

Welcome to the Water in the Woods Activity

Water is crucial for all life. Have you ever wondered how much water makes up certain species?

Let's find out!

Steps:

1. Decide who will be the reader(s) and who will be the guesser(s)
2. The reader will choose and place one card into the folder. The information side should face you
3. The blue folder represents water. Meaning, when the card is fully in the folder, that is how much water makes up that species. The more the card gets pulled out the less it is covered by the blue (water) in the folder and the less that species is made up of water.
4. The reader should slowly pull the card up and out of the folder so that the guesser can guess how much water they think makes up that species!
5. The reader will then reveal how much water truly makes up that species. You will be surprised! Don't forget to check out the fun facts.
6. Repeat as much you want 😊

Optional:

- Play the matching game handout or take it home with you.
- Review "What does water do for you"

Materials:

15 animal/plant cards, circle of life graph, what does water do for you sheet, matching game and suggestions handout, clear blue folder

Additional information:

HUMANS: People (and most animals and plants) are healthier when they get water every day.

- Adult humans need approximately 2-3 quarts every day.
- Humans drink water and get water from the food they eat.

BIRDS : Adult birds are about 60% water, regardless of size.

TREES AND OTHER PLANTS: Plants contain even more water than animals do - most of them, like **sword ferns** are anywhere from 90% to 95% water.

- Plants take in water through their roots.
- Water helps plants move food from one part of the plant to another.
- Plants also use water to support themselves. The pressure from the water inside the plant keeps it up. Can you remember seeing a wilted plant?
- Plants release the water into the air through their leaves when they need to cool down.
 - They 'sweat' like people but it has a special name when a plant does it called transpiration!
 - About 1 in every 10 drops of water in the air come from plants. The rest comes from the oceans, lakes and rivers.
- Without water in the air it would never rain!
- An oak can take in 100 gallons of water a day and transpire (sweat) up to 40,000 gallons a year.
- Just like the earth cleans the water, transpiration or plant sweat can clean water by removing contaminants and pollution.

Moss is a special kind of plant.

- It absorbs water like a sponge.
- Some moss can absorb 20-30 times its weight in water.
- Moss is a moist place for lots of small animals (insects) to live. These small insects are food for other animals like birds.
- Do you have moss where you live? Maybe it isn't so bad. The more moss you have = the less lawn mowing!

Living trees can be very wet. They are different from other plants because of their size.

- Like small plants, the leaves or needles of a tree may be almost all water, 90-95%.
- Depending on the type of tree and the time of year, the trunk, branches and roots of live trees maybe only 30% water or more than 66% water. It is common for trees to be 50% water.
- Tree roots help keep the tree in place and keep soil from washing away when there is a lot of rain.
- **Oak trees** and other trees that lose their leaves don't need as much water in the winter as they do in the summer, so rain soaks into the ground and goes into streams. This is good because the water fills up reservoirs for later use. Evergreens (like **Douglas firs**) keep their

leaves (needles) in the winter and all year. They transpire (sweat) more all year and reduce the water in streams.

ANIMALS

DEER: Deer are about 70% water.

- Deer and other animals may die in as little as three days without water.
- Deer lose weight and stop eating when they don't get all the water they need and we think they need 3-6 quarts each day.

Where do deer get water? Three sources:

1. Like us they drink water that is 'free flowing'. We get water from a faucet. Deer get theirs from ponds, streams, and the dew on plants.
2. Preformed water, or that contained in plants. Just like our food contains some of the water we need, so does the food that deer eat. It is possible, but we are not sure, that with lush forage (lots of green plants) available, deer may not need free water at all.
3. Third is water that their body makes as part of living (metabolism). This is true for people and other animals too.

BOBCATS: Bobcats are about 70% water.

Bobcats don't avoid the water like most cats. They are predators that can swim!

RACCOONS: Raccoons are about 70% water.

Raccoons' forepaws are sensitive and even more sensitive when wet. When their paws are wet this helps them better identify objects in their hand as being food or not.

FROGS: Frogs are about 80% water.

- Instead of drinking water, frogs soak it into their body through their skin.
- Frogs breathe about half the air they need through their nostrils and half through their skin. Their skin needs to be wet so they can breathe through it.
- A frog is an amphibian. They lay their eggs in water. The eggs hatch into a tadpole which lives in water until it metamorphoses into an adult frog. (Metamorphoses like a caterpillar turns into a butterfly!)
- Almost all amphibians have thin, moist skin that helps them breathe. No other group of animals has this special skin.

INSECTS: Insects are about 70% water – some of the time.

- There are many different insects, some can take in 10 times the amount of water they have in their body in the form of liquid food.
- Other insects can lose up to 90% of the water in their body and live.
- These abilities help insects survive heat and cold.

HOW ANIMALS AND PLANTS USE WATER BESIDES DRINKING:

To keep clean:

Birds take baths to care for their feathers and remove parasites (tiny creatures that irritate them).

To be safe:

Some birds swim and dive to avoid predators.

Deer go to the bathroom in a stream to hide their scent from predators.

To find food:

Bobcats are predators that can swim! They don't avoid the water like most cats.

Raccoons wet their front paws to better feel if they are holding something that is food or not.

To breathe:

Amphibians can breathe through their nostrils and their skin! Frogs have to be wet to breathe through their skin.

To reproduce:

Many animals lay their eggs in water then live on land as adults, like frogs and rough skinned newts.

For transportation:

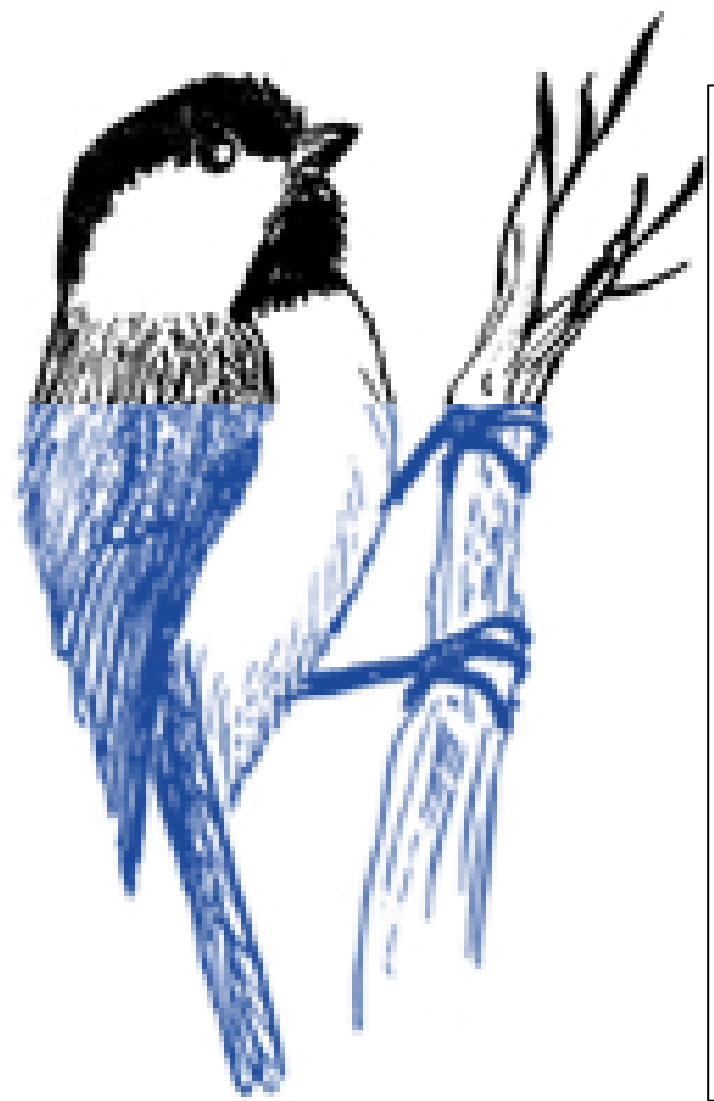
Birds, amphibians and other animals float or swim from place to place.

To stand up:

Plants use water to stand up!

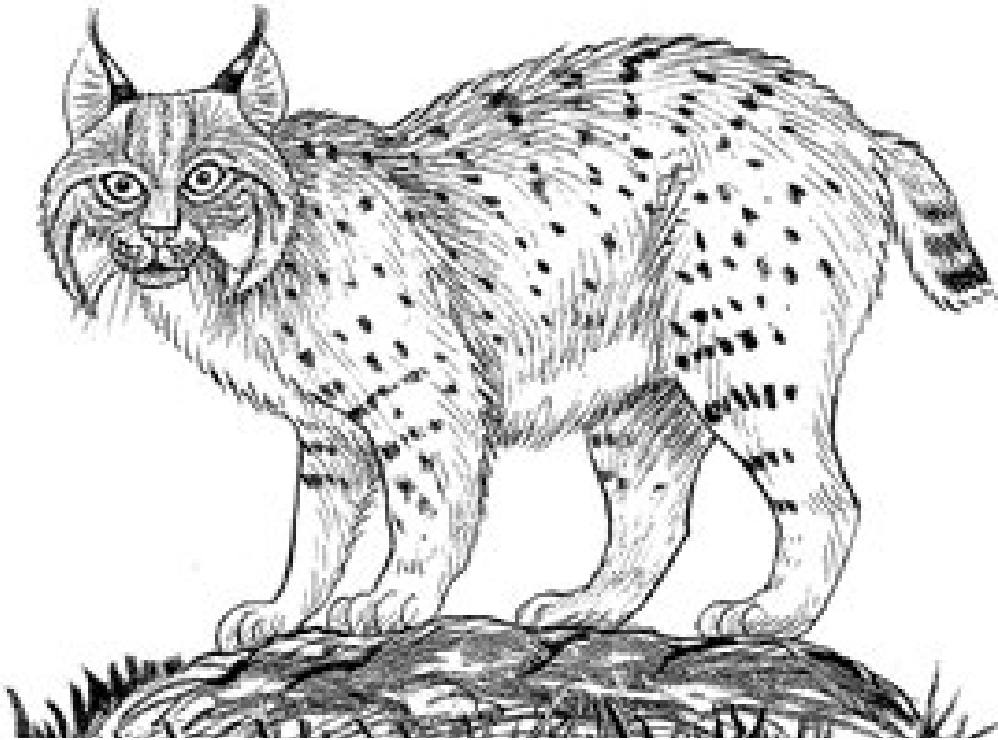


Black-capped chickadee

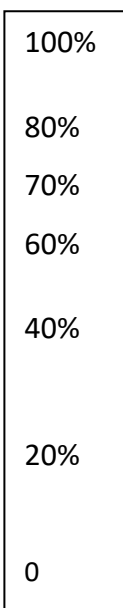


Black-capped chickadee is
about 60% water.

Birds take baths to care for their feathers and
remove parasites (tiny creatures that irritate them).



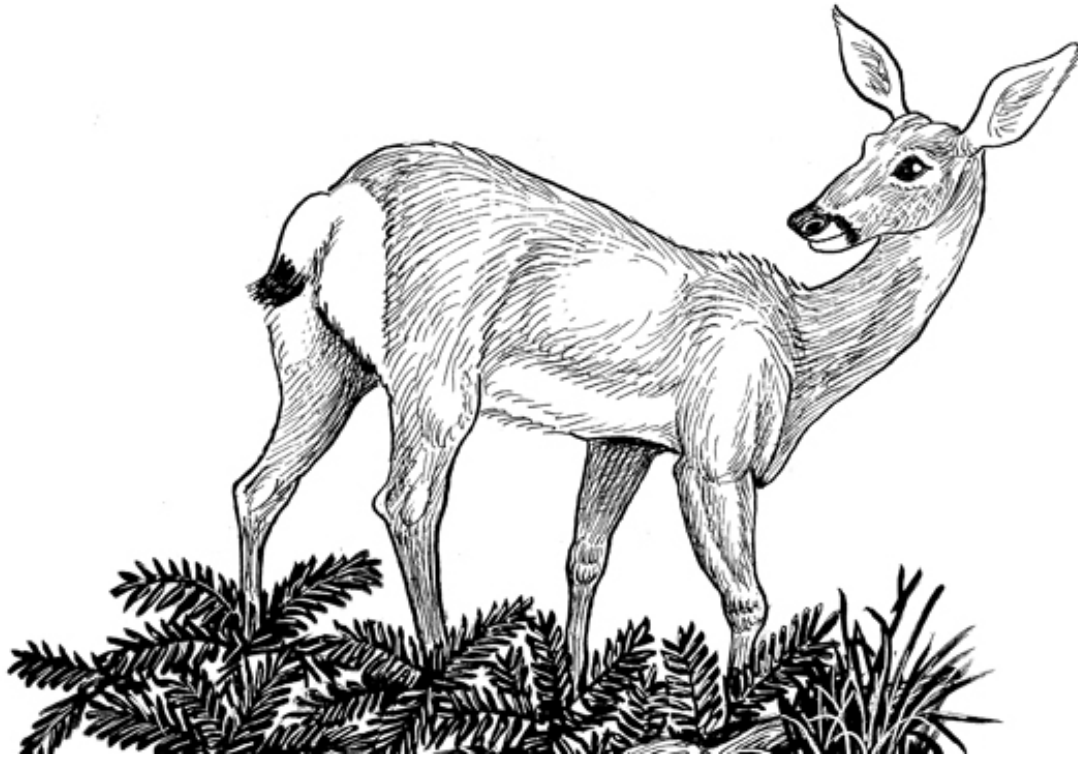
Bobcat



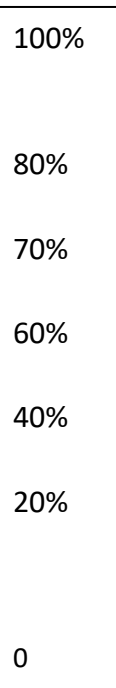
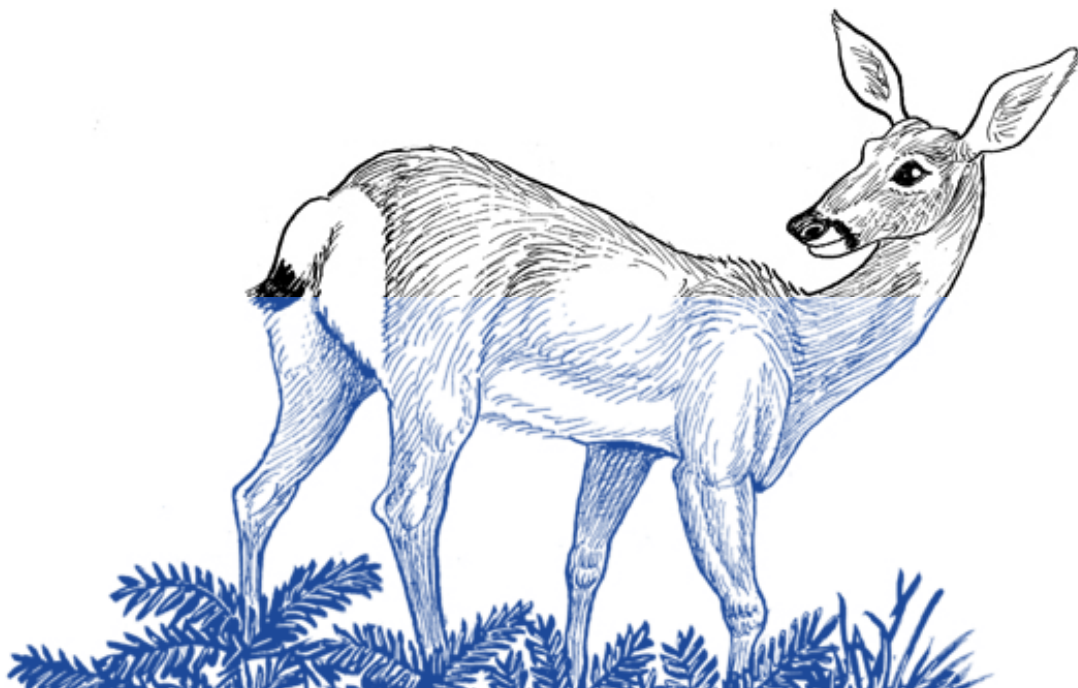
Bobcat is about 70% water.

Bobcats don't avoid the water like most cats.

They are predators that can swim!

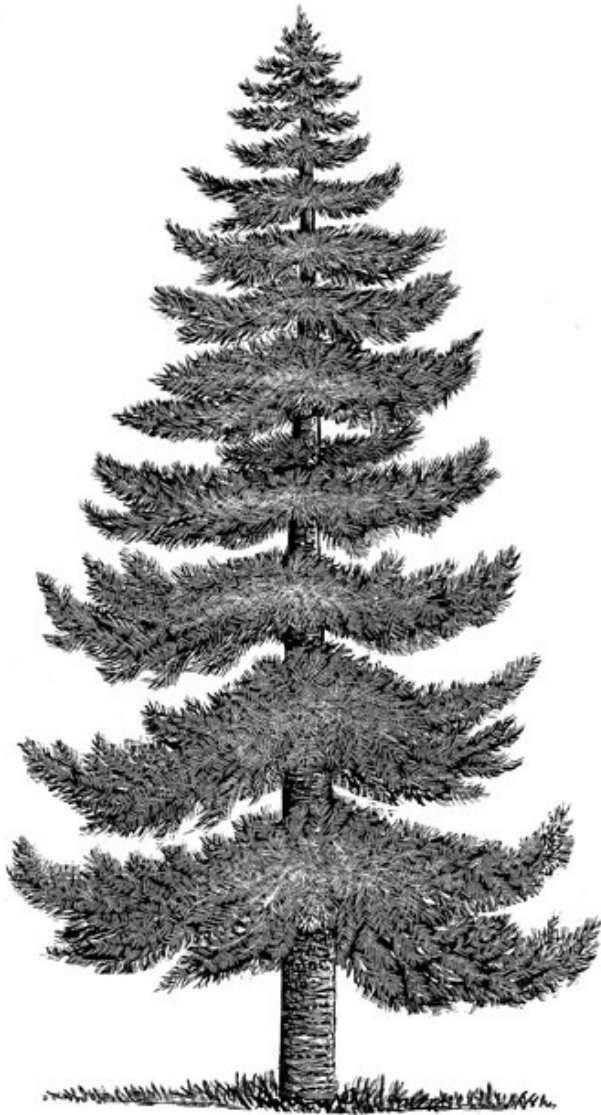


Deer

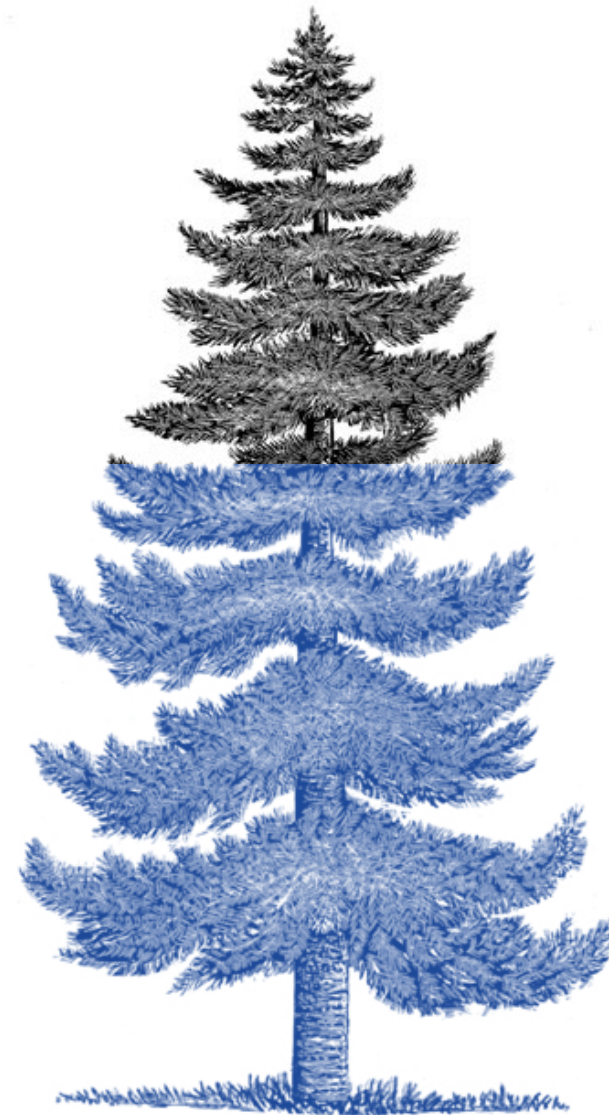


Deer is about 70% water.

- Deer and other animals may die in as little as three days without water.
- Like us they drink water that is 'free flowing' in ponds and streams.
- They also get water from plants. Just like our food contains some of the water we need, so does the food that deer eat. It is possible, but we are not sure, that with lush forage (lots of green plants) available, deer may not need free water at all.
- To be safe, deer go to the bathroom in a stream to hide their scent from predators.



Douglas Fir Tree



100%

80%

60%

40%

20%

10%

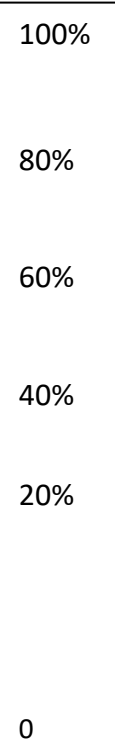
Douglas Fir Tree is more than
50% water.

Living trees can be very wet. They are different from other plants because of their size.

- Like small plants, the leaves or needles of a tree may be almost all water, 90-95%.
- Depending on the type of tree and the time of year, the trunk, branches and roots of live trees maybe only 30% water or more than 66% water.



Frog



Frog is about 80% water.

- Instead of drinking water, frogs soak it into their body through their skin.
- Frogs breathe about half the air they need through their nostrils and half through their skin. Their skin needs to be wet so they can breathe through it.
- A frog is an amphibian. They need water to lay their eggs. The eggs hatch into a tadpole which lives in water until it metamorphoses into an adult frog. (Metamorphoses like a caterpillar turns into a butterfly!)
- Almost all amphibians have thin, moist skin that helps them breathe. No other group of animals has this special skin.
- Rough skinned newts are amphibians too!



Great Horned Owl

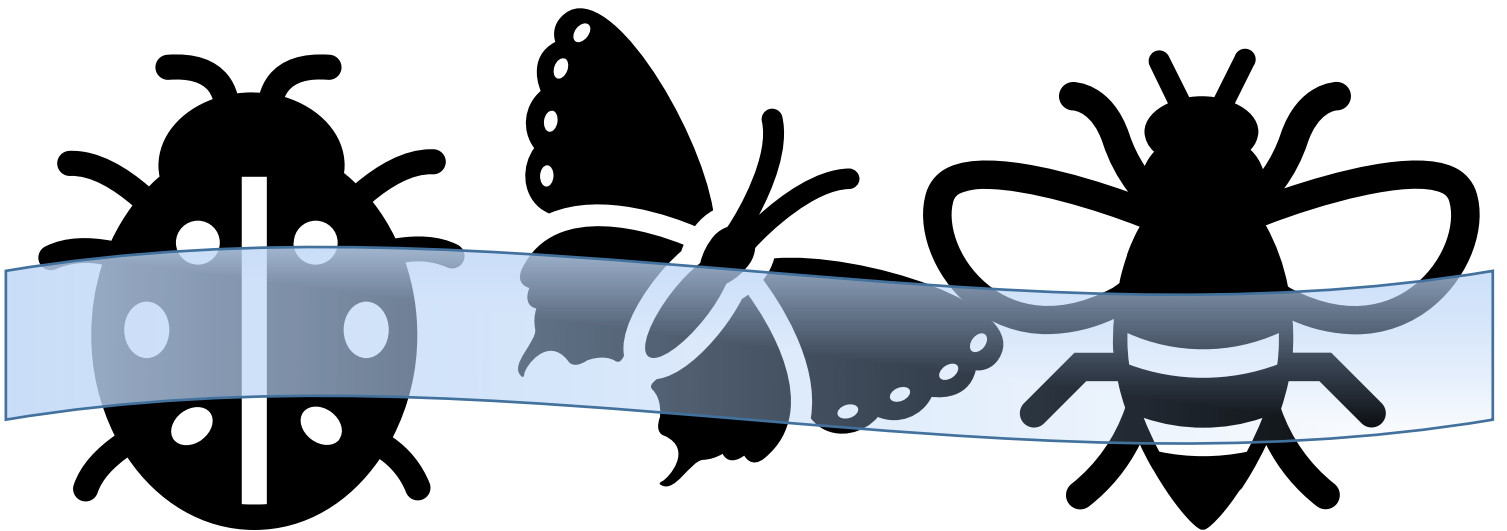


Great Horned Owl is about
60% water.

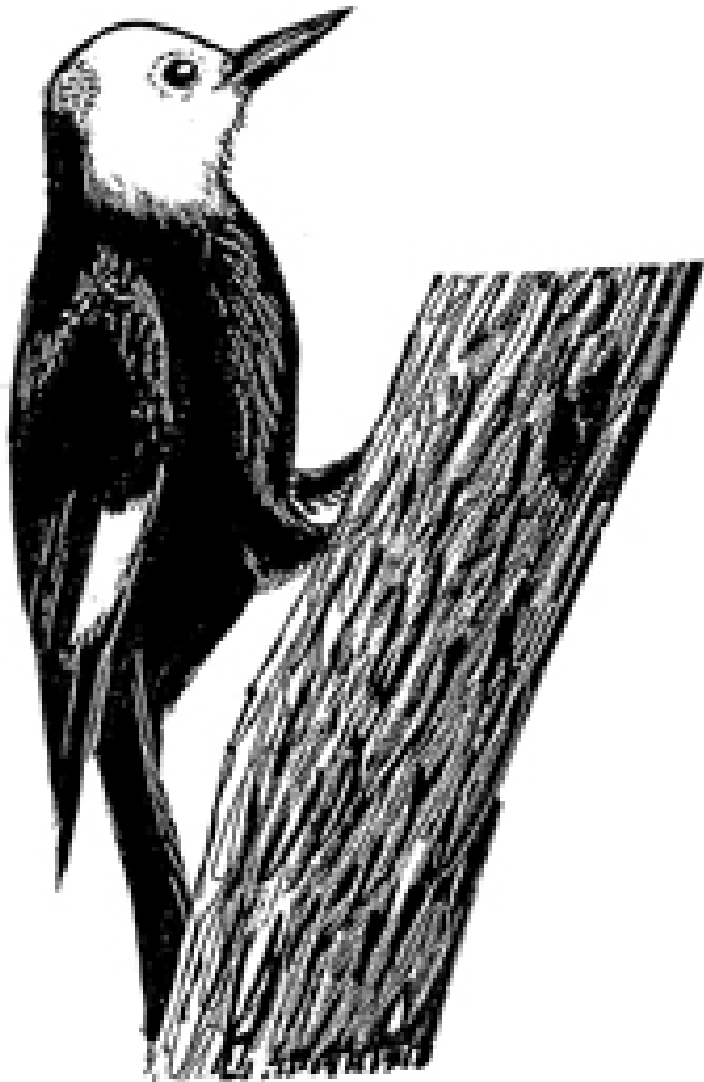
Adult birds are about 60% water, regardless of size.



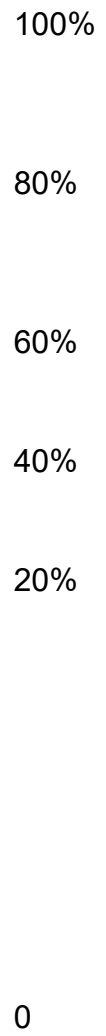
Insects and more!



It depends! An insect may have more or less water depending on their stage of life, like a caterpillar or butterfly. Many can lose half of the water in their body and survive.

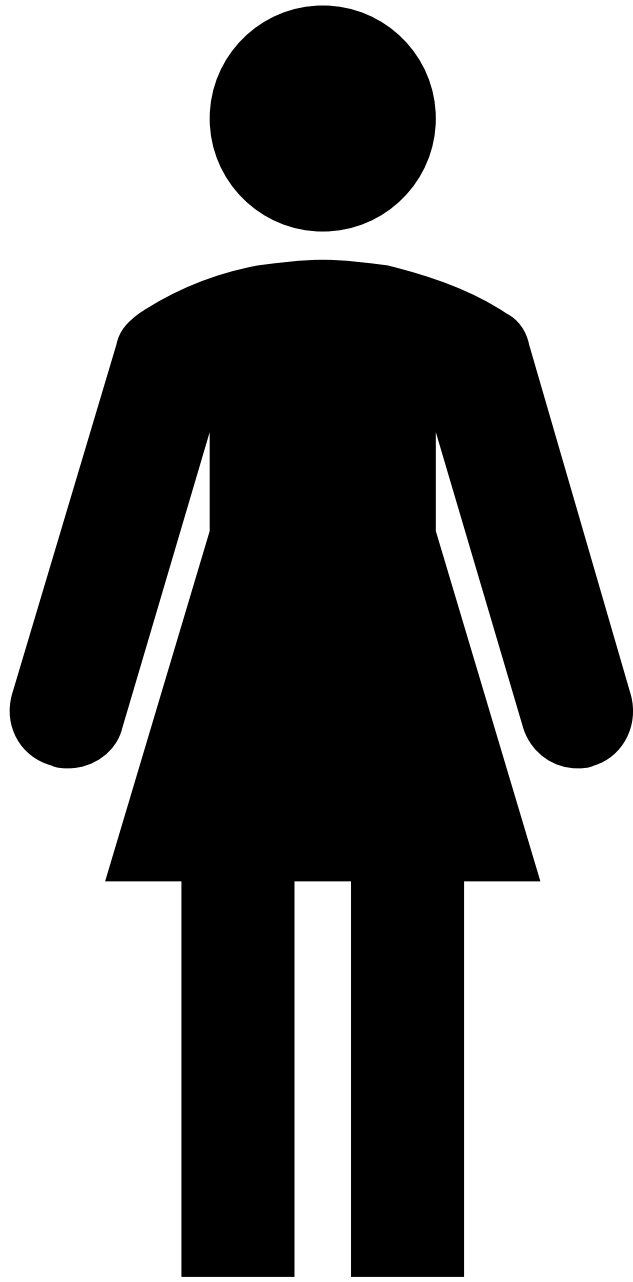


Woodpecker

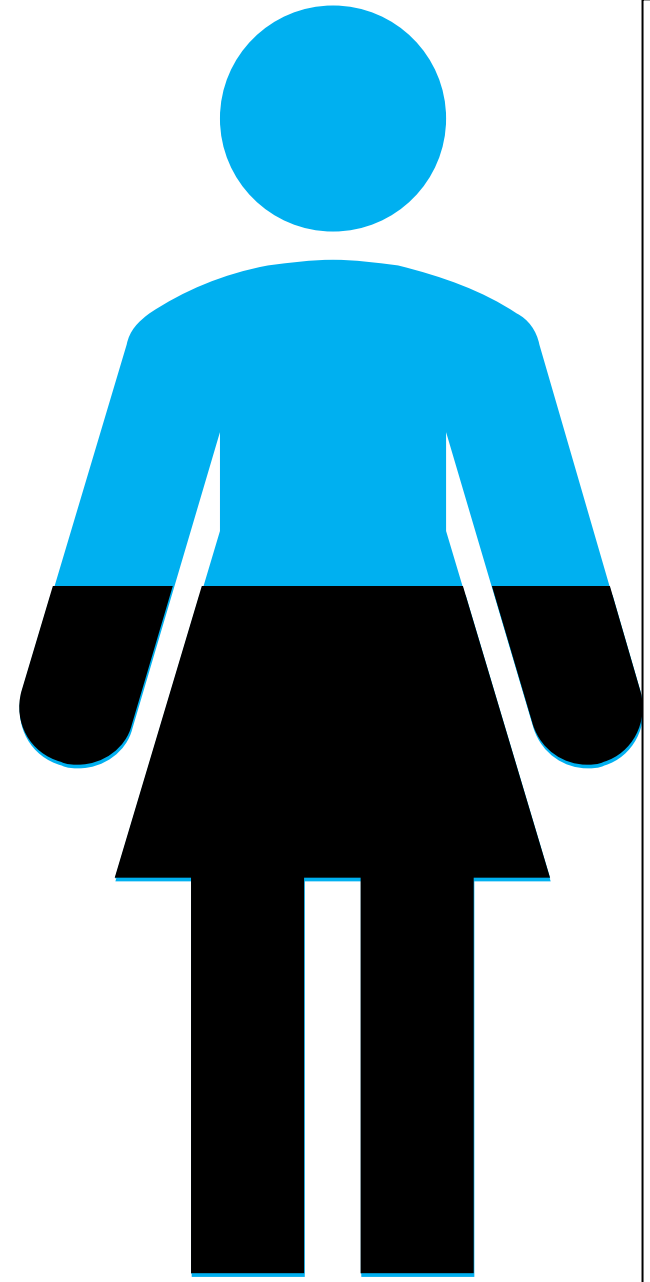


Woodpecker is about 60%
water.

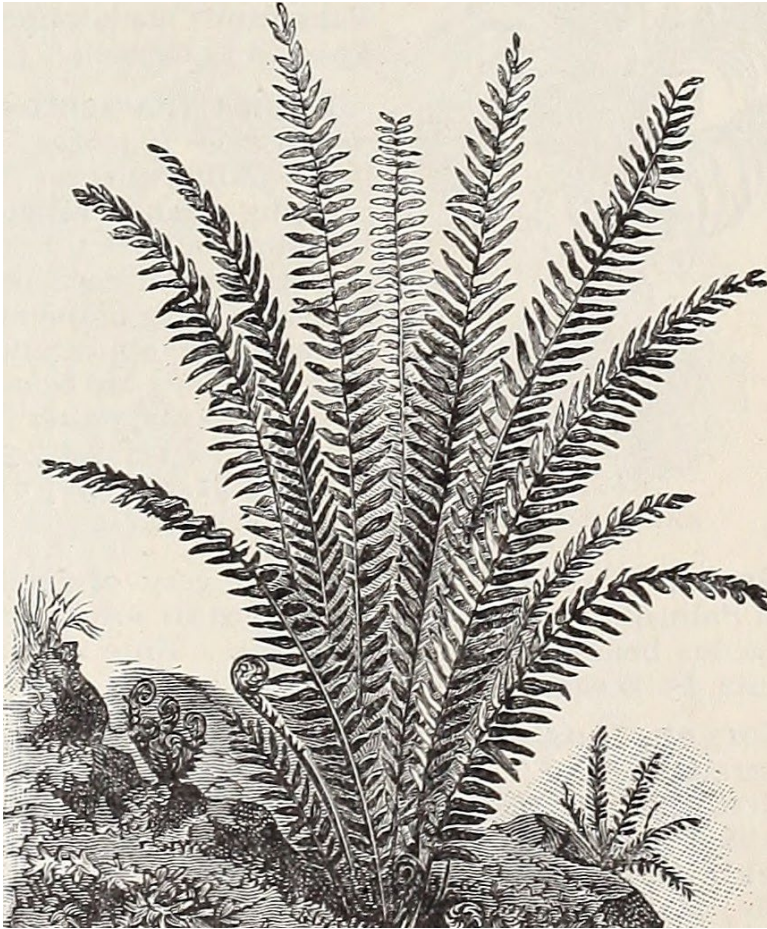
Birds like ducks and geese swim and dive to avoid predators.



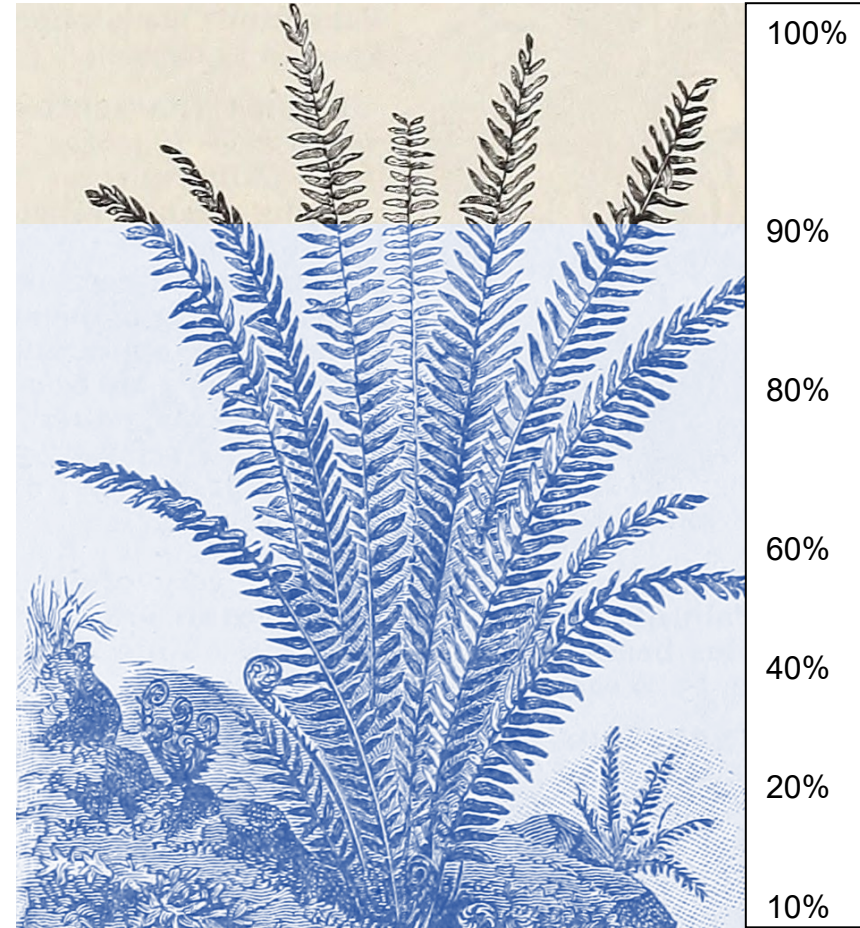
Woman



Woman is about 55% water.

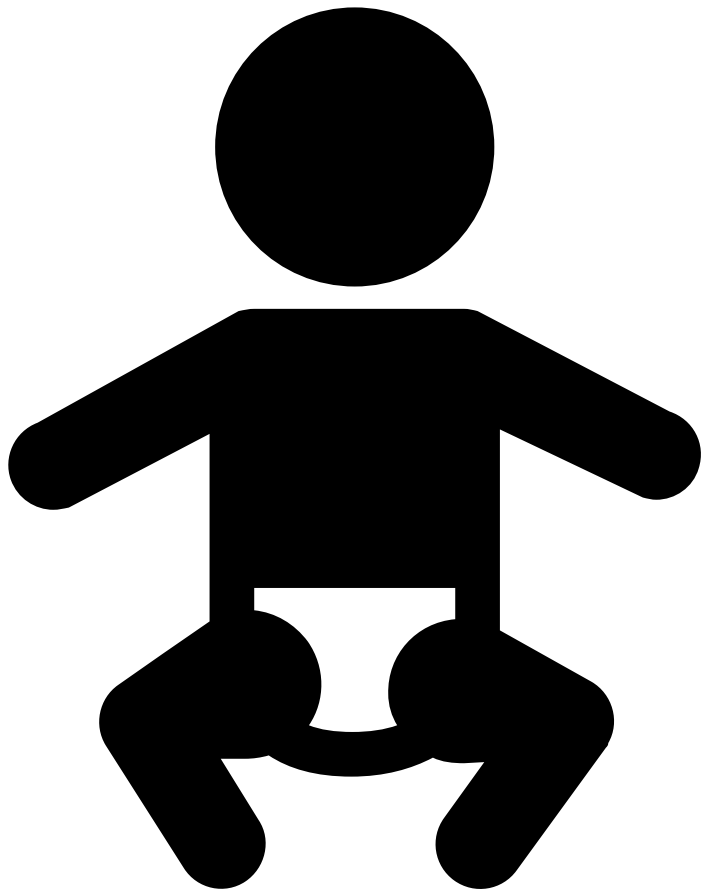


Sword Fern

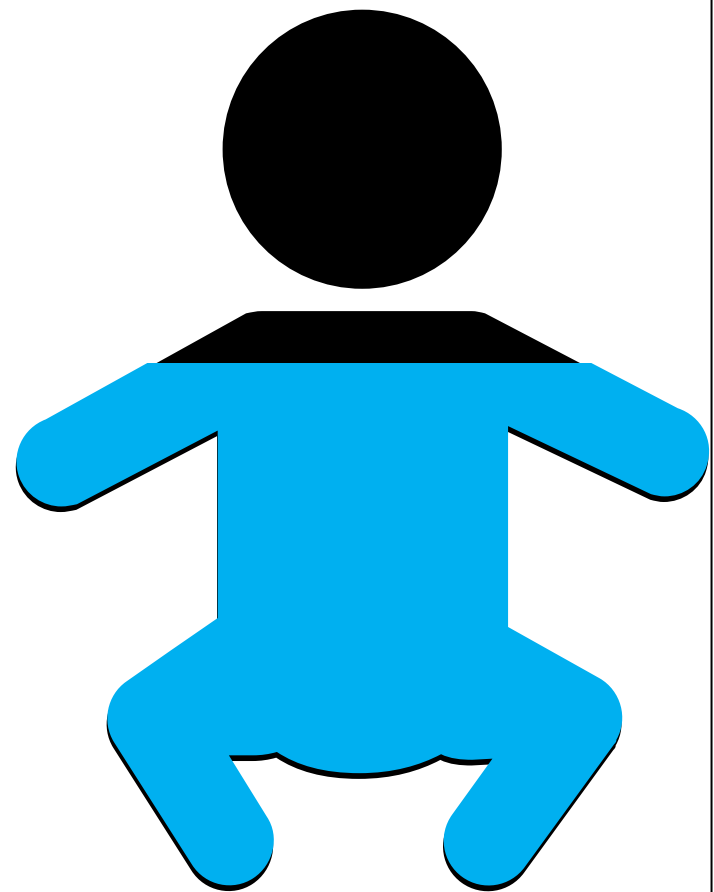


Sword Fern is about 90% water.

- Water helps plants move food from one part of the plant to another.
- Plants use water to support themselves. The pressure from the water inside the plant keeps it up. Can you remember seeing a wilted plant?
- Plants release the water into the air through their leaves when they need to cool down.
 - They 'sweat' like people but it has a special name when a plant does it called transpiration!
 - About 1 in every 10 drops of water in the air come from plants. The rest comes from the oceans, lakes and rivers.



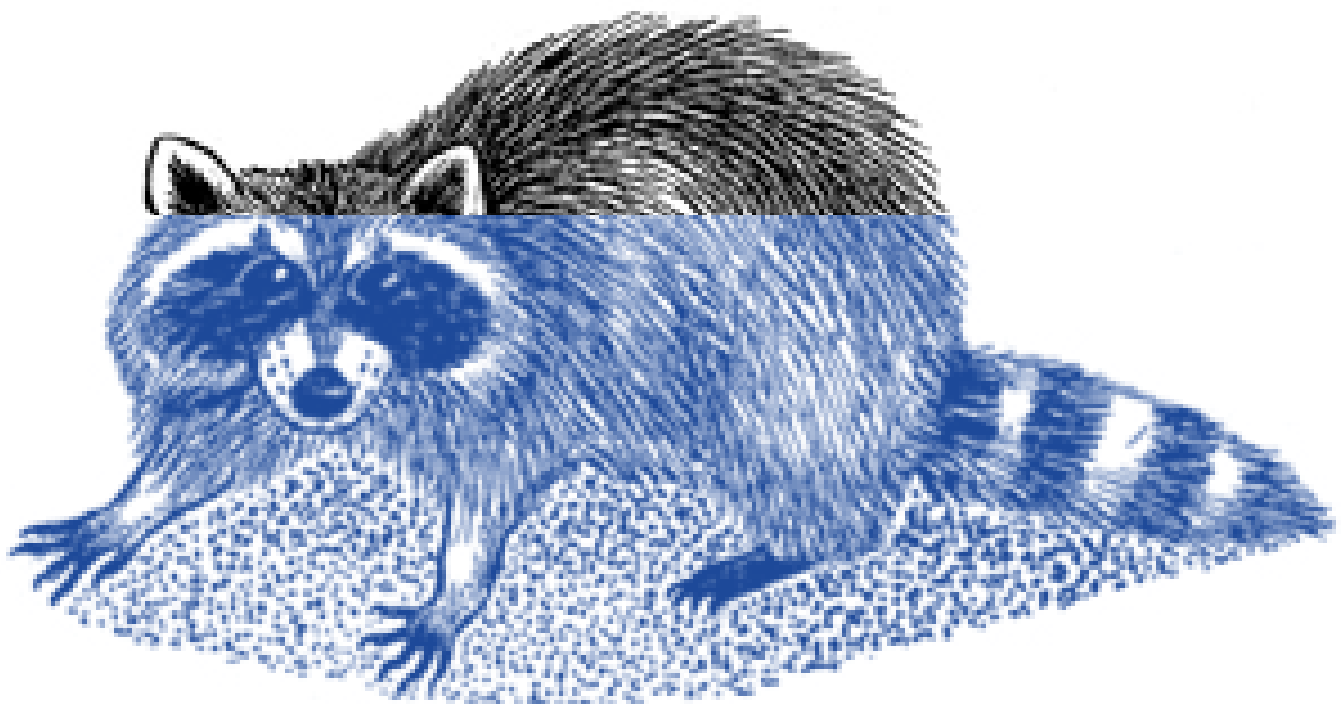
Infant



Infant is about 75% water.
Depending on their size
children are about 65% water.



Raccoon

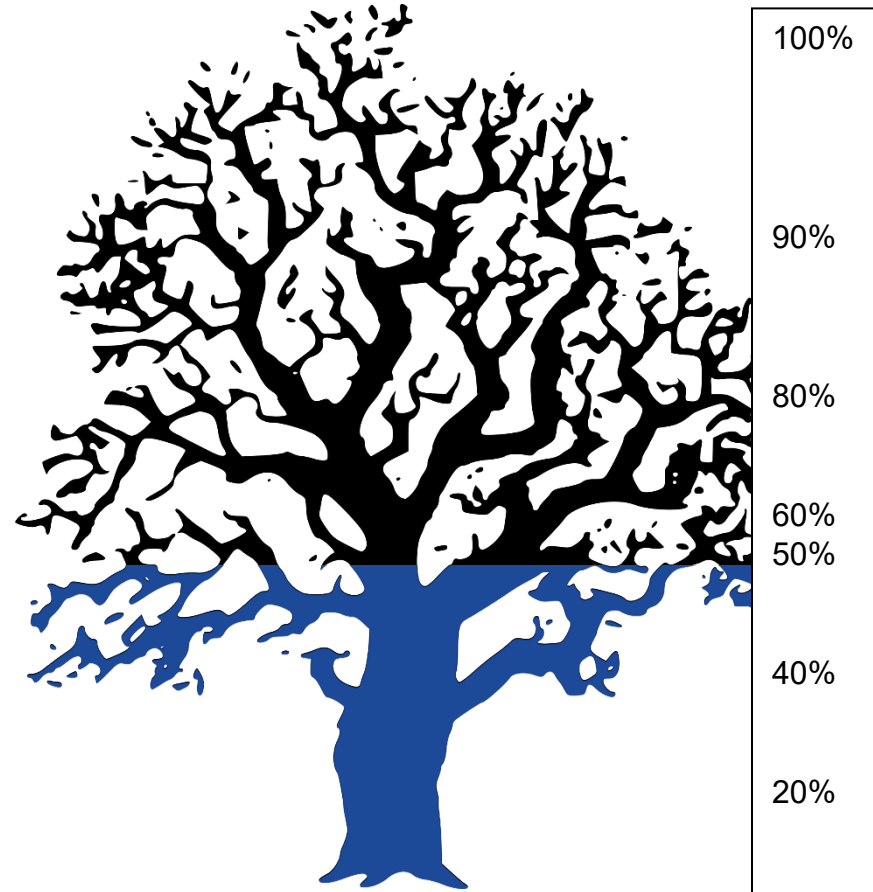


Raccoon is about 70% water.

Raccoons wet their front paws to better feel if they are holding something that is food or not.



Bare Oak Tree

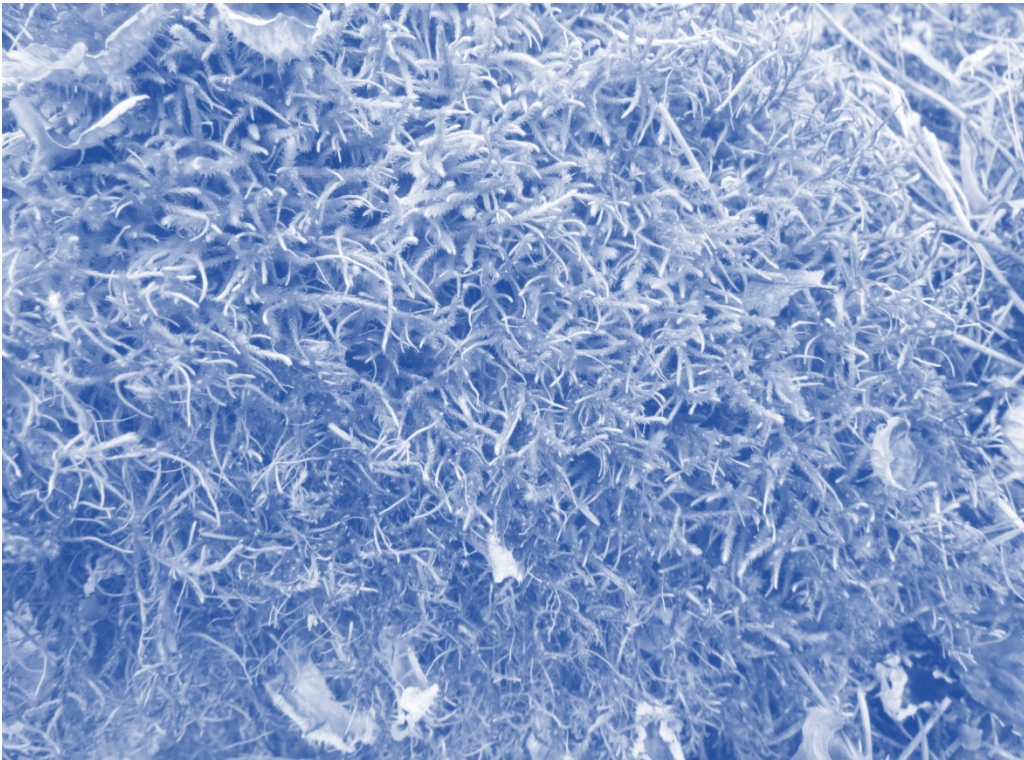


Bare Oak Tree is about
50% water.

- Tree roots help keep the tree in place and keep soil from washing away when it rains a lot.
- Oak trees and other trees that lose their leaves in the winter don't need as much water as they do in the summer, so rain soaks into the ground and eventually flows into streams.
- This is good because the water fills up reservoirs for later use.
- Evergreen trees (like Douglas firs) keep their leaves (needles) in the winter and all year. They transpire (sweat) more and reduce the water in streams.

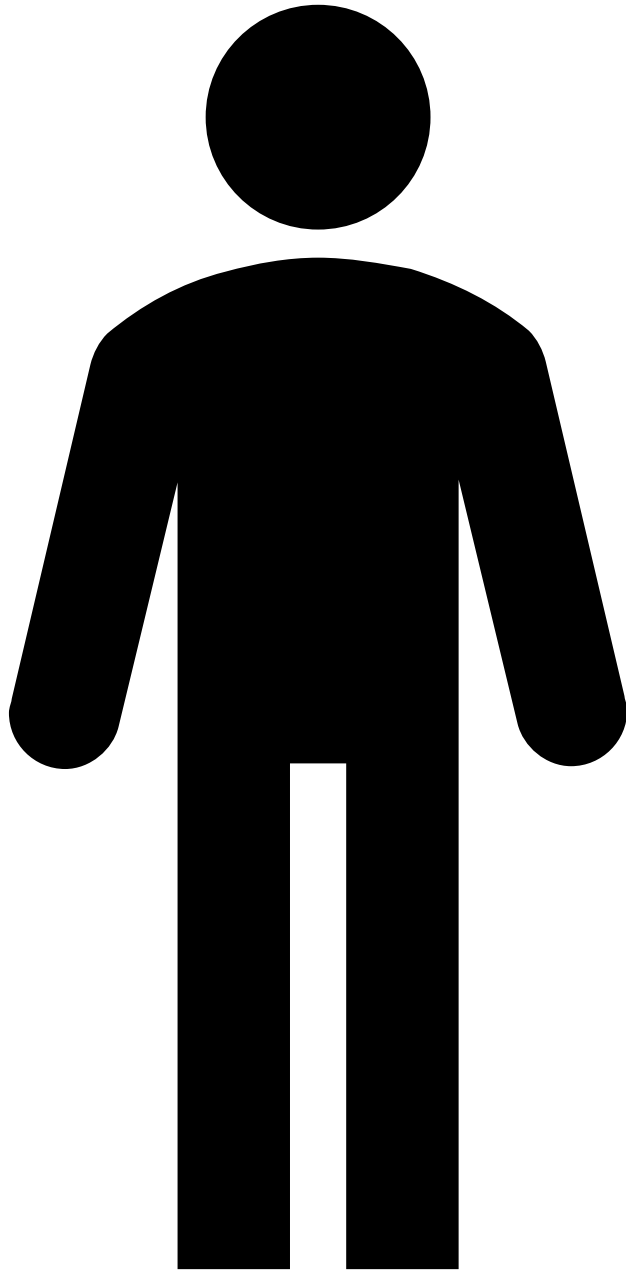


Moss

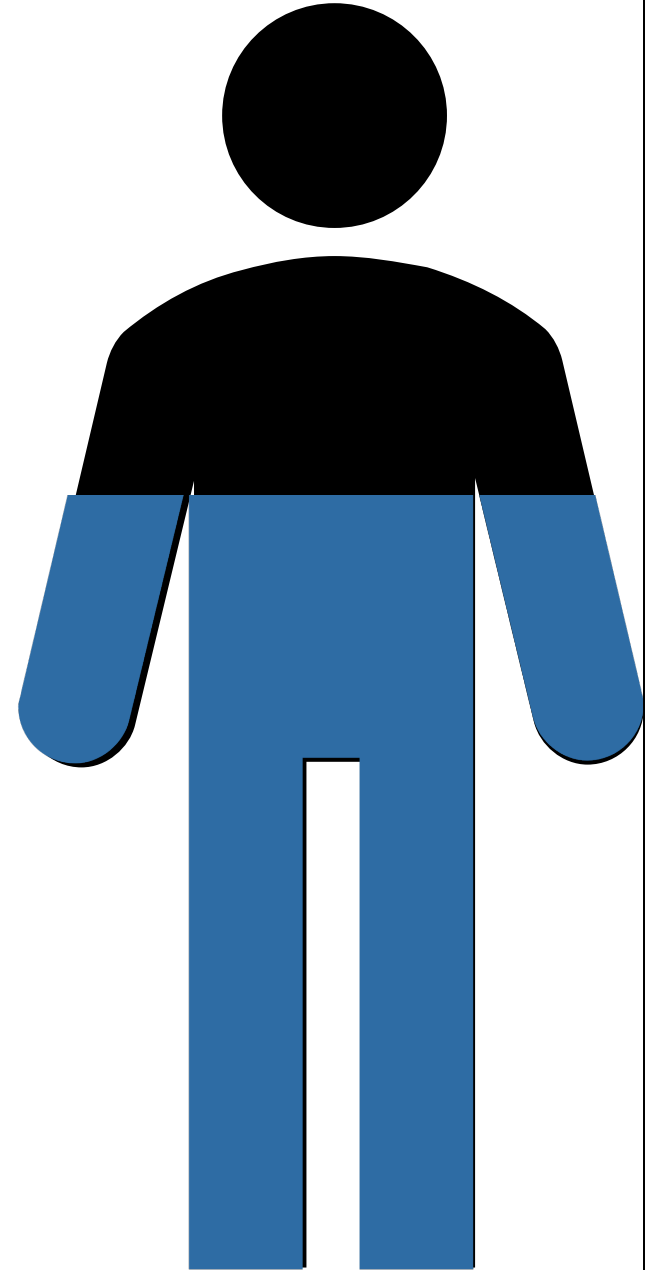


Moss can hold about 20-30 times its weight in water!

- Moss can absorb water like a sponge and it holds lots of water!
- Moss is a moist place for lots of small animals (insects) to live. These small insects are a source of food for other animals like birds.
- Do you have moss where you live? Maybe it isn't so bad. The more moss, the less lawn mowing!



Man



Man is about 60% water.

