

# AMIK ECO

finds a way



Franziska Lethmaier \* Nina Gutmann

AMi  
KFCO

AMiKFCO

KFCO  
AMi

AMi  
KFCO

AMi  
KFCO

AMiKFCO

KFCO  
AMi

AMi  
KFCO

AMiKFCO

KFCO  
AMi

KECO<sup>AMI</sup>

AMI<sup>◌</sup>KECO

AMIKECO

## amikeco (Esperanto)

a•mi•ke•co

Meaning: Friendship

AMI<sup>◌</sup>KECO

KECO<sup>AMI</sup>

KECO<sup>AMI</sup>

AMIKECO

**Imprint:**

**Author:** Franziska Lethmaier

**Illustrator (incl. cover picture):** Nina Gutmann

**Illustrator (Accompanying text):** Theresa Hübner

**Gender & Diversity Advisor:** Lisa Mercedes Mittischeck

**Publisher:** Office for Gender Equality and Equal Opportunity, Graz University of Technology

**Layout:** Carina Höglinger

**English translation, Proofreading:** Sara Crockett, Sara's Scientific Translations

**Printing:** Gugler GmbH

**Fonts:** Open Sans & Children's handwriting **nanoversity**



**PurePrint®**  
innovated by gugler\* DruckSinn  
Gesund. Rückstandsfrei. Klimapositiv.  
drucksinn.at

2022 Verlag der Technischen Universität Graz

[www.tugraz-verlag.at](http://www.tugraz-verlag.at)

ISBN (print) 978-3-85125-922-3

ISBN (e-book) 978-3-85125-923-0

DOI 10.3217/978-3-85125-922-3



This work – excluding the cover and parts noted otherwise – is licensed under a Creative Commons License “Attribution 4.0 International (CC BY 4.0)”.

<https://creativecommons.org/licenses/by/4.0/deed.en>

**About the author and illustrator:**

**Author:**

Franziska Lethmaier, BA BA

Degrees in pedagogy and sociology received in Graz

Has worked in child education and care areas of TU Graz since 2014



**Illustrator:**

Nina Gutmann, BA

Degree in pedagogy received in Graz

Has worked in the field of child education and care as well as in child and youth welfare services

Deputy Head of the Childcare Facilities at TU Graz



AMIK ECO  
finds a way

Franziska Lethmaier \* Nina Gutmann

# This is Ami.

Ami is a piglet.  
Together with its parents,  
a meerkat and a giraffe,  
the piglet lives on  
a deserted island.



Detailed information for adults is found from page 37 and on.







Ami often feels lonely, because there  
are no other children to play with.  
That makes the piglet very sad.

**One day, Ami decides  
to go and search  
for other children.**

Along the way, the piglet discovers something in the water and looks at it curiously.

"Hello! Who are you?"  
asks a voice from the water.

"My name is Ami. What's your name?"

"My name is Keco" said a small octopus in the water.

"Would you like to be friends with me?"



Ami would like to be friends with Keco and asks the young octopus, "Will you come ashore to play with me?"

"Unfortunately, I can't come ashore, because it's much too dry for me there," the young octopus answers sadly.

Keco would also like to play with Ami.

**What are the two of them going to do now?**



For more information, see page 44.





# The piglet has an idea.

It springs into the water with Keco,  
and they dive under the water together.  
But Ami soon gets a funny feeling and  
has to come back up to the surface.  
The piglet cannot breathe under water  
like the young octopus.

Playing like this is no fun!





A swimming ring is needed!

**Will the children be  
able to play with that?**

Ami gets a swimming ring and  
jumps into the water with it.

"Keco, where are you?" cries the piglet.  
"I'm right here next to you!" Keco replies.  
But Ami can't see the young octopus,  
because the ring is in the way!  
The two of them have to keep thinking.

**Can they  
find a solution?**

The two children decide that Ami must dive down to Keco so that they can be together.

But they already know that they can't do that unless they can bring air under water.

**Hmmmm,  
what should they do?**

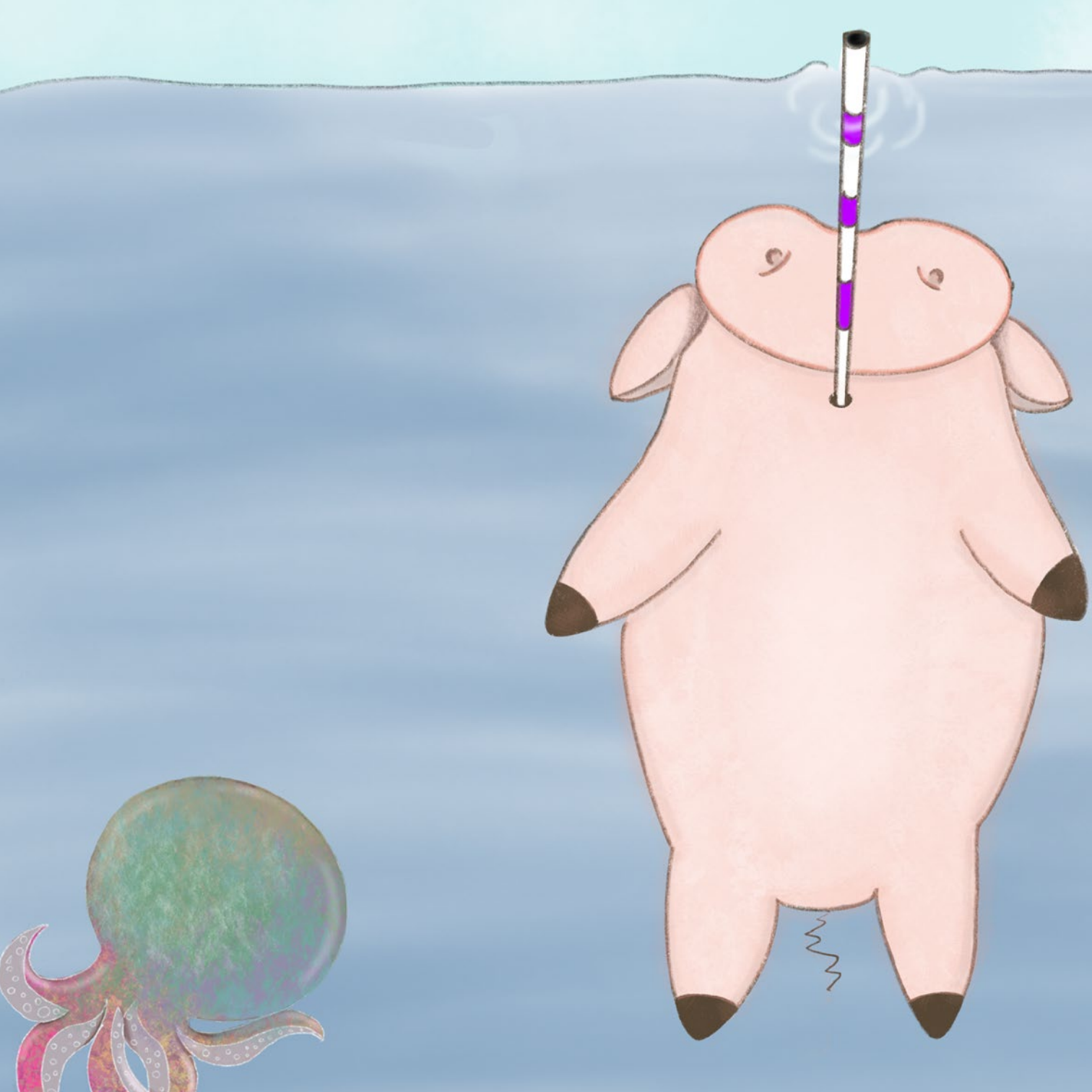
First, Ami gets a straw and tries to use it.

Now the piglet can breathe under water,

but it still can't move around very easily and cannot play with Keco.

Another solution must be found.

**But what?**





Then the piglet gets a special glass helmet and puts it on. There is a little bit of air in the helmet. This way, Ami can see Keco and also stay under water for a little while.

But, oh dear! The oxygen runs out far too quickly, and Ami has to come back up to the surface.

After Ami's failed attempts to stay underwater, the two children search for a way that Keco can come ashore.

Ami and Keco decide to make the special glass helmet full of water for Keco to put on.

But the good plan has a catch: The air dissolved in the water in the helmet runs out after a short time, and Keco has to return to the sea. I guess that didn't work either!

**But the two children  
don't give up.  
They want to find a  
way to play together!**



Evening is approaching,  
and Keco and Ami have to go home.  
But they promise to meet  
again the very next day.

On the way home, the piglet suddenly  
remembers an interesting film  
it saw recently that was all about

**diving with  
oxygen tanks.**







"What's worrying you?" ask Ami's parents when the piglet arrives home.

Ami tells them about Keco and the problem that is keeping them from playing together. The piglet also tells them about the film on diving.

"Should we help you tomorrow?" the parents ask.

"Oh yes!" exclaims Ami enthusiastically.

**Will they be able  
to solve the problem  
together?**

The next day, Ami and the parents go to Keco's watery home with lots of materials.

Since Keco can't get out of the water, the young octopus watches curiously as the three cut, glue and seal something.

**What are they planning to do?**



# Ta-da!

Finally, the special  
equipment is ready!







Ami quickly jumps into the water  
and dives down to Keco.

**It works!**

Ami gets fresh oxygen through  
the tube, and the two children  
can finally play together  
for as long as they want.









## Focus areas:

Gender  
Diversity  
Science  
Technology

## Accompanying text

## Help and support

Day after day, we learn how to deal with a wide variety of situations. And from time to time, we go through different phases that demand a lot from us. But we do not always find a solution to every problem on our own. Asking for help and support, accepting it, or just helping each other and being there for each other is just as important in the children's everyday lives as eating and drinking. Just like all other skills and key areas, it is also important to recognise and promote these.

## Diversity, gender neutrality and family

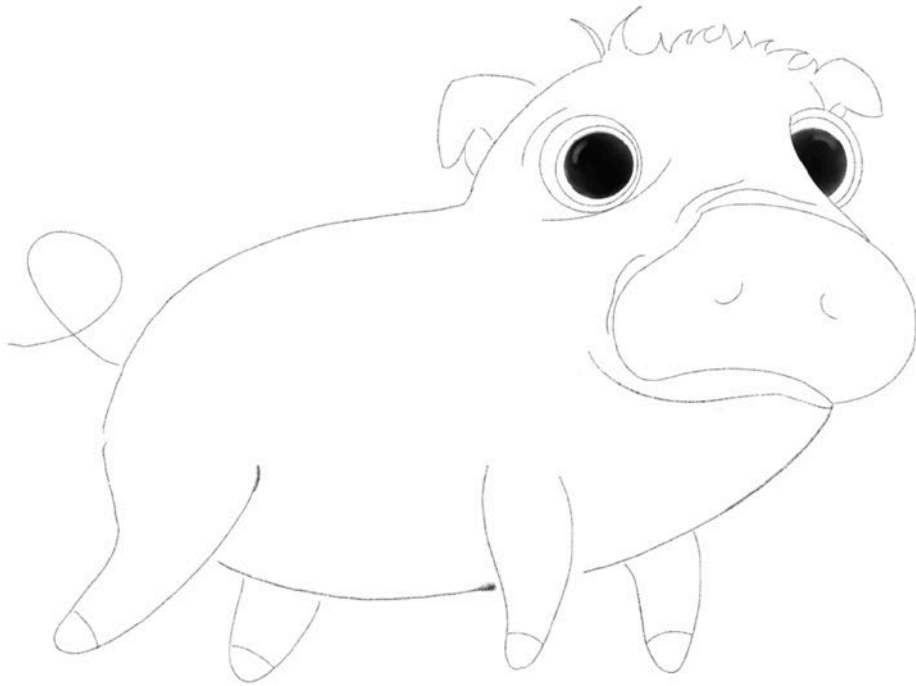
Open-mindedness, openness and tolerance are values that have always accompanied childcare at Graz University of Technology and are now also reflected in its picture books. Therefore, diversity, should not be emphasised as something special, but should be included and portrayed as something normal. This is why the piglet has a meerkat and a giraffe as parents, despite all of the laws of nature. In this way, the concept of adoption becomes accepted as something normal, and children who are adopted or grow up in a foster family can identify with the story. By asking specific questions (Can the pig have a meerkat and a giraffe as parents? Are there children who do not live or grow up with their biological parents?), this aspect can be discussed when the story is being read out loud and any questions answered.

Ami and Keco as well as the parents are deliberately not assigned a specific gender in the story. No personal pronouns are used (e.g. instead of he or she, it is simply used to refer to Ami/Keco) or the terms piglet/the young octopus are used. No possessive pronouns are used (e.g. Ami's parents instead of his or her parents). Therefore, children can decide for themselves whether the parent are equivalent with a mommy and daddy or whether a same-sex couple is raising a child. In addition, if they want, the children can assign Ami and Keco a gender or do without it altogether. Typical boy/typical girl? There is no such thing. The focus is on the personality, character traits, wishes and needs of the characters, because that's what matters in the end. Children should be allowed to develop independently of these often-obstructive gender classifications. Moreover, more than the two gender identities of male and female have been recognized. The various stories deal with diversity issues (gender is one of many diversity aspects), but also with science and technology in a child-friendly way, offering children a playful approach to the material.

## Friendship and finding solutions

Like everything else in life, the idea of friendship has to be learned first. How do I affect others? What effect does my behaviour have? How do my words affect the other person? How do I argue and get along with someone? What does it mean for me to have or to be a friend? These and many other questions arise constantly when children make their first friendships, and sometimes things don't work out the way you want them to. It is important not to give up. Especially when forming the very first friendships, children learn a lot about different personalities, character traits, idiosyncrasies and differences. Therefore, it is very important to promote empathy and social skills. Whether "like attracts like" or "opposites attract" is not important here; the fact is that no two friendships are alike, and their uniqueness is exactly what makes them special. By asking questions related to the story, one gets small insights into the children's world of thoughts. In this way, it is easy to see where the children still need clarification or treatment and what they are concerned about in the story or what they have understood and what they have not. In addition, the children can always get involved themselves through these intermediary questions. They can actively accompany Ami and Keco on their way to finding a solution and suggest solutions themselves.





## Why do pigs like to roll in the mud?

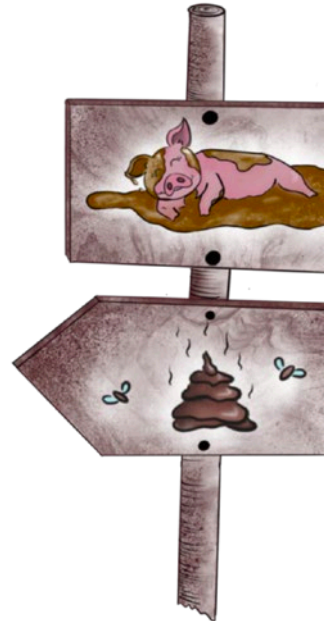
There are reasons that pigs love to roll in the mud. Unlike humans, pigs cannot sweat and, therefore, they need to roll in the mud to cool down.

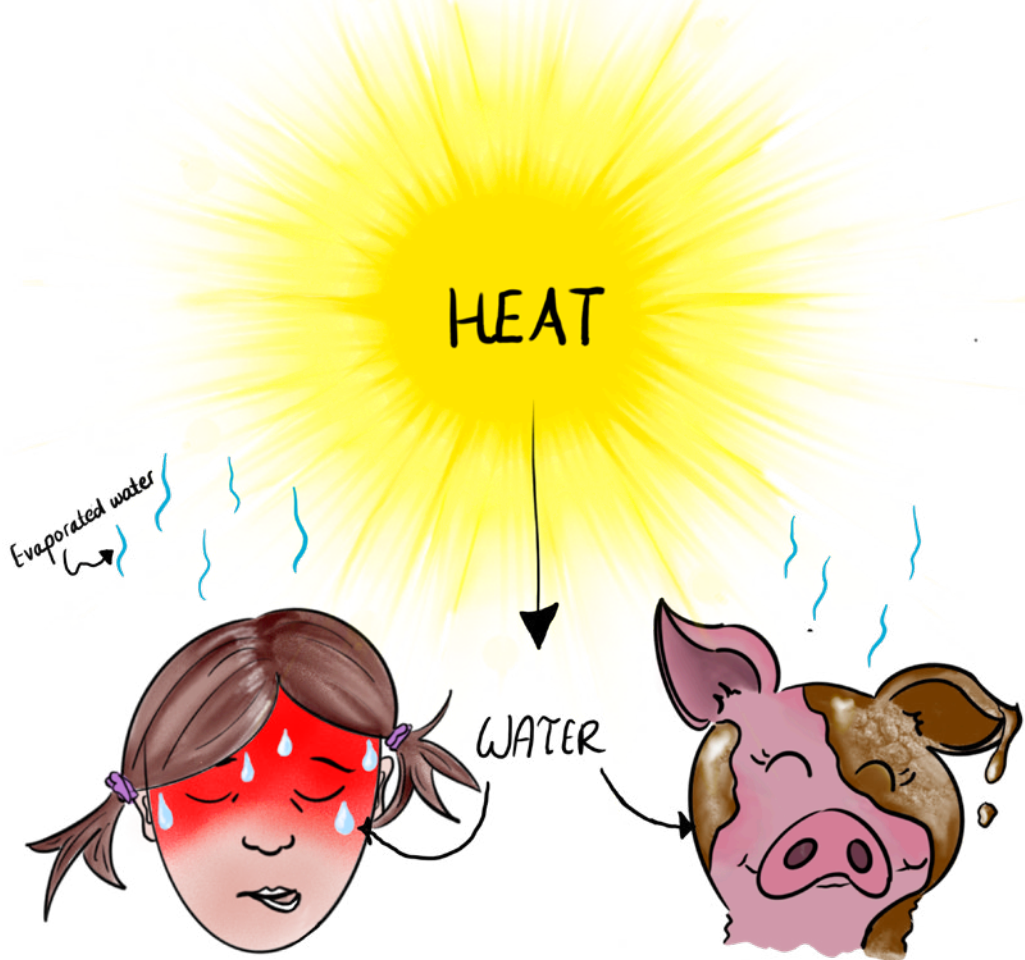
## Why do sweat and mud help with cooling?

Both sweat and mud contain a lot of water. When the water evaporates, heat is released, so that the surface (our skin) from which the water evaporates cools down.

## Did you also know ...?

Pigs are not only clean, they are also very smart and social. They like to play and talk with other pigs. In the evening, they cuddle up together and have dreams while they sleep. But pigs don't go to the toilet where they roll in the mud. They go to another place to do that.





## COOLING EFFECT

Water from **sweat**  
evaporates

Water from **mud**  
evaporates



For more information, see page 12.

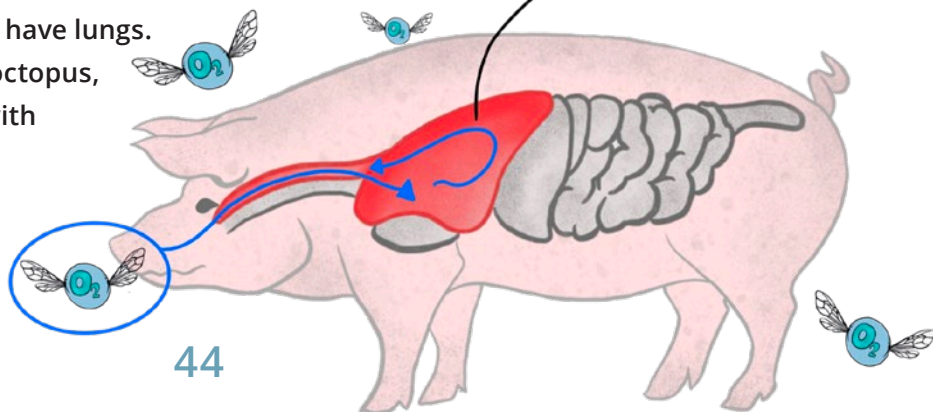
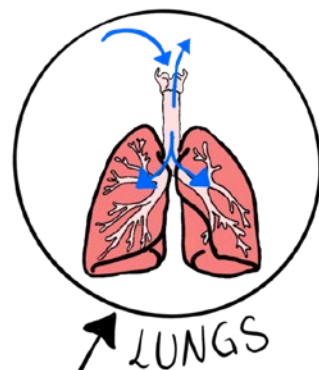
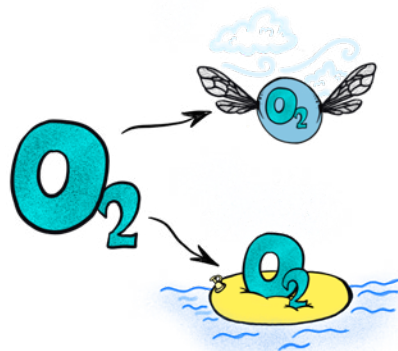
## Why can't octopuses live on land?

Almost all living things need **oxygen** in order for their bodies to function properly and for them to live. Oxygen is found in the air, but it is also found in water.

These oxygen molecules are so small that we cannot see them with our eyes. There are several ways to increase the amount of oxygen in the body.

Both humans and pigs breathe air in through their mouths and absorb oxygen from the air in their lungs. By breathing deeply in and out, you can feel and see how the lungs get larger and smaller in the body. The lungs are specialised for absorbing **oxygen** from the air.

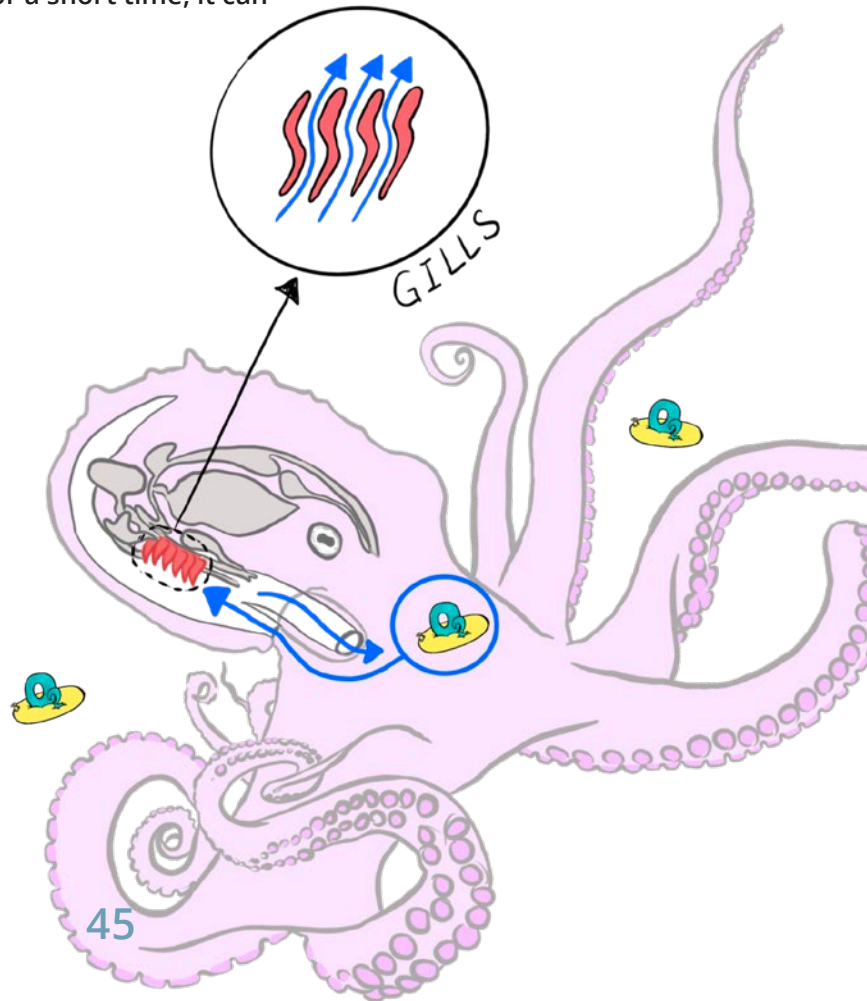
Both octopuses and fish do not have lungs. Instead, they have gills. In the octopus, these are located in the head with the rest of the organs.



The gills can absorb oxygen from the water and ensure that it passes on to the body. The octopus also excretes toxins via the gills. If the gills are exposed to air for too long, they stick together and dry out. Thus, the octopus can no longer breathe. However, since it can also absorb small amounts of oxygen from the air through its skin for a short time, it can survive briefly on land.

## Did you also know ...?

Octopuses are incredibly smart animals and can also change colour depending on how they are feeling at the time. They can also adapt their skin to match the environment, so they are very good at camouflaging themselves. If octopuses get injured and lose one of their eight arms, they can grow this arm back completely.





How lovely that everyone is different!



Oh, the gi - raffe is ve - ry big, and the mouse is ve - ry small.

The monkey's arms are skinny, and the pig is plump and round like a ball.

Like this or that, just stay the way you are. How lovely that everyone is different.

Like this or that, just stay the way you are. How lovely that everyone is different.

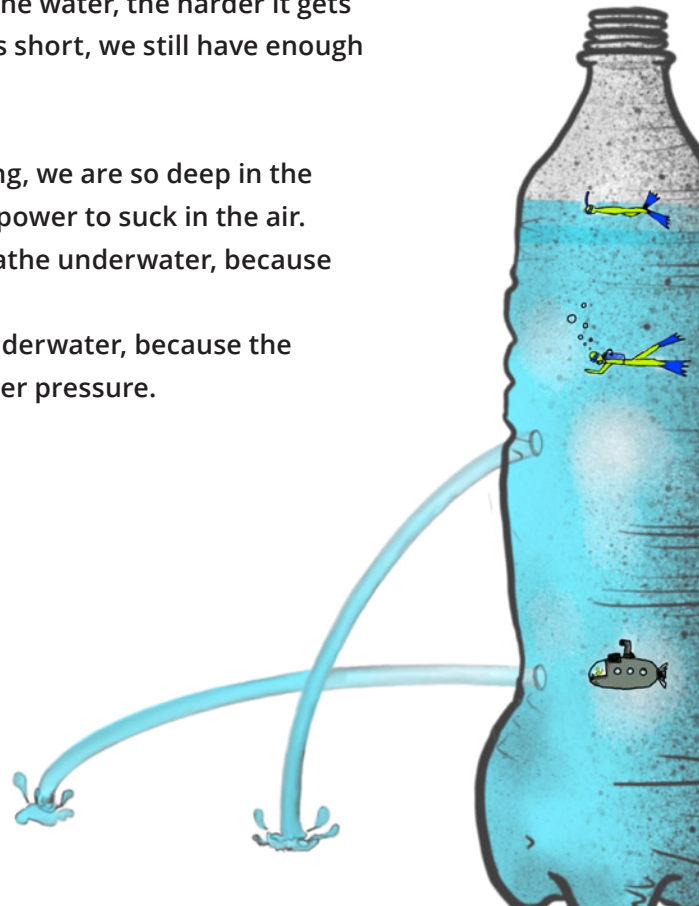


# What happens when we breathe under water using a long tube?

Water is much heavier than air. (To be exact, water is 1300 times heavier than air). The water is so heavy that it applies pressure to everything that is in the water. When our body is underwater, this weight puts the most pressure on our lungs. That is where most of our air is. Therefore, it is much more difficult to breathe underwater. The deeper we are in the water, the harder it gets to breathe. If the snorkelling tube is short, we still have enough power to suck air into our lungs.

But if the snorkelling tube is too long, we are so deep in the water that we do not have enough power to suck in the air. Using a scuba tank can help us breathe underwater, because it helps to push air into the lungs. The submarine can also go deep underwater, because the heavy metal can withstand the water pressure.

47



# Experiment 1

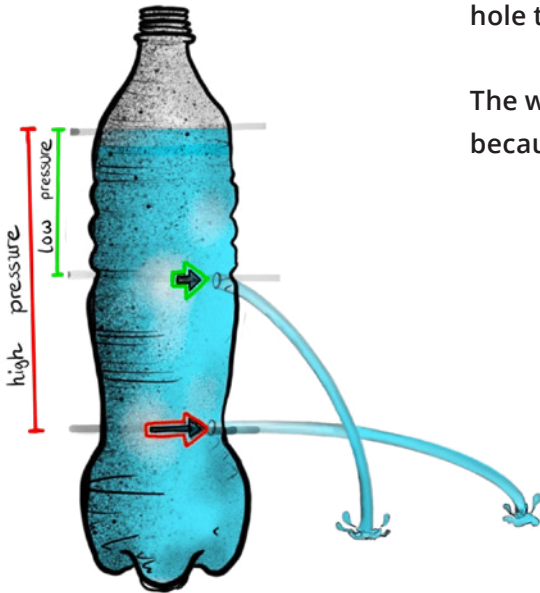
This experiment shows that the water pressure is higher further down in the water.

**We need:**

- an empty plastic bottle
- water
- a pointed object



**H<sub>2</sub>O**



The water sprays further out of the hole lower on the bottle, because the water pressure is higher there.





## Experiment 2

### We need:

- a container filled with water
- a plastic bag
- to use our hand

In order to understand the water pressure better, we will concentrate on the feeling we have in our hand when we open our fist underwater.

**Step 1:** Open your fist in the air

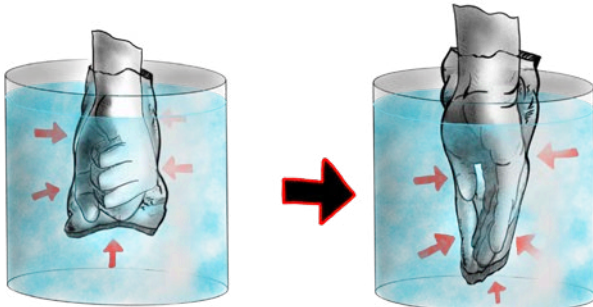
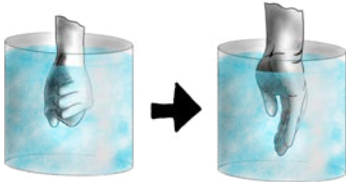
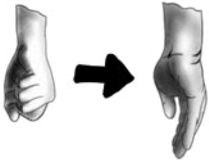
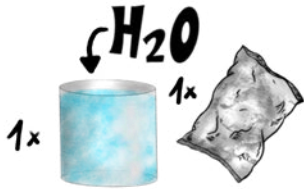
**Step 2:** Open your fist in the water

How does it feel? (Wet, cold, etc.)

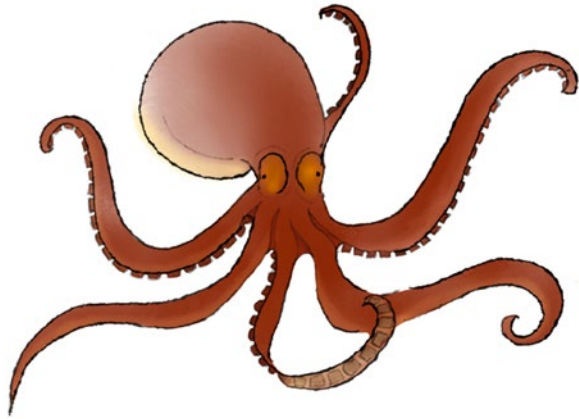
**Step 3:** Open your fist in the bag in the air

**Step 4:** Open your fist in the bag in the water

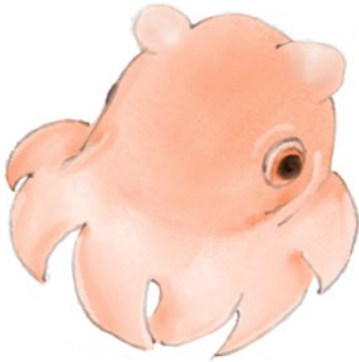
How does opening your hand in the bag in the air feel different from opening your hand in the water? The resistance that you feel when you open your hand underwater is the water pressure.



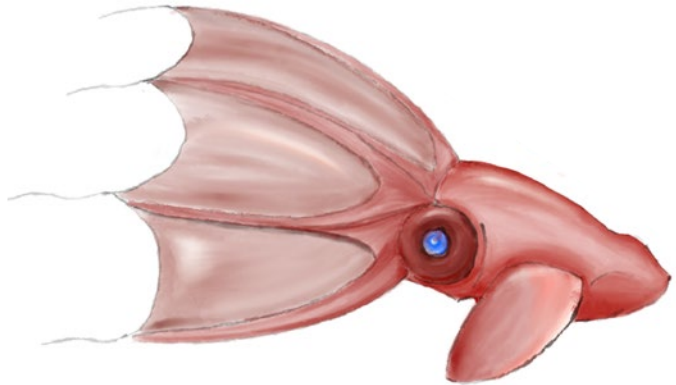
**Do not leave children unattended with plastic bags. To help protect the environment, please dry the plastic bags and reuse them!**



Giant Pacific  
Octopus



Dumbo  
Octopus



Vampire Squid



Carribean  
Reef Squid



Bobtail Squid

# AMIK EKO

finds a way

In this picture book, we accompany Ami the piglet and Keco the young octopus on a very special journey. Because they live in different habitats, water and land, the two cannot play together at the beginning of the story. Together, they go on a journey to overcome all obstacles, allowing a true friendship to develop.

When I'm alone, you join me,  
and in no time at all I'm laughing free.  
I don't feel lonely,  
because I always have you.  
If you need help, I help you,  
and if I need you, you help me too.  
And when you go away, well, I think of you,  
and I'm sure that you often think of me too.  
That's why it's so nice, when we meet again.  
Yes, when we meet again, we'll be friends.

You will find a short accompanying text in the appendix that provides those reading aloud, and especially parents and educators, with background information and further suggestions.

This book is one of a series of 6 children's books published by the Verlag der Technischen Universität Graz. The series focuses in particular on those values that form the foundation of the educational care of children at Graz University of Technology: tolerance, openness and appreciation of fellow human beings, animals, diversity, nature as well as technology and natural sciences.

ISBN (print) 978-3-85125-922-3  
ISBN (e-book) 978-3-85125-923-0  
DOI 10.3217/978-3-85125-922-3



**PurePrint®**  
innovated by gugler\* DruckSinn  
Gesund. Rückstandsfrei. Klimapositiv.  
drucksinn.at