

# Job Shadowing na Dinamarca

21 a 26 de Outubro de 2024



# Participantes



- Diretores dos Agrupamentos associados ao EDUFOR (Sátão, Vila Nova de Paiva, Penalva do Castelo, Mangualde, Nelas, Canas de Senhorim)
- Diretora do EDUFOR
- Embaixador Digital
- Assessor do EDUFOR



## Programa

- **21 e 22/10**
- **Visita** aos Espaços e Produtos da LEGO Education
- **Conhecimento** dos valores e da cultura da LEGO
- **Exploração Educacional** dos produtos oferecidos pela LEGO
- **Grupos de Trabalho** para a utilização da LEGO Education em aprendizagem STEM
- **Ligação** entre a oferta da LEGO Education e o Currículo
- **Diálogo** sobre iniciativas inovadoras e avaliação dos encontros

# Programa

- **23 a 25/10**
- **Visita** a escolas e espaços “sala de aula”
- **Exploração** dos Kits da LEGO Education e da sua importância como recurso pedagógico
- **Experimentar** os Kits da LEGO Education na aprendizagem STEM

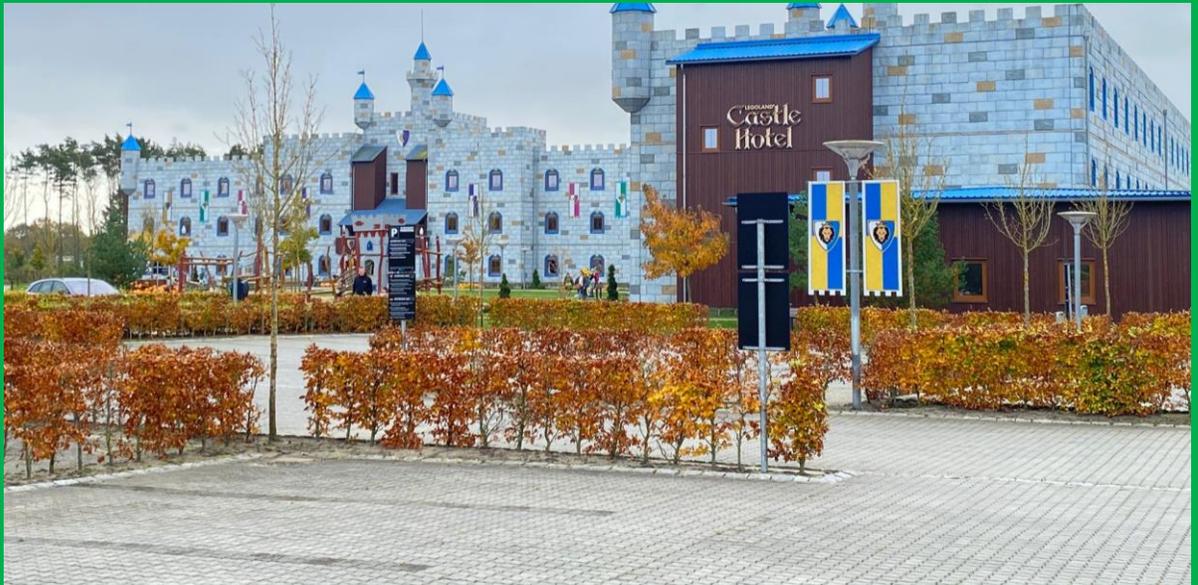


Cidades  
por onde  
andamos



Billund – Imersão  
no mundo  
imaginativo e  
fantástico da LEGO  
e da Legolândia





# Hotel Castelo



# Legolândia





As fantásticas  
cidades da  
Dinamarca ( e não  
só...) construídas  
em Lego



LEGO



# A Empresa



1998  
The LEGO Group and MIT  
Media Lab launch LEGO  
MINDSTORMS, an intelligent  
brick integrating robot system  
and the LEGO building system.

# The LEGO Group at a glance

Family-owned  
Danish company  
founded in



The LEGO name  
comes from 'LEg GOdt',  
meaning  
'play well'



#1  
Reputable  
Brand



120+  
countries



20,000+  
colleagues



Top 100  
influential  
companies

Source: TIME 2021

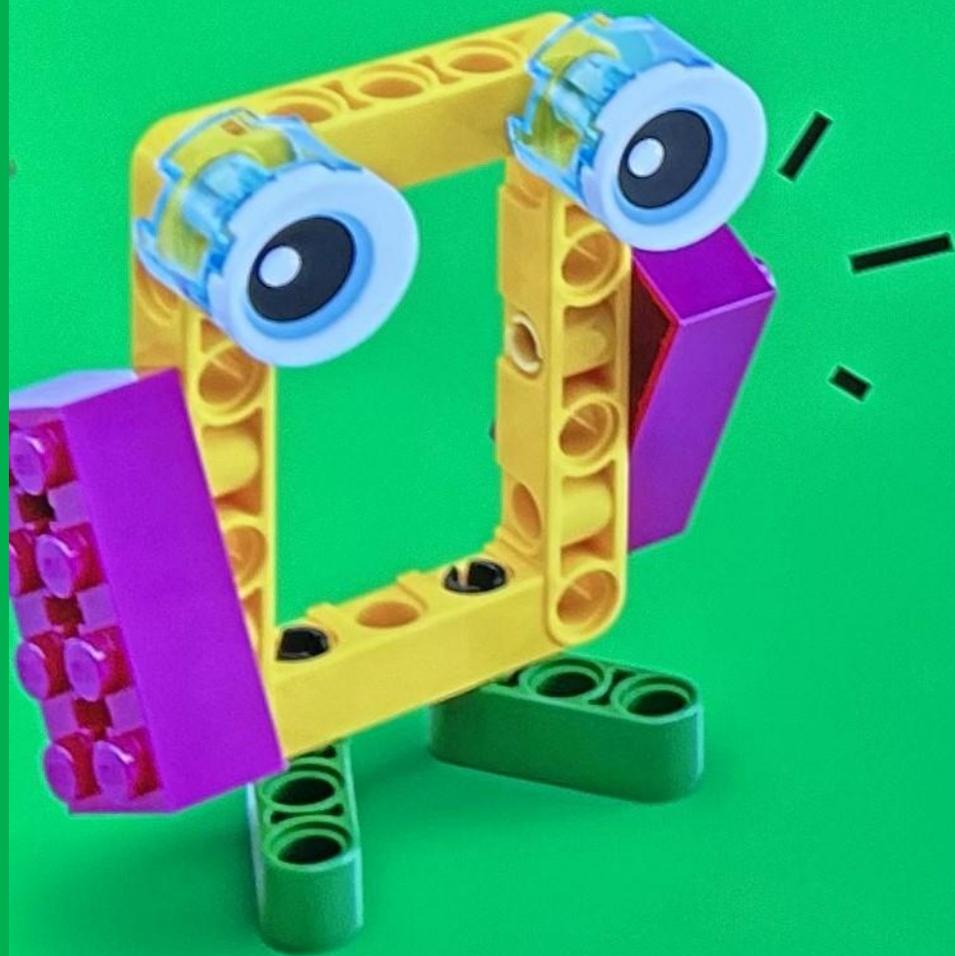


**Write**  
your ideas on me!



# Em formação





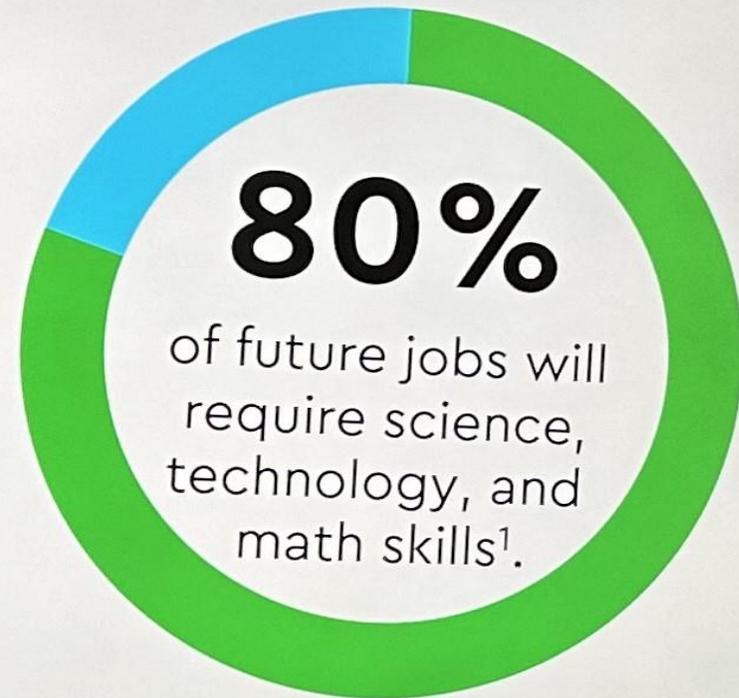
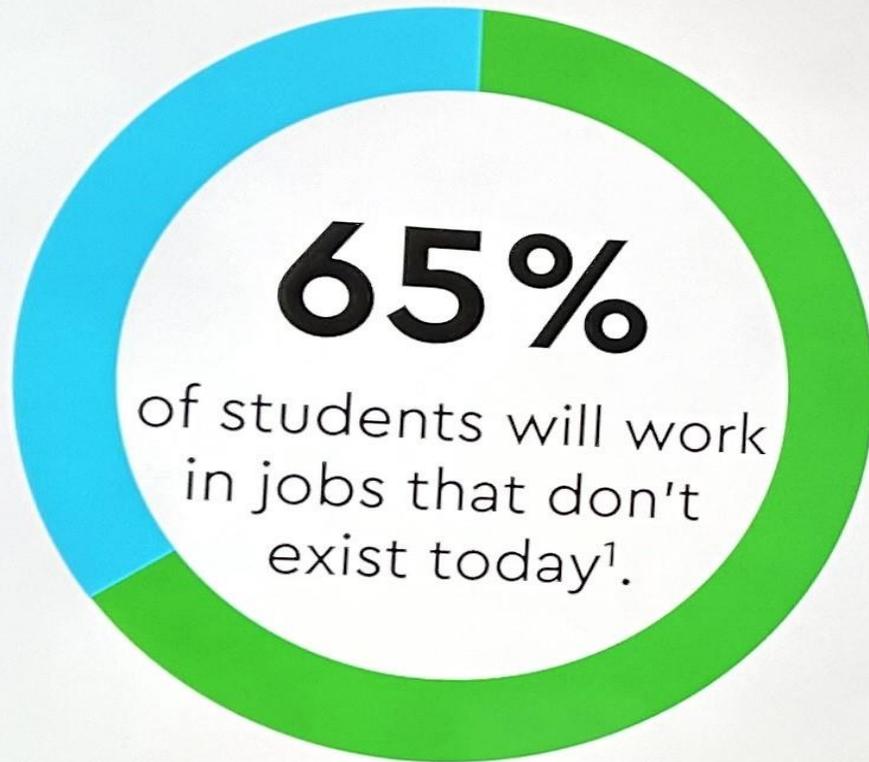
**What skills do  
students need to  
acquire?**

“ Students need to be prepared for jobs that have not yet been **created**, for technologies that have not yet been **invented**, to solve problems that have not yet been **anticipated** ”

OECD "The Future of Education and Skills 2030"



# How do we prepare students to thrive?



# What skills do students need to acquire?

## Top 15 Skills for 2025\*

1. Analytical thinking & innovation
2. Active learning & learning strategies
3. Complex problem-solving
4. Critical thinking & analysis
5. Creativity, originality & initiative
6. Leadership & social influence
7. Technology use, monitoring & control
8. Technology design & programming
9. Resilience, stress tolerance & flexibility
10. Reasoning, problem-solving & ideation
11. Emotional intelligence
12. Troubleshooting & user experience
13. Service orientation
14. Systems analysis & evaluation
15. Persuasion & negotiation

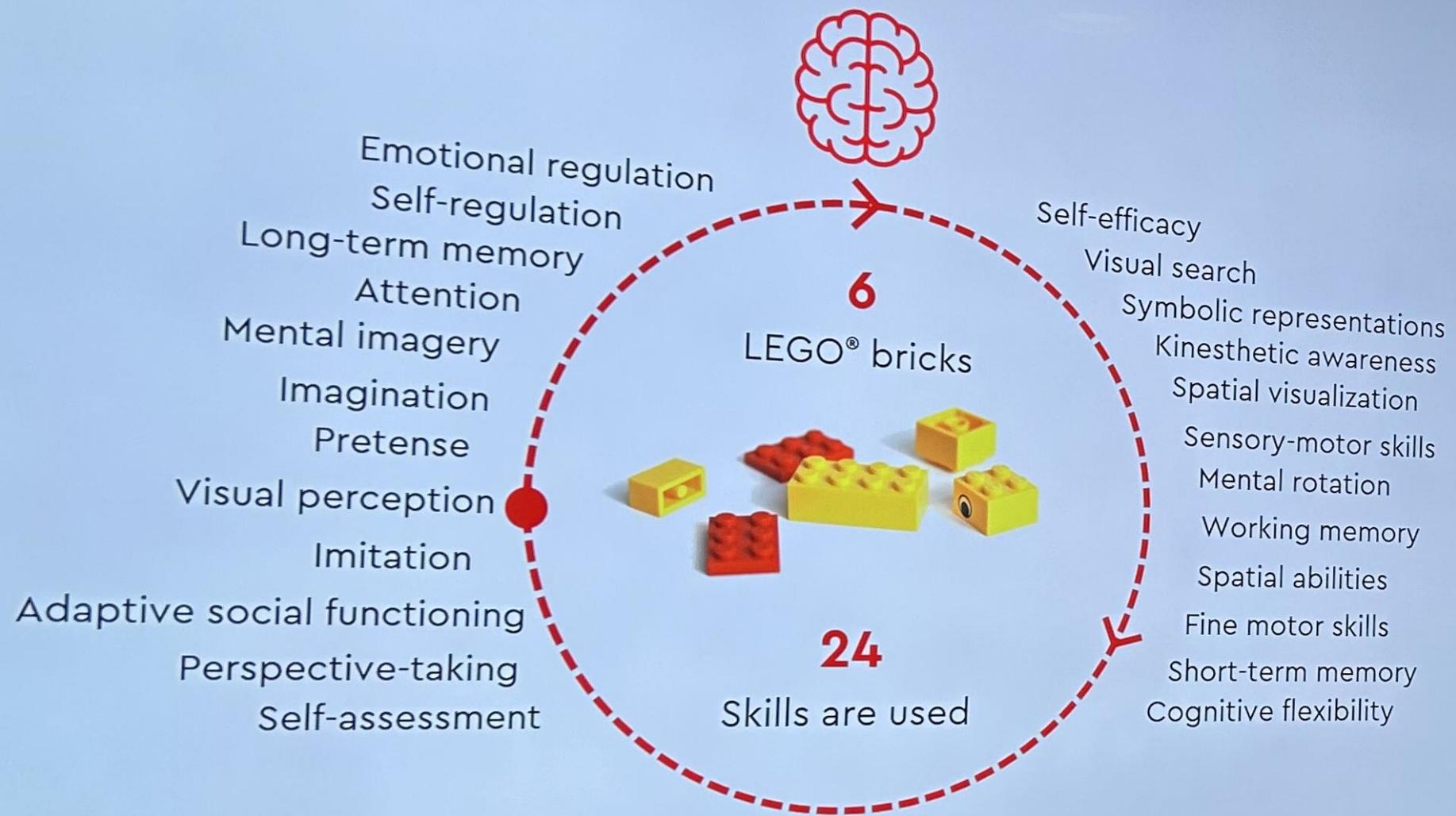


# The power of learning through play at school

- **Actively engaging:** Learners demonstrate motivation and commitment
- **Joyful:** Enjoyment of learning makes students feel able and confident about their learning
- **Meaningful:** Drives sustained engagement, deeper learning, better retention
- **Socially interactive:** Develops interpersonal, communication, social skills
- **Iterative:** Encourages exploration, trial and error approach, builds resilience

- Hands-on learners acquire knowledge through experience rather than abstraction, helping with **better retention**
- Meaningful, joyful activities **nurture curiosity** and **stimulate creativity**
- Engaged, hands-on learners **perform better across subject matters**

# What just happened?

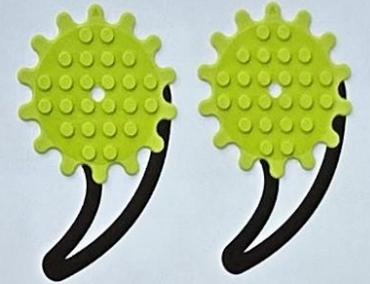


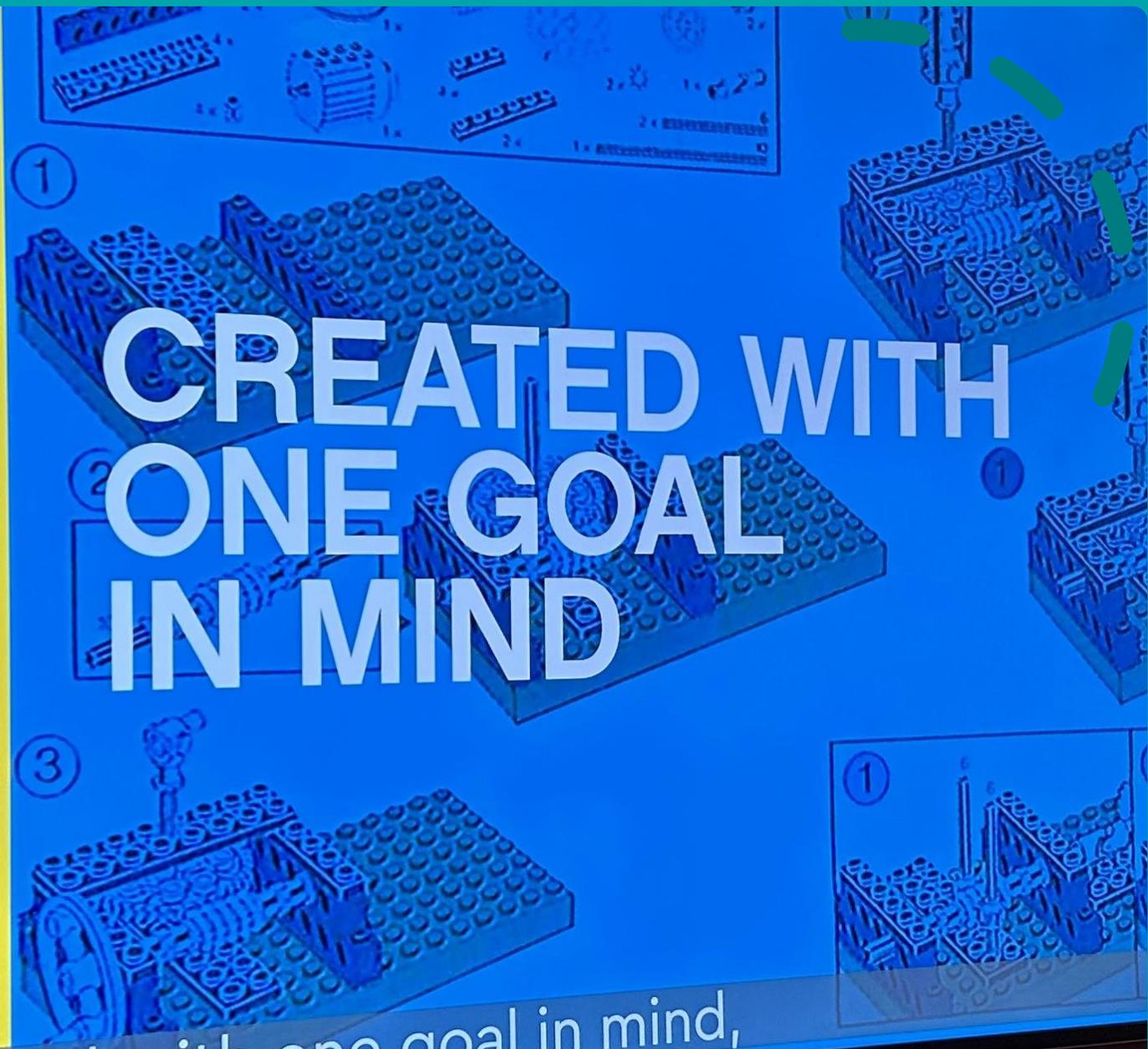
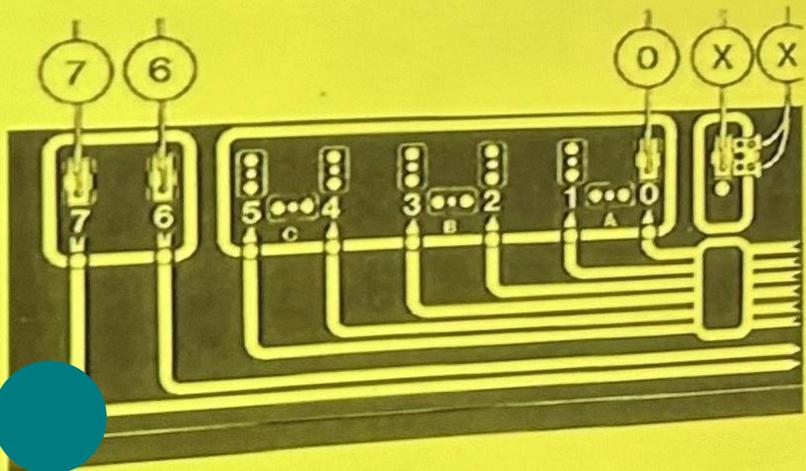
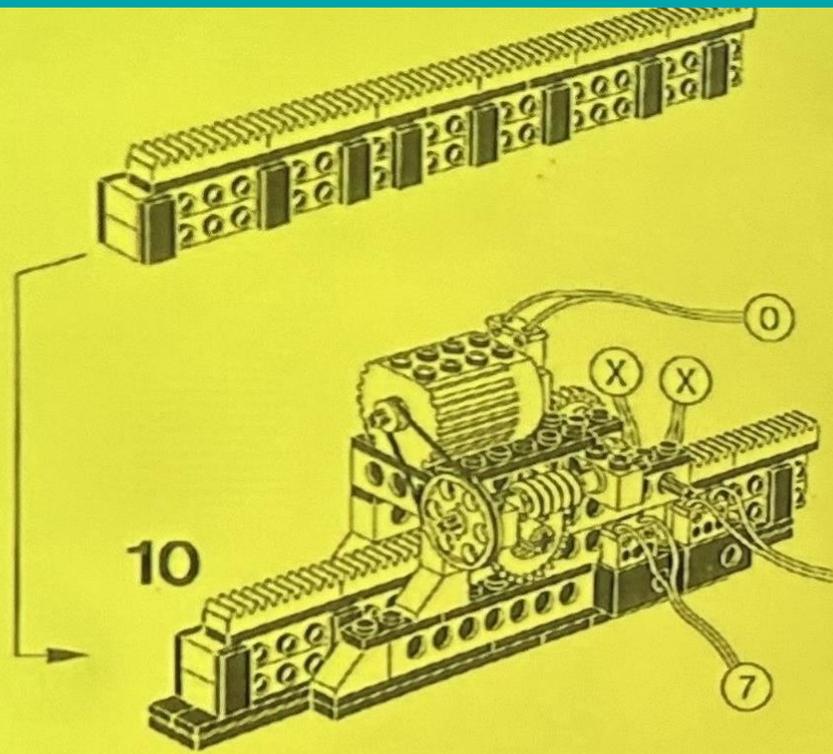


# LEGO® Education Mission



*To inspire and develop the builders of tomorrow, enabling every student to succeed.*





CREATED WITH  
ONE GOAL  
IN MIND

Created with one goal in mind,

# The LEGO® Learning System

An *intuitive, inclusive*, and highly *adaptable* hands-on learning system.



LEGO® Education  
Early Learning Portfolio

EARLY LEARNING



LEGO® Education  
SPIKE™ Essential



LEGO® Education  
SPIKE™ Prime

PRIMARY

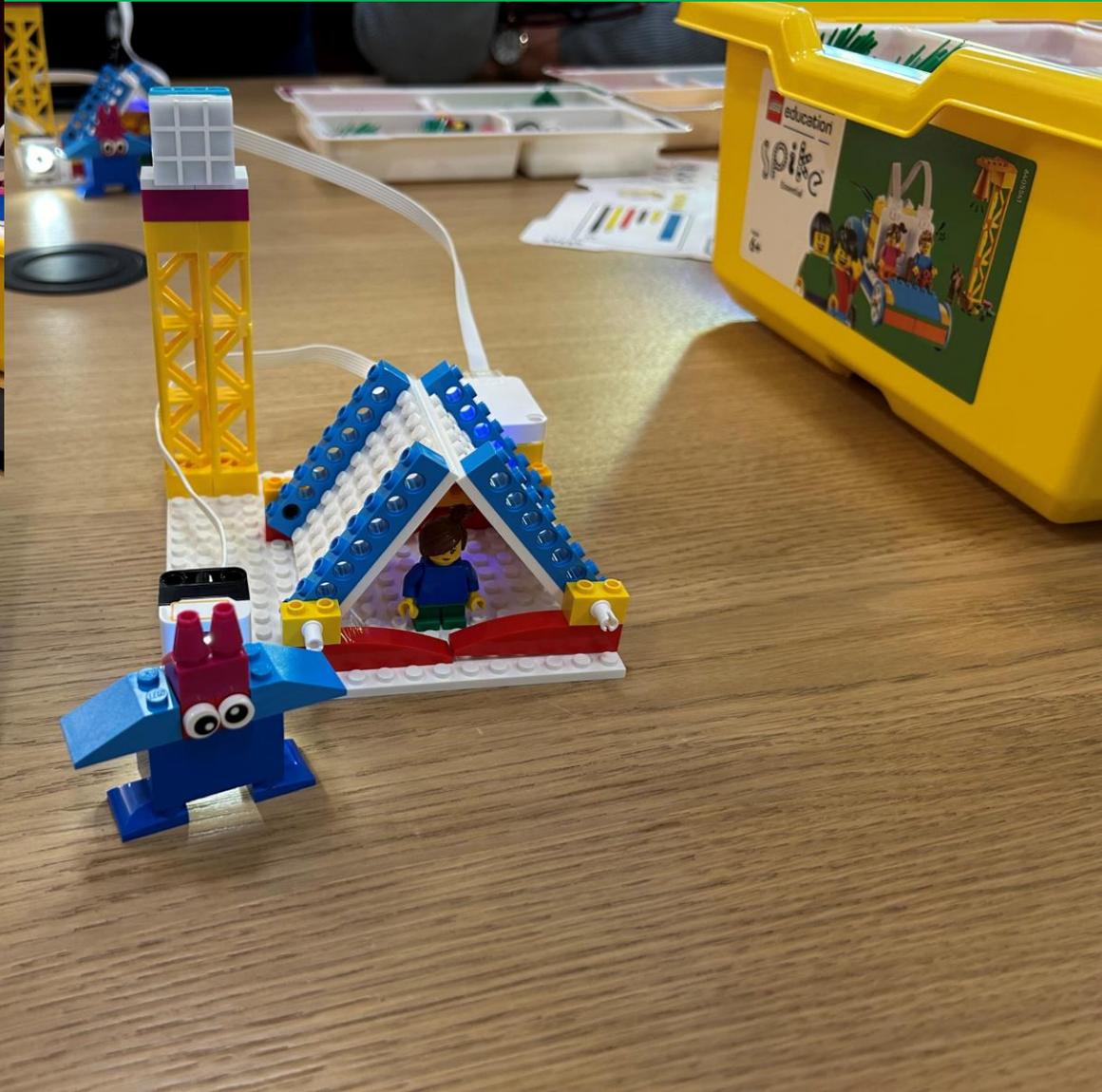
SECONDARY



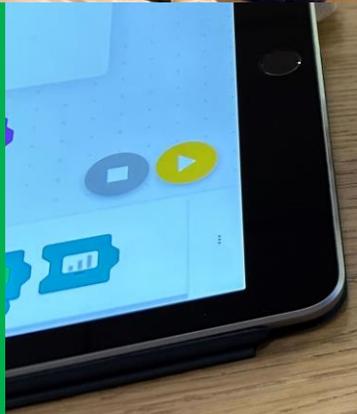
LEGO® Education  
BricQ Motion Essential



LEGO® Education  
BricQ Motion Prime



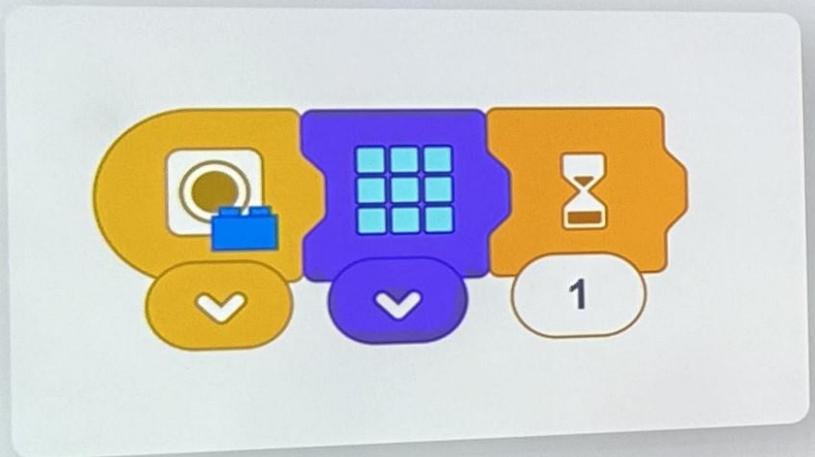
Mãos à obra



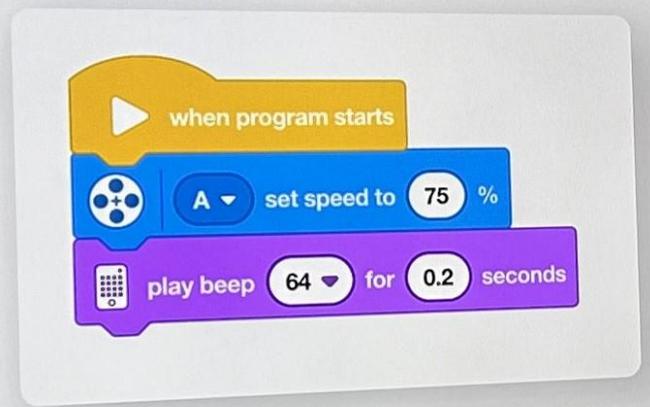
# PROGRAMMING

LEGO® Education SPIKE™ Prime develops students' coding capabilities, progressing from Icon blocks to Word blocks based on Scratch, and through to Python

## 3 Ways to Program



**ICON BLOCKS**  
Support Beginner Coders



**WORD BLOCKS**  
Explore Vertical Coding

```
1 from spike import PrimeHub, LightMatrix, Button,  
2 from spike.control import wait_for_seconds, wait  
3 from math import *  
4  
5 hub = PrimeHub()  
6  
7 hub.light_matrix.show_image('HAPPY')
```

**PYTHON**  
Moving on to text-based coding

# Conhecer a História da LEGO

en, og  
men har jeg i  
rhus. Man mener  
For at det  
e en Driftkabit  
Jelp jeg har  
at forsatte

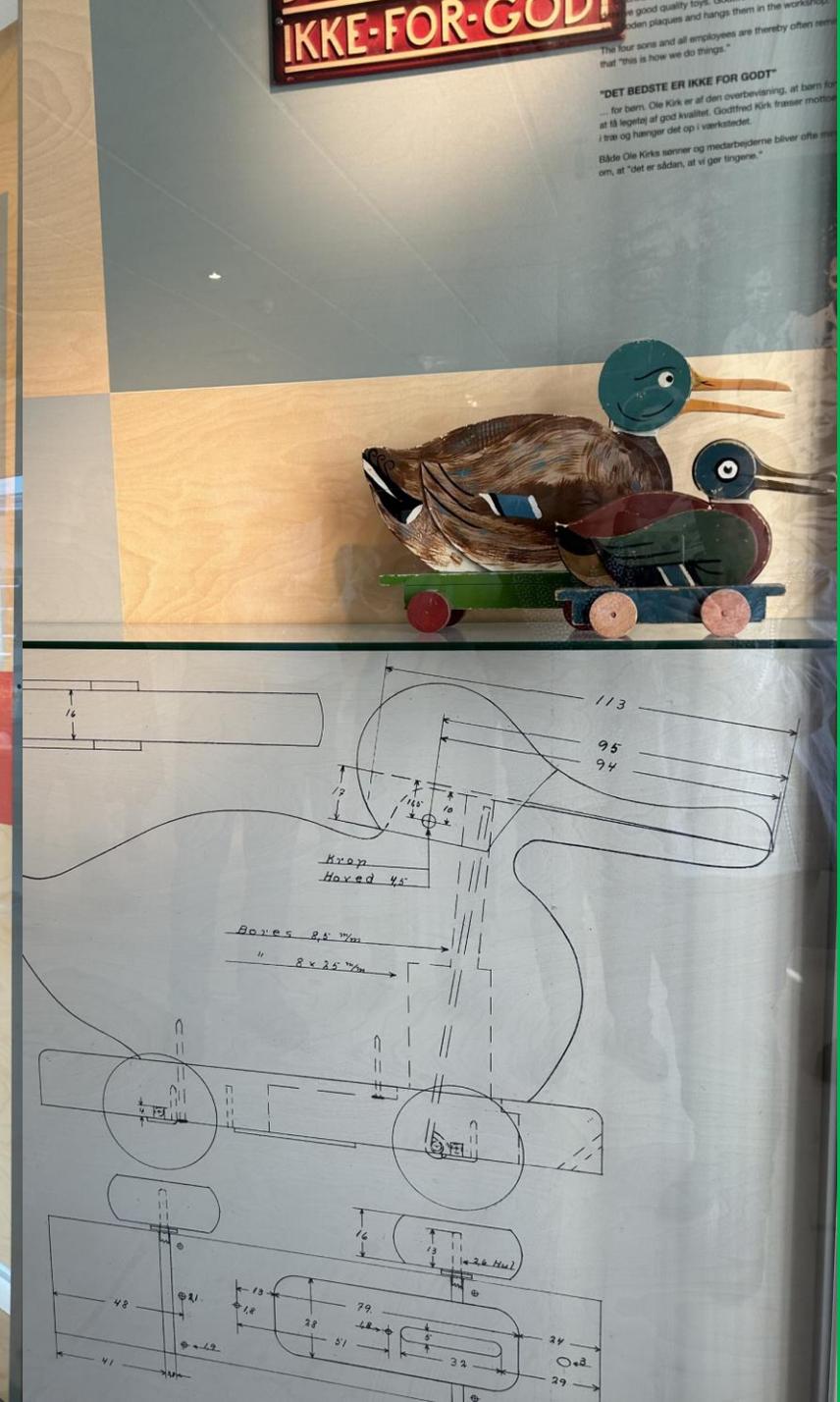
LEg GOOd

Play well

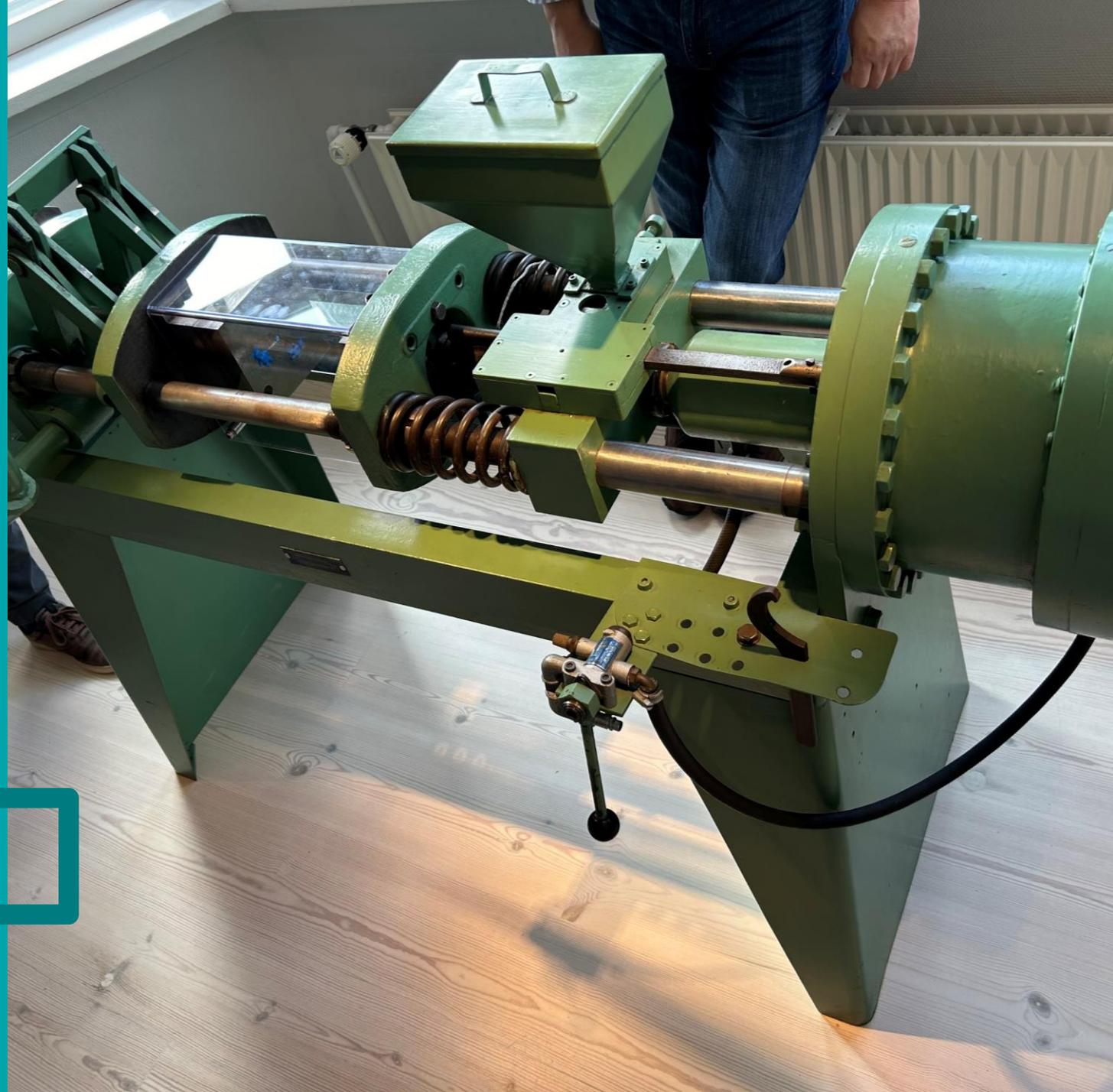


# Casa- Museu

Viragem  
para o  
mundo dos  
brinquedos



A primeira  
máquina para  
fazer  
brinquedos de  
plástico



De peças  
montáveis mais  
simples ...  
a mais  
complexas



# Odense – a cidade da robótica



# Odenseskolen



# Biblioteca

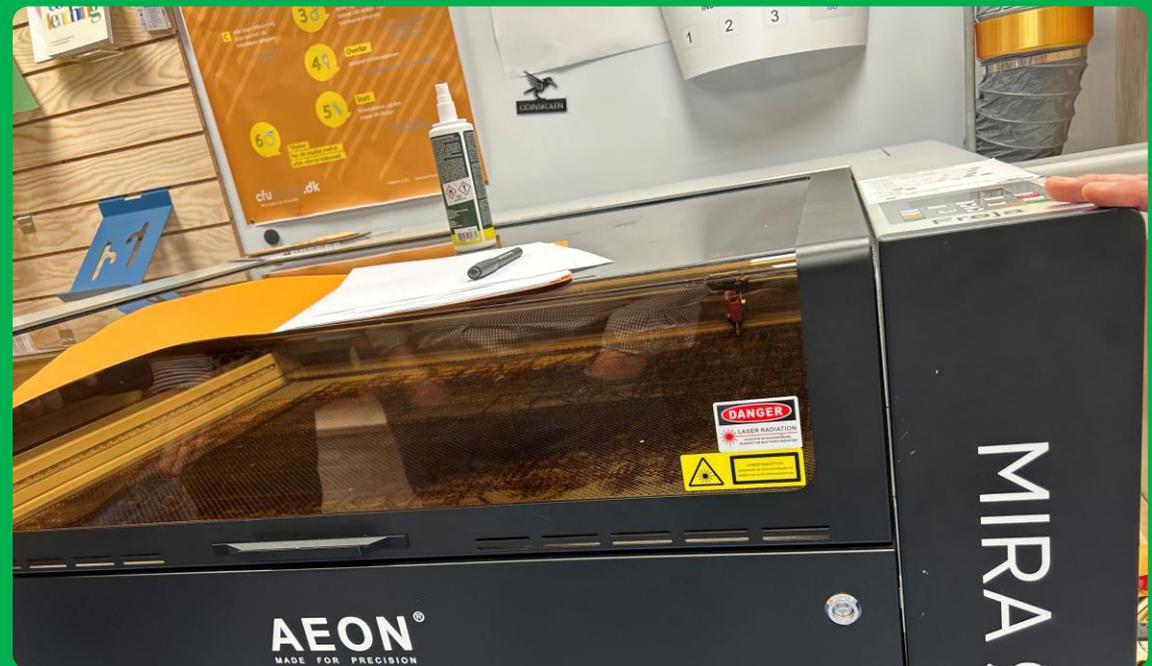




E com a  
tecnologia



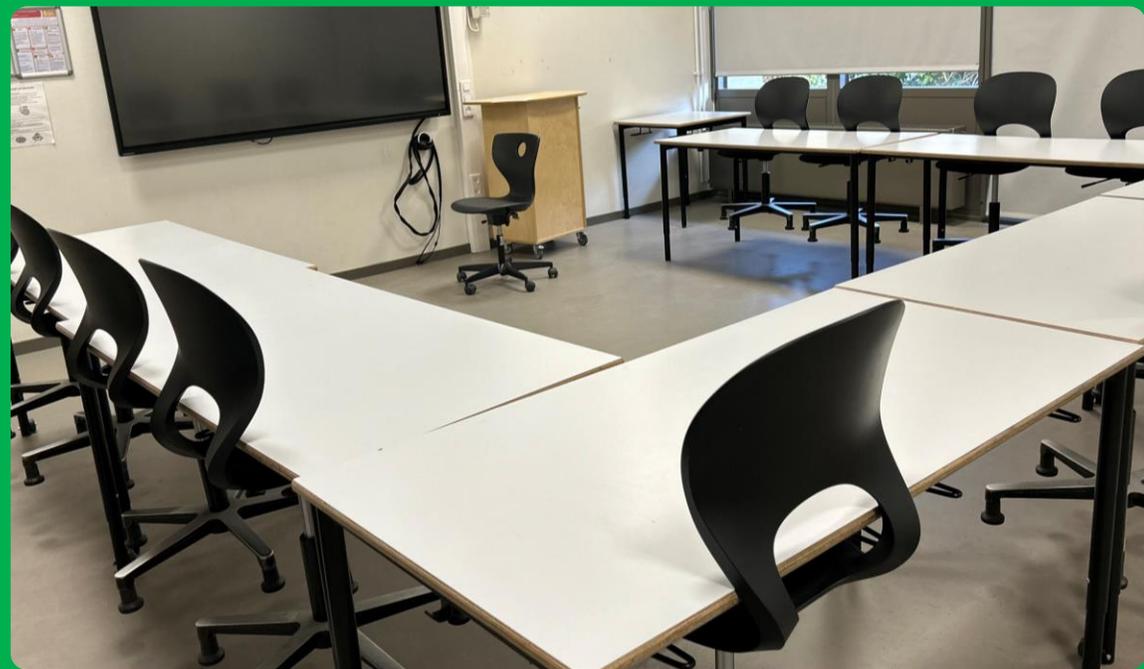
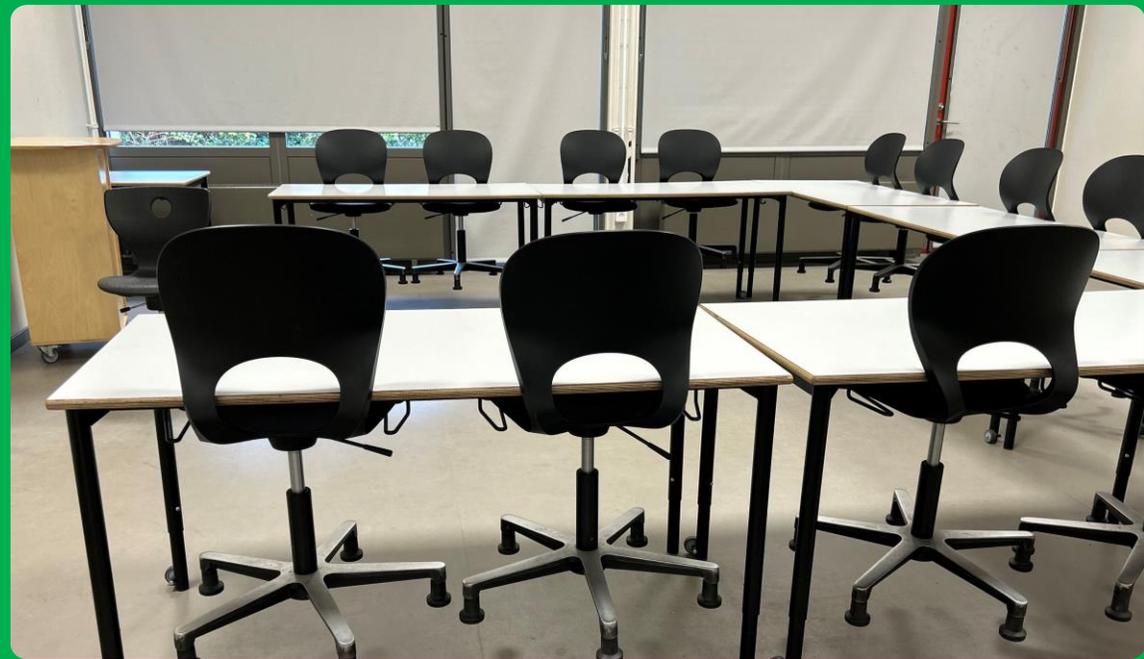
# Robótica e Criatividade



# Espaços de treino da comunicação e de estudo



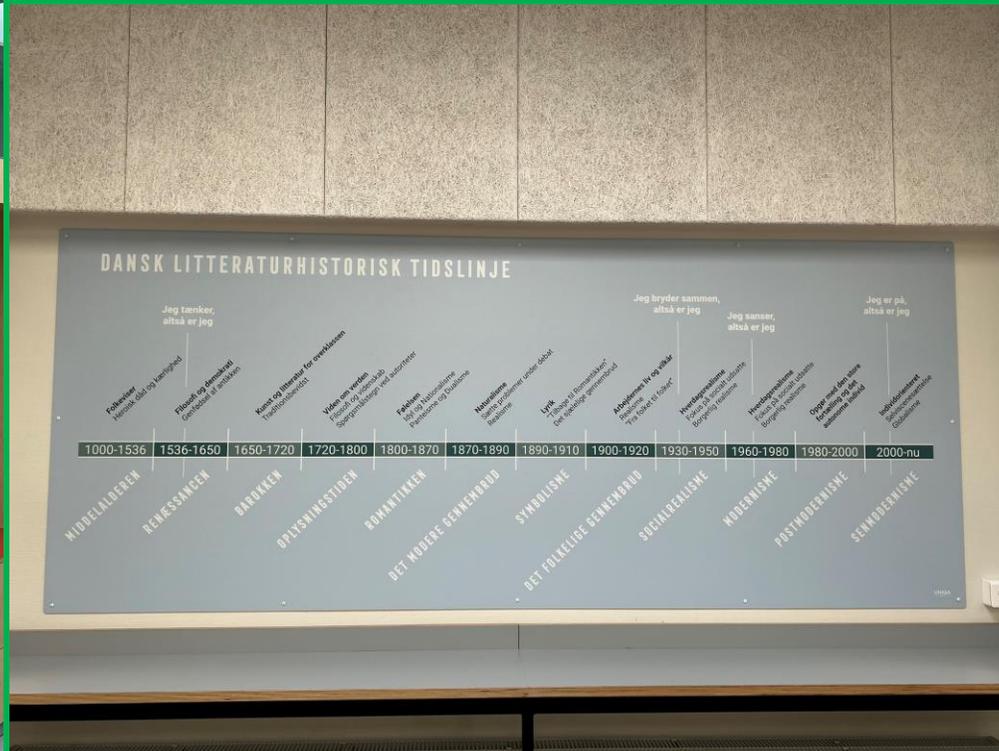
# Salas de aula



**Sala com casa  
de banho  
incluída**



# ESPAÇOS COMUNS de partilha, comunicação e aprendizagem



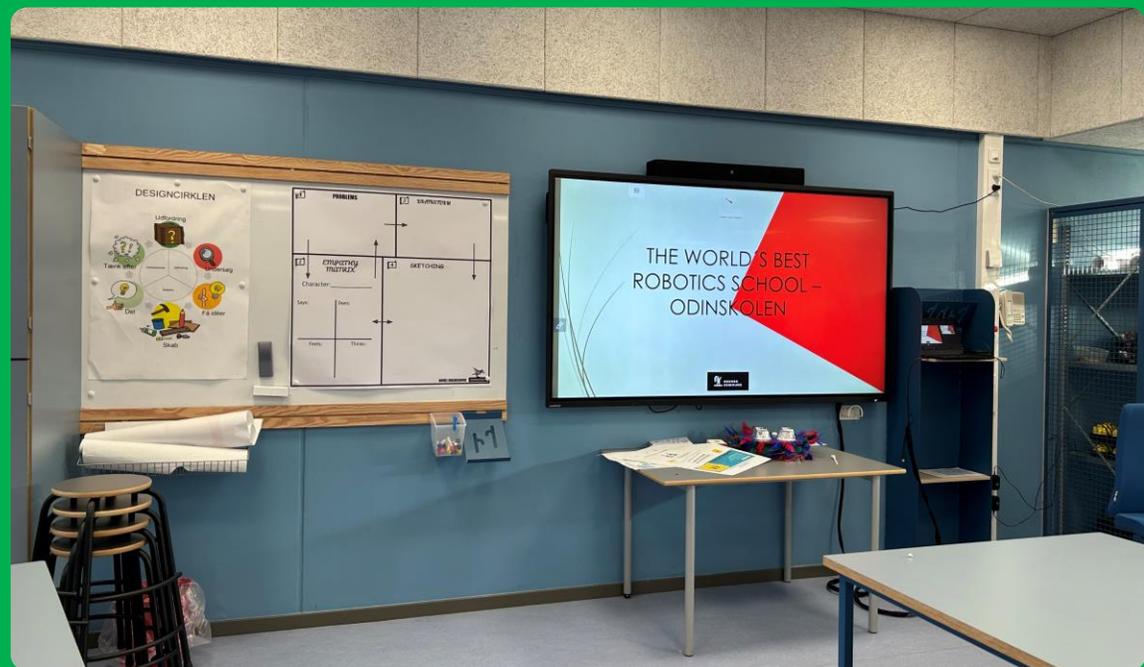
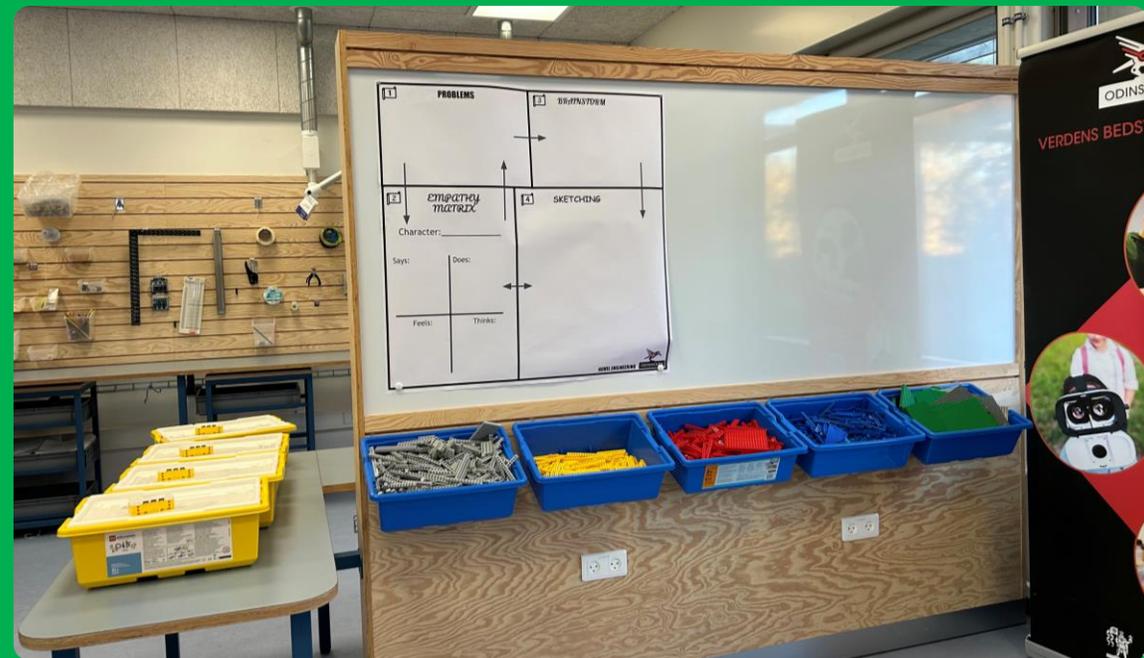
# Anfitriões: Thomas, Kasper, Klas



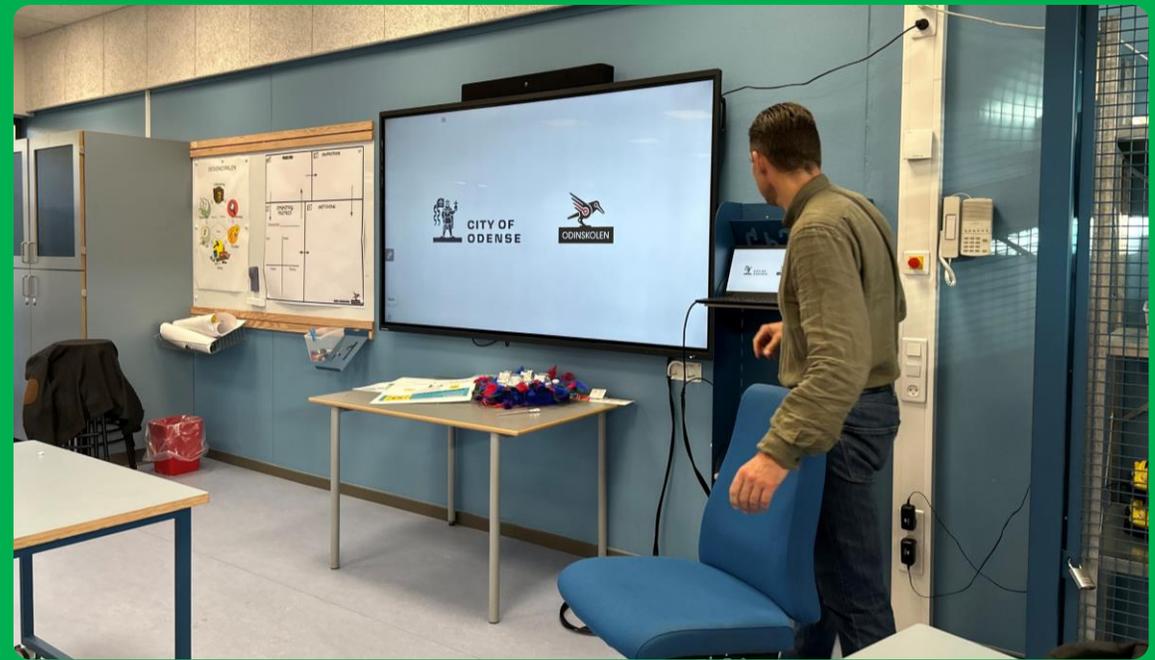
# Um cafezinho para começar



# Sala de trabalho



# Apresentação da Escola



Odinskolen

At Odinskolen there are approx. 425 pupils.

The school is multicultural and located in Vollsmose, Odense Municipality.

95 percent of the school's pupils are bilingual. Many pupils come from socially disadvantaged and educationally deprived homes.

The urban area is undergoing transformation, where, among other things, many non-profit housing is being demolished. The wish is to create an area in Odense that resembles the rest of the city in terms of socio-economic parameters. However, Vollsmose remains Denmark's most exposed residential area on this time.

This provides a special task for the staff, as in addition to the students' professional development, there are also many socio-pedagogical challenges to take care of.

# Apresentação do Município de Odense

The children in the city of robots

VERDENS  
BEDSTE ROBOTBY  
Danish for the world's best robotby  
i børnehøjde

- 2017

- Kr. 50 mio. (6.7mio Euro)

- Strategy 2020-2030

- Funding 50 mio. from  
private Foundations

ODENSE  
KOMMUNE

Odense Municipality

VERDENS  
BEDSTE ROBOTBY  
Danish for the world's best robotby  
i børnehøjde

34 schools

17.000 pupils

2000 teachers

ODENSE  
KOMMUNE

### What?

Bluebots age 4-8



VERDENS  
BEDSTE ROBOTBY  
Oplevelt for børn og voksne  
i børnehøjde

- Algorithms
- Collaboration
- Debugging

ODENSE  
KOMMUNE

### 2.-9. klasse

CoSpaces  
og VR



ODENSE  
KOMMUNE

### LEGO Education 0.-9. klasse

Meta Data Center Community Grant



ODENSE  
KOMMUNE

# Apresentação de projetos de robótica das diferentes idades

### What?

Micro-bit age 10-16

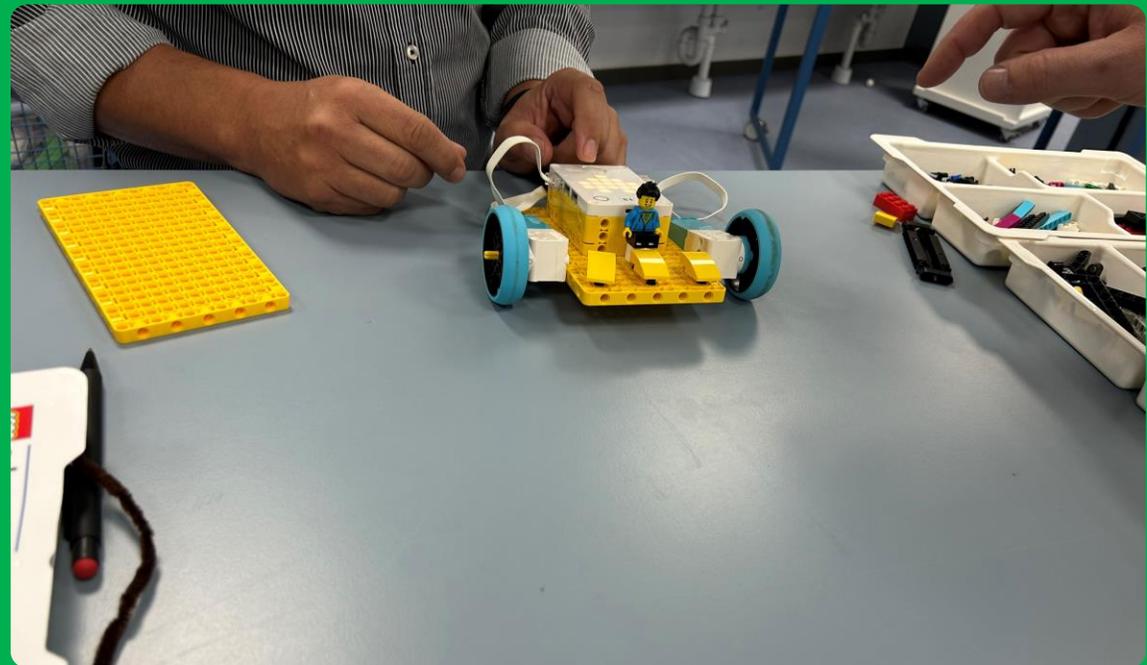
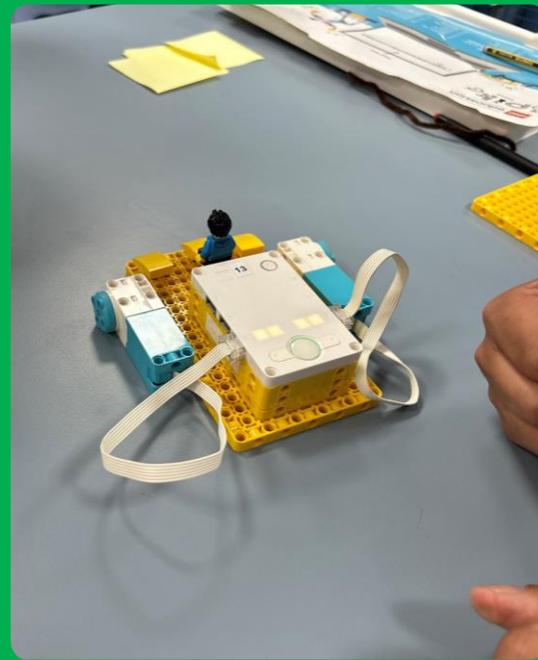


VERDENS  
BEDSTE ROBOTBY  
Oplevelt for børn og voksne  
i børnehøjde

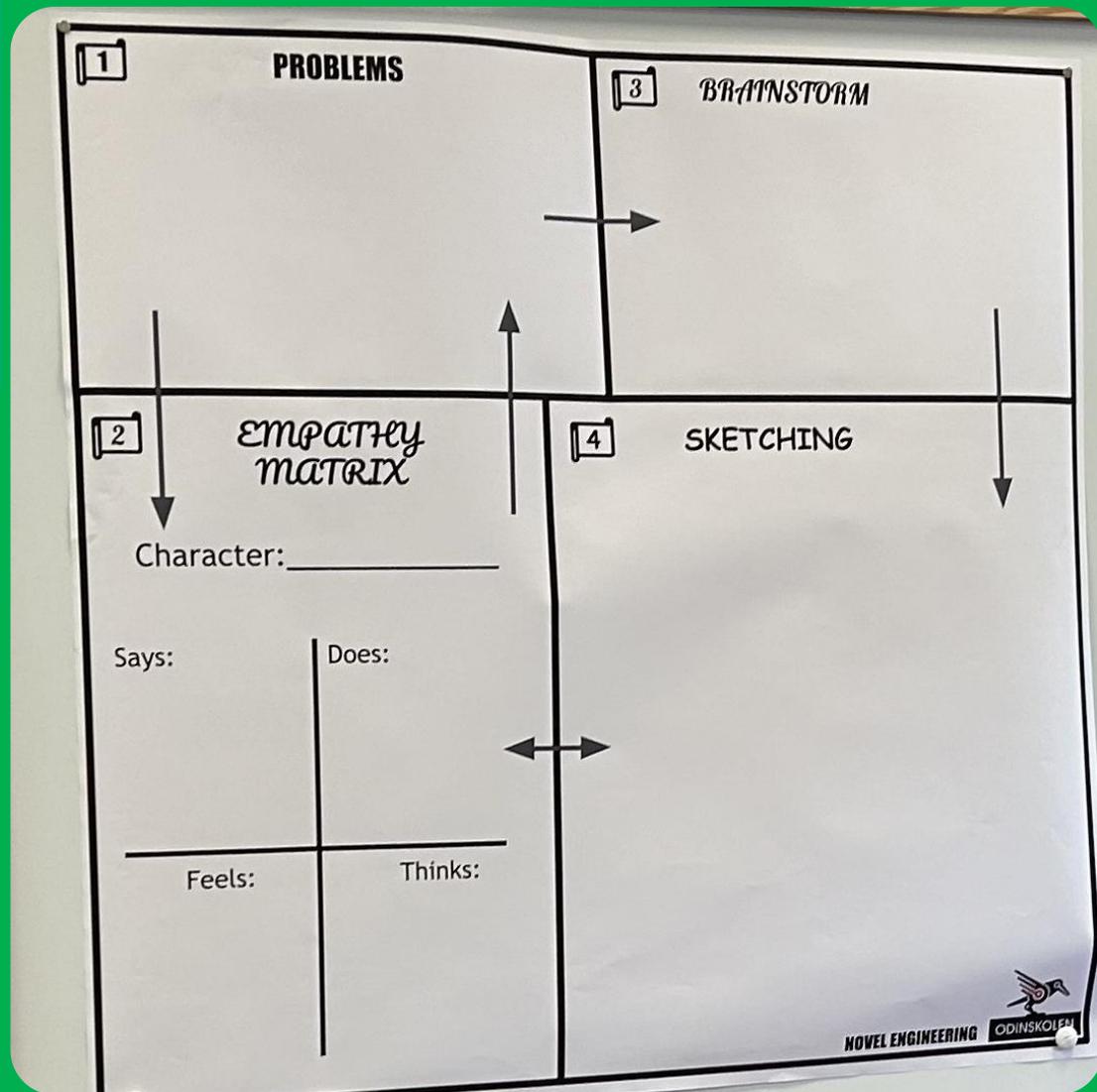
- Creating
- Tinkering
- Evaluation

ODENSE  
KOMMUNE

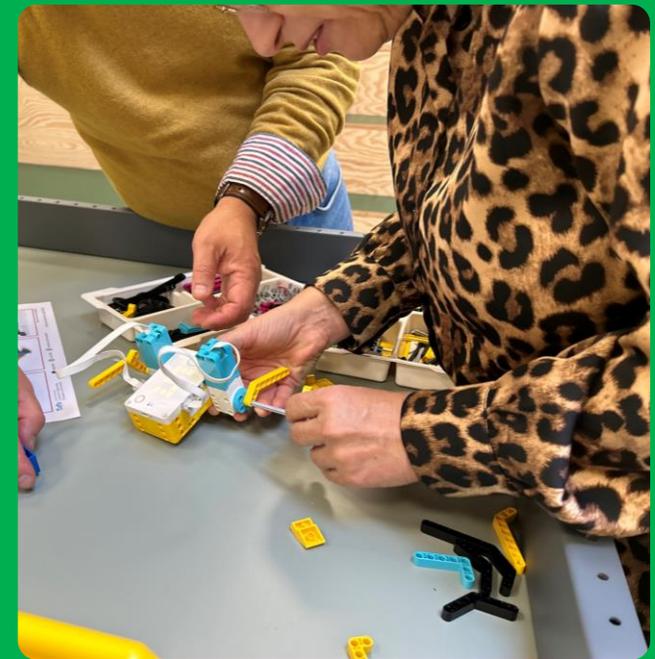
# Aprender fazendo



A partir de  
uma história  
construir  
soluções



Refletir sobre o  
que aprendemos  
e ... continuar a  
experimentar



# Sct. Hans Skole



As biciletas  
não  
podiam  
faltar



— — — — —  
Aprender fazendo,  
refletindo, e  
também...  
sorrindo 😊



# Um excelente acolhimento com direito a tradutora



# Contacto com outros equipamentos e outra realidade



ASUS

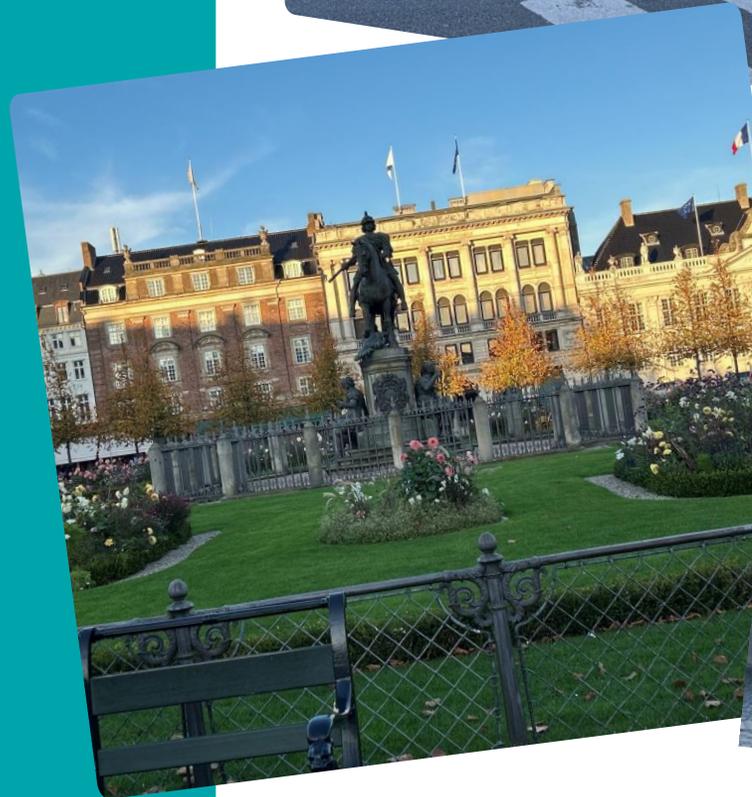
# A noite em Odense – “Street Food”



# Copenhagen



# Uma visita pela cidade

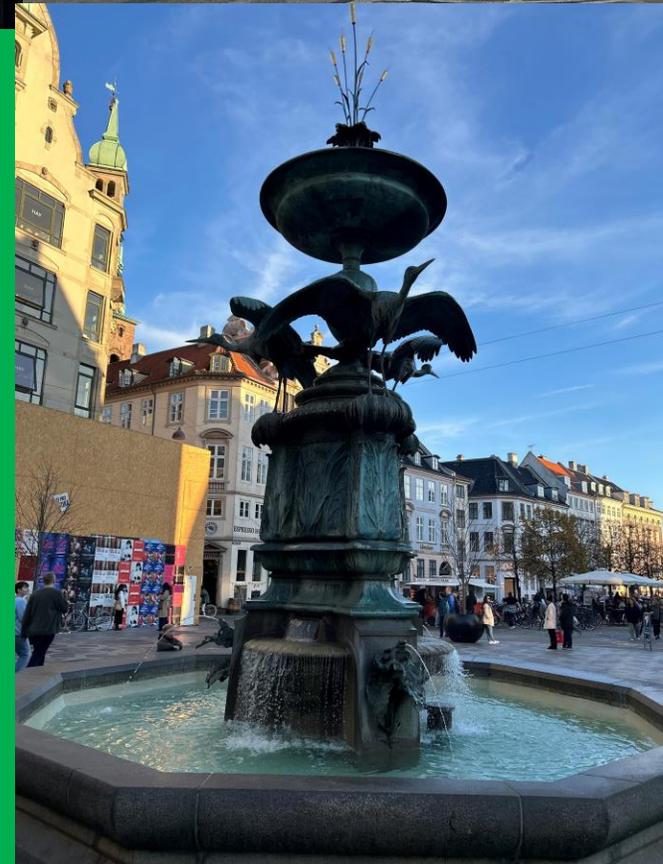




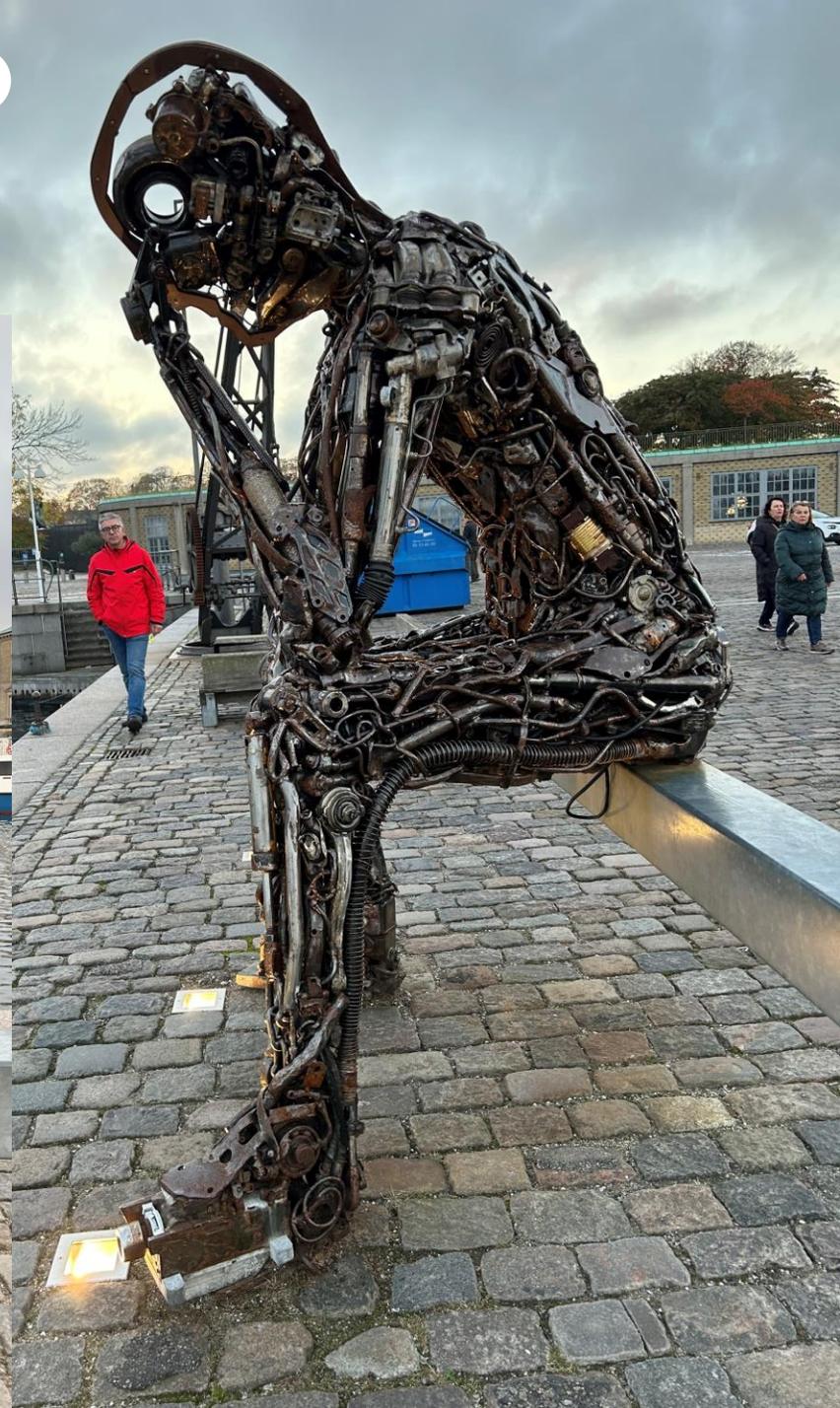
# Cidade

# Pontos turísticos fundamentais





“A chave para o futuro”



# Jardim Botânico





# Castelo de Rosenberg





# O tesouro real



Um passeio de barco  
para ter uma rápida  
visão sobre a história  
da cidade a partir  
dos seus locais e  
edifícios  
emblemáticos



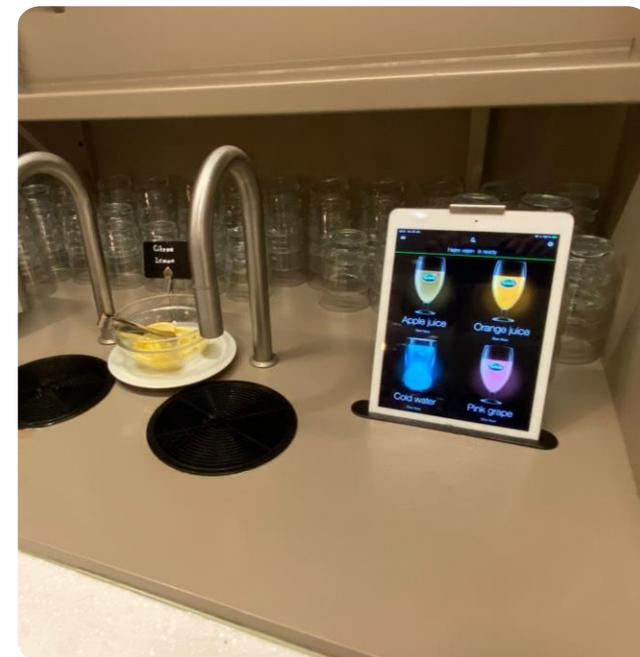
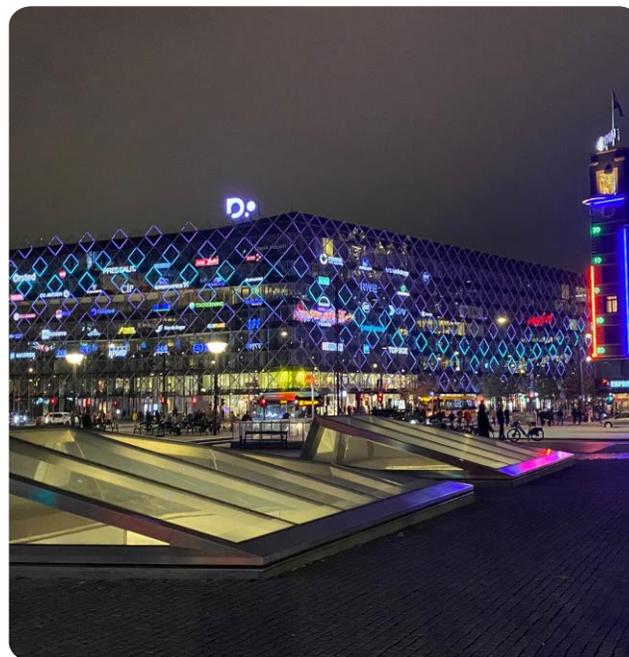
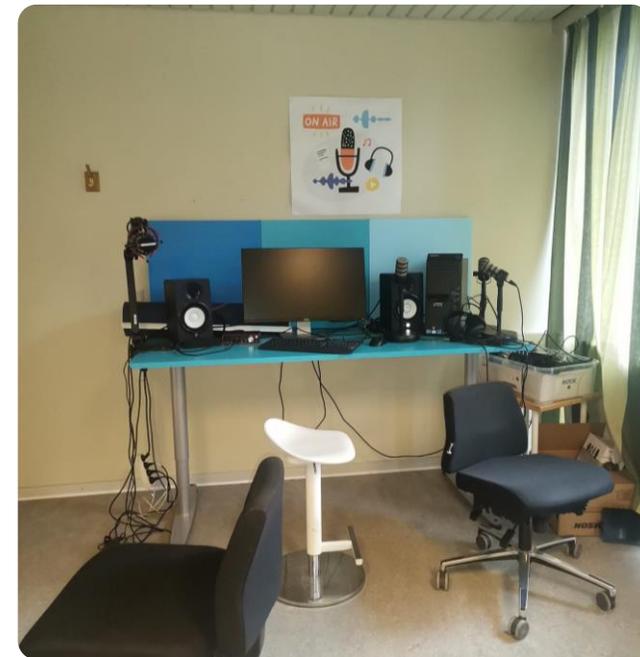
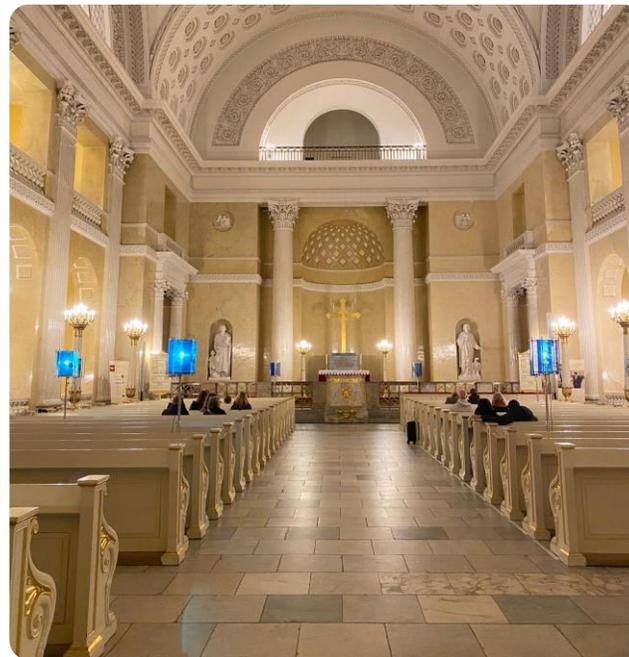
# A Igreja de Frederick



Uma cidade  
de palácios e  
jardins onde a  
vida se  
experimenta  
com calma



Um país onde a tecnologia está presente em cada detalhe da vida quotidiana



Uma cidade onde  
o melhor jantar foi  
uma Pizza  
e o melhor almoço  
foi num restaurante  
tailandês 😊



Quando  
vamos juntos,  
vamos  
melhor...



Regressando a  
Portugal,  
agradecemos ao  
programa Erasmus +  
e ao EDUFOR esta  
excelente  
oportunidade de  
aprendizagem

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