

My name is Pieter Van Leemputten. I am the team coordinator of the STE(A)M-Academy of the UCLL University of Applied Sciences in Belgium. My team works in the department of research and expertise where we experiment and develop STEAM content for children and youth between 4 and 14 years old.

WHY do we do what we do?

Here in the city of Leuven in Belgium, we prepare the youth of today for the challenges of tomorrow .

We all know that the future is unpredictable; science and technology are changing at the speed of light, which means that the world of tomorrow looks very different from what it is today. The world is evolving and so are it's jobs. According to the World Economic Forum 65% of children entering primary school today, will ultimately end up working in completely new jobs that don't exist yet.

Think of 'Body part makers', 'eSports Coaches' or 'Robotics engineers'. Ever heard of 'AR Journey Builders', 'Vertical Farmers', or 'Nano Medics'? The future begs for more job creation in STEAM. Keeping this in mind, we believe that every child should get the chance to discover STEAM and develop their talents at an early age. In this way, we want to be able to give children the opportunity to make a well-considered choice about their study path and professional careers and cultivate a growth mindset in a world that never stands still.

Since 2017, we have been organizing hands-on STEAM-workshops during and after school hours. Our team works together with teachers, students and volunteers to reach out to as many children as we can.

I would like to highlight three key aspects of our organization to stir up kids' interest in STEAM and **HOW** we aim to accomplish our goals.

I would like to start with what we call: "**Educating the educators of tomorrow**".

Our students get the chance to organize workshops with children, create new content and improve our organization in general through various projects, internships and theses. By supporting our students through coaching, them and help them by overcoming their fears, we create impact on both levels in parallel this way. We reach and shape our students while simultaneously reaching the youth.

We call our students at the UCLL University of Applied Science the "Moving Minds". Not just anybody is a Moving Mind. You choose to become a Moving Mind by developing a strong and authentic personality, by creating a broad-minded vision and by not being averse to thinking outside the box. Our STE(A)M Academy collaborates with different bachelor's degrees in different domains, namely Technology, Chemistry, Healthcare, Wellbeing and Teacher Training and serves as a **living lab** for these students. We believe that the **white space** and **creating a safe environment** are necessary to experiment, to grow and learn 21st century skills. By engaging in hands-on activities outside their comfort zone "I can't do this" becomes "I can't do this **YET**".

My second takeaway is the importance of "**Investigative learning in STEAM**". As I just told you we work the same way with children as we do with the Moving Minds. We provide them with the necessary handles and contexts with open challenges where we focus on the process. The way to the solution is not determined beforehand. Our workshops are made up of free-form, integrated assignments that begin with a socially relevant challenge from the children's daily lives. Children complete these assignments on their own with guidance from our Moving Minds.

For example, this summer we are working on a river upcycling project to create more awareness on plastic waste in waterways. During this project, the children and their mentors collected plastic and upcycled it to create a new gadget. In this way, they determined the value of the plastic and learned

about the upcycling cycle. The goal was choosing a gadget or product which makes people contemplate their actions concerning waste and littering. The final product of this project will be auctioned during the Impact Festival later this month.

Another example can be found in our project where we teach toddlers the basics of computational thinking. They use a very accessible gender-neutral robot called Cubetto to make it move in different directions on a giant mat with coordinates. Combined with experiments concerning the theme and woven into an arching story, children are captivated at a young age and confronted with challenges we face today.

To conclude I would love to talk about our Edison project, in which we **“Bridge the regional gap”**. We believe in cooperation and co-creation in all levels of our institute. Apart from the intense collaboration with our own students, we work shoulder to shoulder with other organizations to maximize our strengths and realize our dreams. That is why we created the Edison STEAM-partnership. We work together with schools, local authorities, companies, STEAM-academies and organizations throughout the region. We are firm believers in the $1 + 1 = 3$ principle. What started as a local idea in Leuven has the ambition to create collaboration in all of Flanders. We share information, best practices and invest in didactic materials which can be used by any of our partners in education or in spare time. We have substantive working group which gathers every 3 weeks to discuss opportunities, content-related optimization and writing projects to get more funding in. Our several project teams give a short update on the progress of their work and ask for advice or feedback, before heading back into working on their goals.

STEAM is going to save the world and by investing in the youth today, society will be the big winner in the medium and the long run. I am a firm believer in working together and reaching our common goals as a community where we will need the input and contribution of every stakeholder. After all, it takes a village to raise a child.