TITLE: Sit, dance, sing and talk , stop

LEARNING SCENARIO	
School: Mangualde School Group	*Duration (minutes): 120*
Teacher: **Cristina Ligeiro, Manuel Figueiredo, Paula Loureiro, Renato Castro**	*Students age: 14*

Essential Question:	**How to program NAO to sing, dance, sit and talk?**

Topics:

- Programming robots
- Computational thinking
- Blocks programming language

Aims:

Remember the main Choregraphe concepts to do the proposed tasks
Create a sequence of movements and actions
Make NAO robot sit, dance, sing and talk

Outcomes:

Programming for:
- Set
- dance
- Sing
- walk (with different parameters)
- Talk

Work forms:

- individual work
- work in pairs

Methods:

- *Coding*
- *Interactive exercise /simulation on the computer*
- Discussion
- Testing

ARTICULATION

Course of action (duration, minutes)

INTRODUCTION

Students must create a short script that represents the expected action of NAO. Then the students will begin to program together, in Choregraphe, according to the planning done previously. From time to time the program will need to be loaded on the robot to confirm that it runs correctly. In case of failure, students must solve the problems, cyclically ,to create their own knowledge. As students work collaboratively and think critically and creatively, experimenting with different command blocks, they create a still experimental developmental narrative. Communication between peers and working groups should be reinforced by the working methodology used. The teacher should be a mere facilitator of learning.

MAIN PART

Topics for discussion

- Computational Thinking
- The Choregraphe application
- Third Code

Scenarios for discussion

- The students continue to practice the use of several blocks of commands, namely, the one to sit, to dance and to sing.
- They can even go further, and try out the block of playing football, playing an instrument, in a sequence, interspersed with dialogue and movements.

CONCLUSION

We expect students will continueto work autonomously, solving problems and experimenting with solutions and algorithms, in a dynamic of computational thinking and teamwork.

Methods	***Work forms***
Wor in the text *interactive exercise /simulation on the computer*	*individual work* *work in pairs*

Material

- Computers
- Student guide nº 3 https://edufor.sharepoint.com/:w:/s/Erasmus554/EaftSjnXZzxLpFQvMpwCfHcBDqTCq_zBv-5xrtszcSLR9Q?e=2LwoV0
- Choregraphe. Exe
- NAO robot

Literature

- NAO Software 1.14.5 documentation; http://doc.aldebaran.com/1-14/software/choregraphe/starting_discovery.html

PERSONAL OBSERVATIONS, COMMENTS AND NOTES

The work sequence is developing in an a great rhythm. Students share ideas and make suggestions in a continuous sharing and close collaboration.