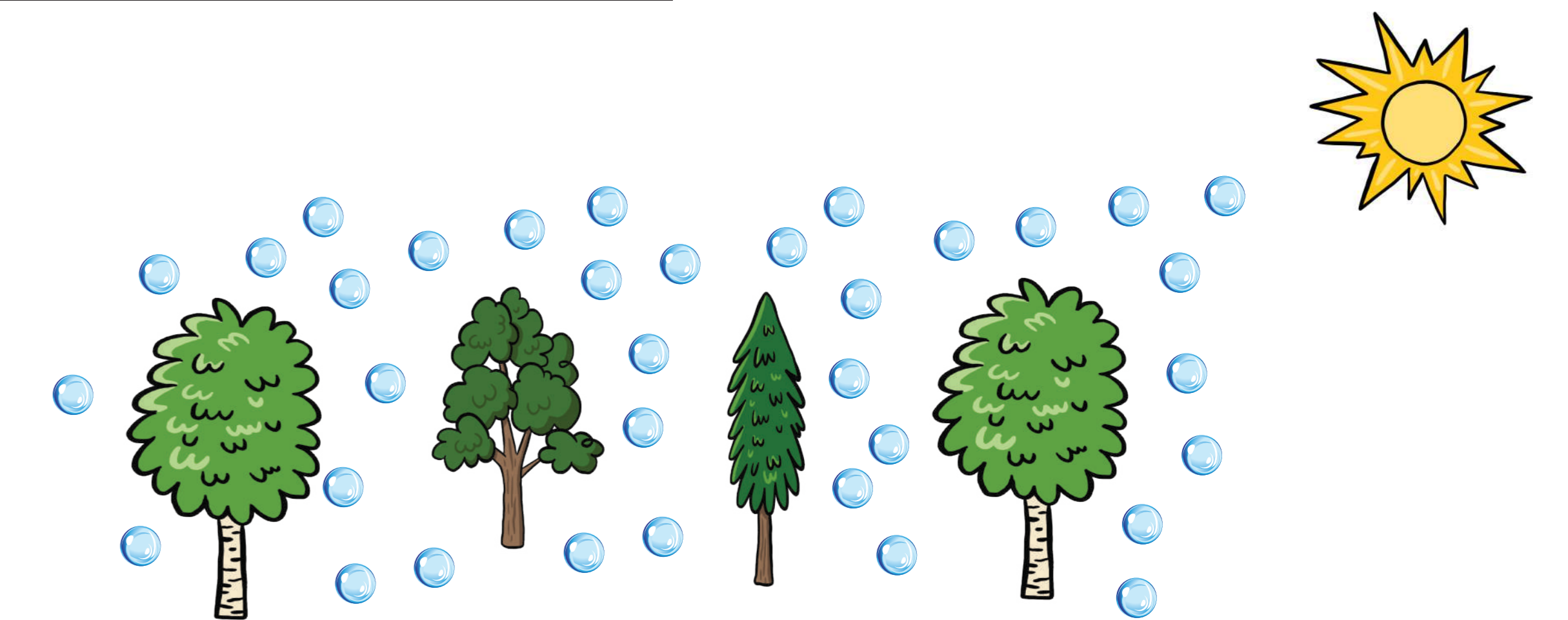
If you look closely, you might be able to spot tracks of forest animals in the area! So keep your eyes open and be very quiet, maybe you can find some animal tracks! **This is another reason why it is so important to care for the forest.** Think of the cute squirrels, the nimble birds and the shy deer. When we protect the forest, we help these animals stay safe and healthy.

The forest is like a big family in which we all live together and have to help each other.

The forest - a natural air conditioner

Do you know how the **forest** helps us when it's really hot? **It's like a big fridge!**

Imagine you are outside on a super hot day and go into the forest. It's much cooler there! But why is that? The treetops provide shade. Trees also "sweat": they absorb a lot of water through their roots, which they release through their leaves and needles when it gets hot. Water also evaporates from the ground. This cools rising warm air. As a result, the air in the forest remains fresh and cool. The forest therefore functions like a **natural air conditioning system!**



Did you know that forests also provide a pleasant climate in cities? If there are lots of trees and plants in the city, it also gets a bit cooler there. That's why more and more trees are being planted in cities so that it doesn't get too hot there. **The forest really is a hero that helps us to feel comfortable, especially on hot days!**

Give it a try!

Do you want to start a cool mission? You can test the powers of the forest for yourself!

Take a thermometer and go into the forest on a hot summer's day. Take a journey through the forest and hold the thermometer in different places. **Measure the temperature and write down how warm it is.**

Then go out of the forest and measure the temperature again. Compare the figures and work out how much cooler it is in the forest!

You'll see how magical the forest is when it's hot.

Have fun discovering, measuring and cooling off!



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Water and recreation - the forest as a basis

Recreation in and around the water

Water is very important to us humans, not just for drinking, but also for having fun and relaxing! Many people love to spend time outdoors in the nature, especially in places like lakes, rivers or stream banks.

In Austria, there are many such places where we can play, swim and relax. Visitors from home and abroad like to spend their holidays in the mountains, in the forest and by the water! In 2023, over 45 million people spent their holidays in Austria. That's almost 5 times as many people as there are inhabitants in Austria! This shows how much people enjoy our nature.



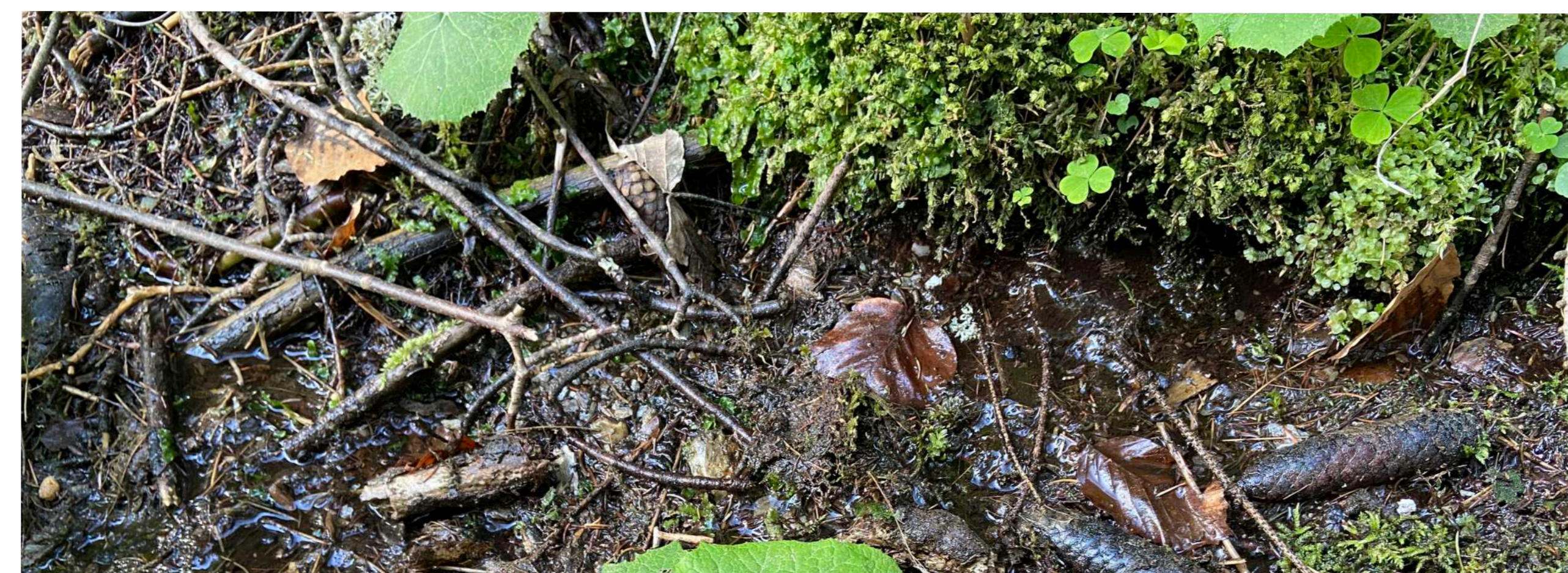
The forest and our water

Trees are like giant **umbrellas**. Their leaves catch the rain and thus protect the soil from **erosion**. Trees are also like **water pumps**. With their long roots, they draw water from the ground and release it again through their leaves and needles. Some trees can even release up to 1600 litres of water per day. That's 160 large buckets or 18 full bathtubs!

And last but not least, forests act as **water reservoirs**. Water is stored in the forest soil. This prevents the soil from drying out, provides sufficient groundwater and drinking water and protects us from flooding.

The forest soil as a water filter

Do you know why **trees** are even more important? **They provide clean water!** In the forest there are many small tunnels and cavities in the ground. Water collects there. Trees, fungi and tiny animals help to purify the water. It then flows into the groundwater or comes to the surface again at springs. **This is another reason why it is so important to look after the forest and not pollute it!**



The forest is therefore a real multi-talent and makes it possible for Austria to be a country of clean drinking water.

We still have drinking water from the pipes and not just from bottles as in many other countries around the world!

Further experiments on the filter function of the forest floor can be found in the Naturpark Sölk-täler exhibition:

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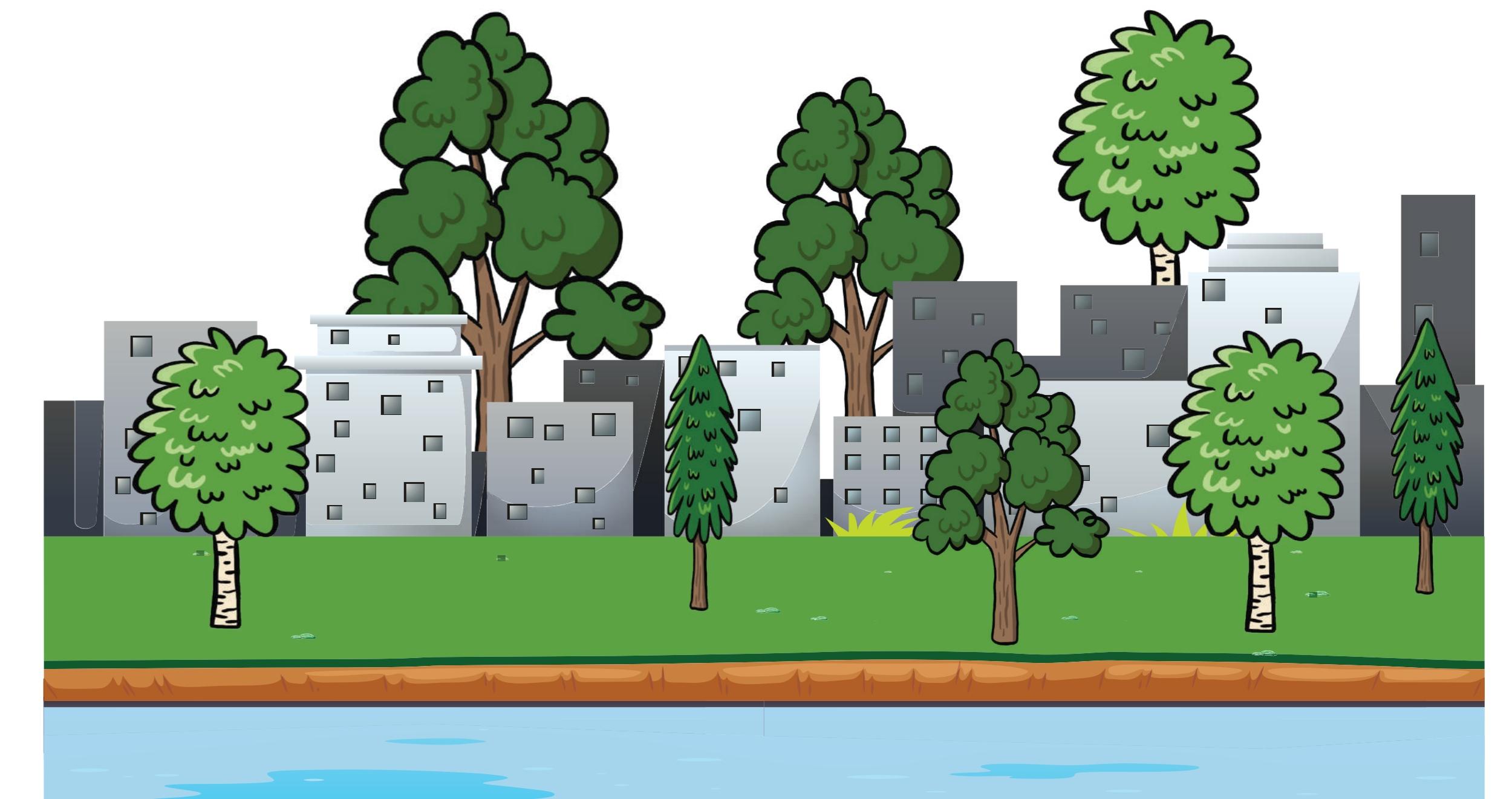
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Water also acts as a natural air conditioner

Imagine you're in the city on a summer's day. The sun is blazing down from the sky and it's really hot. In addition to lots of greenery in the city, something else helps us to cool down: Water!

Streams and rivers flow through many cities. If they are cleverly designed, i.e. if they are surrounded by green banks with shade-giving trees, they can really refresh us.



This is because **water** also helps to make the heat more bearable in a natural way. It **absorbs the heat and stores it so that it doesn't get so hot** in the surrounding area.

Water is therefore not only there for drinking, but also for cooling down. That's why it's important in cities that we not only pay attention to "green", but also to "blue" in order to protect ourselves from the effects of climate change.

Try it for yourself!

If you're at the **Augelände in Öblarn** and the Walchenbach is at low water, don't hesitate to go down to the stream bed and play. You can **build dams**, **play with homemade wooden boats** or even **splash around in the water.**

If you are particularly interested, you can also measure the water temperature and compare it with the air temperature. You will also notice how pleasantly cool it is near the clean water.

Don't forget - our forests make all this possible!

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