

Robotika Hezkuntzan

Zientziaren astea Informatikan
2011-11-10

Koldo Olaskoaga

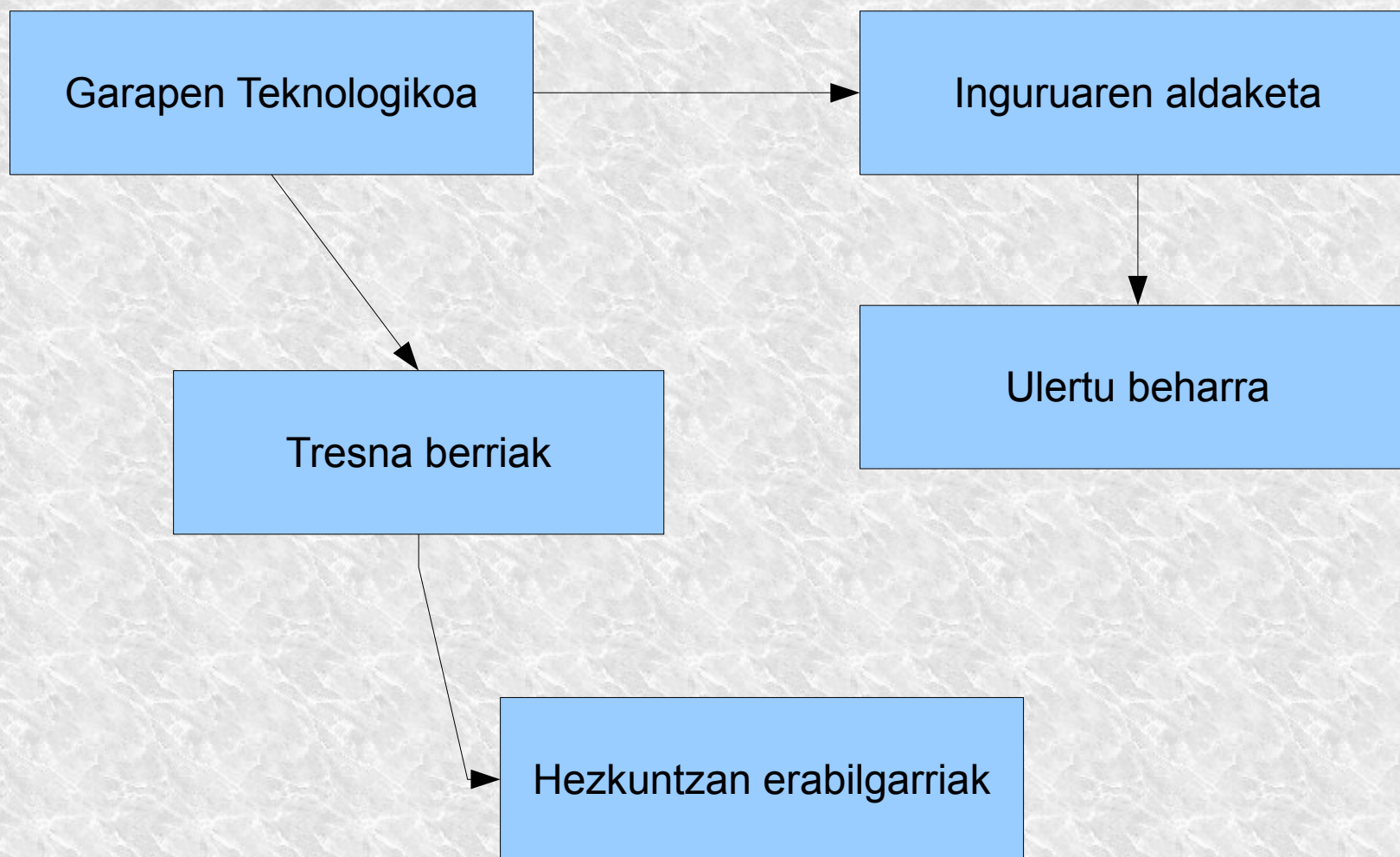


Lrobotikas.net

Robótica Educativa y Recreativa

- Experientziak hezkuntzan
- Hardwarea / Softwarea
- Lehiaketak eta Zientzia eta Teknologia Programak

Testuingurua hezkuntzan



Hezkuntzan Erabilgarriak

Ikasketa Objektua

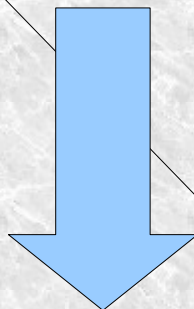
Ikasketarako Tresna

Elkarlanerako Tresna

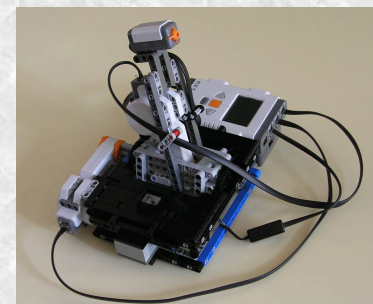
1.0



Teknologia Kontsumitzaile



Teknologia "Prosumidore"



2.0

Haur eta Lehen Hezkuntza

Ikasketarako tresna

Miaketan oinarritutako ikasketa



Beebot



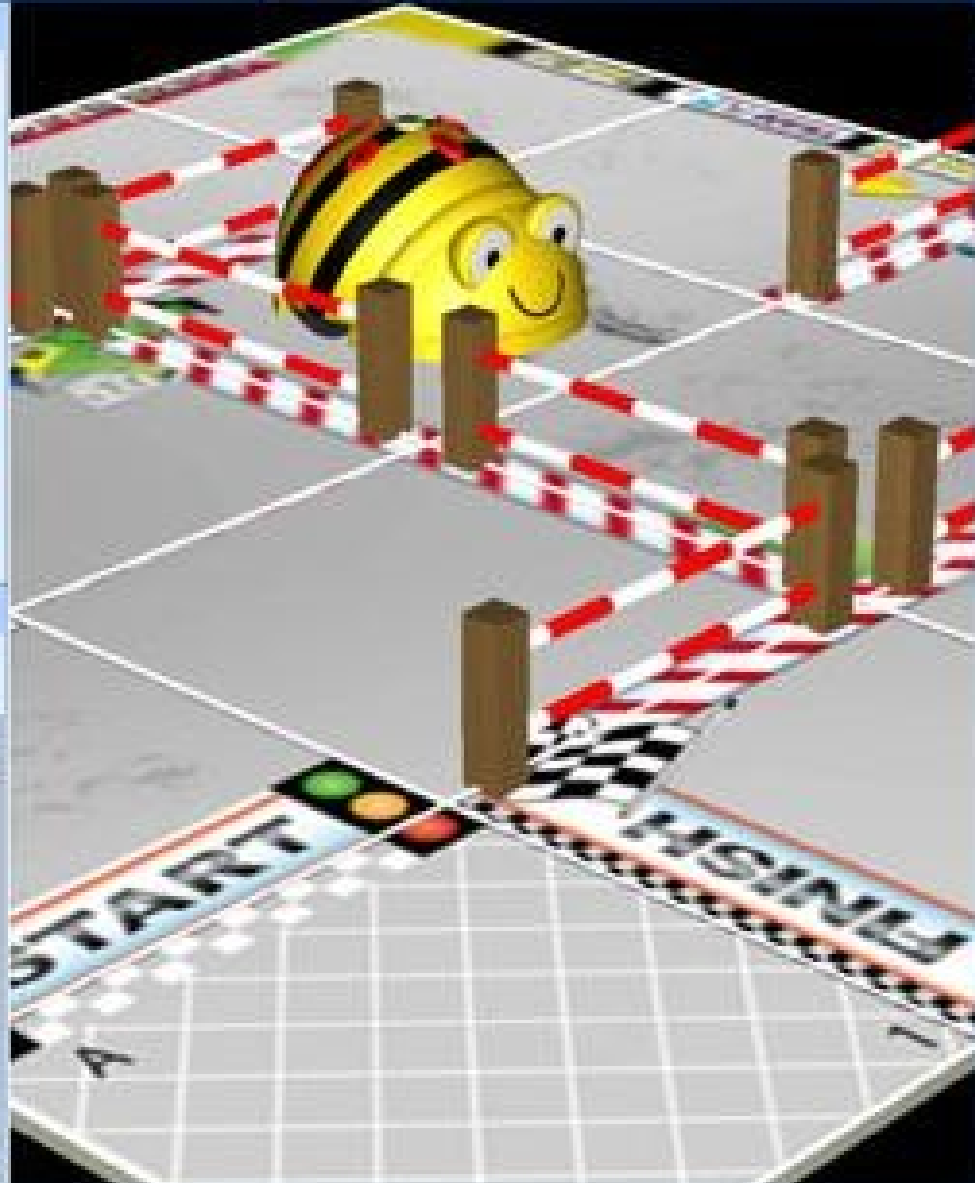
Navigation

A set of navigation icons including a red square with a black triangle pointing up, a yellow Bee-Bot character, a red square with a black triangle pointing left, a red square with a black triangle pointing right, two vertical red bars, a red square with a black triangle pointing down, and a red square with a white X.

Commands

Delete Edit

- Turn right
- Move forward
- Move back
- Move forward
- Turn right
- Turn right
- Turn right

A list of commands with red square icons: Turn right, Move forward, Move back, Move forward, Turn right, Turn right, and Turn right. The last command is highlighted with a blue background.

Index 3D objects

Race track

Treasure island

Busy street

A vertical panel on the right side of the interface. It has a tab labeled 'Index 3D objects'. Below the tab are three thumbnail images: a race track with a Bee-Bot, a treasure island with a Bee-Bot, and a busy street with buildings and a Bee-Bot. Each thumbnail is labeled with its respective name: 'Race track', 'Treasure island', and 'Busy street'.

Esperientziak Italian

G. Barbara Demo, Giovanni Marciano, Simonetta Siega:
Concrete Programming: Using Small Robots in Primary Schools.



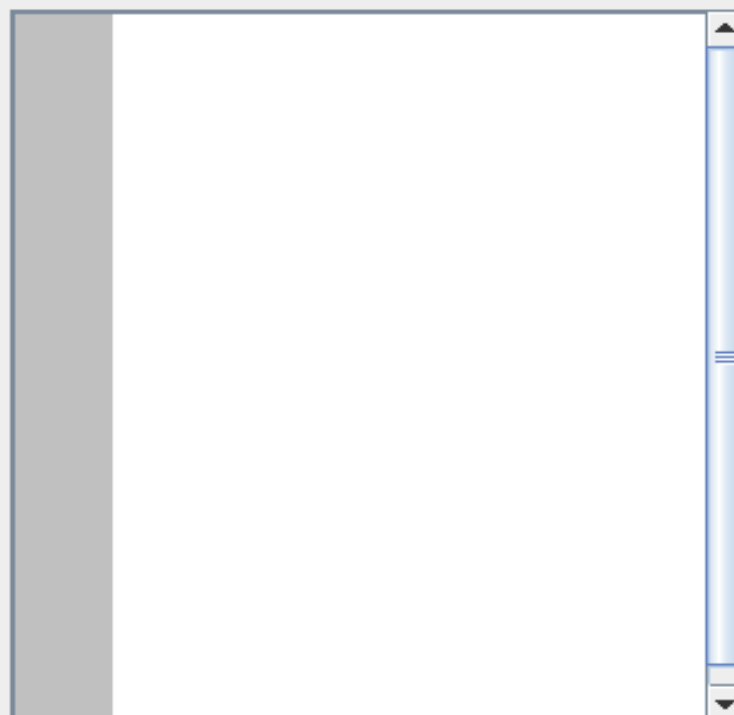
File Progetto



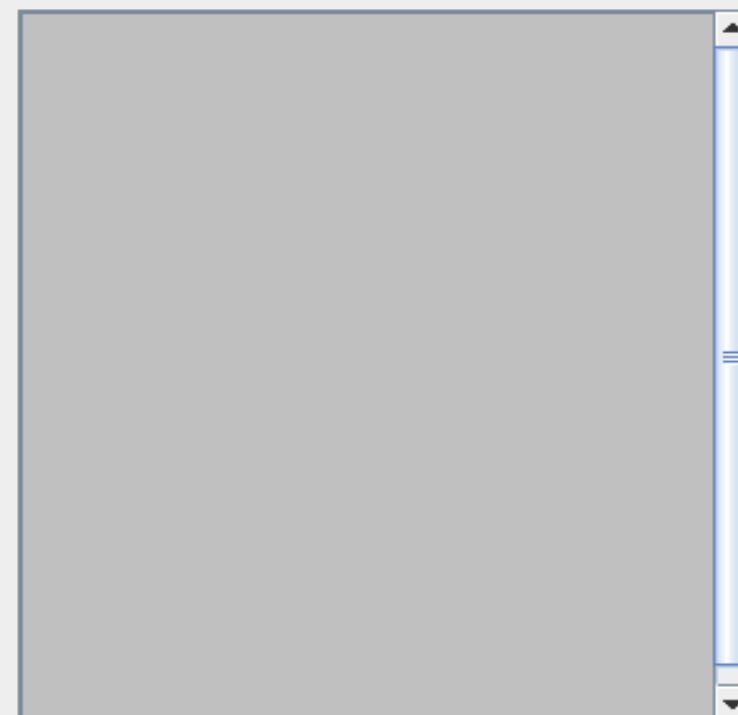
Baby 1
Baby 2
Baby 3
Baby 4
Baby 5

Robby
ciao
avanti (numero)
indietro (numero)
destra (numero)
sinistra(numero)
veloce (numero)
ripeti (numero)
aspetta (numero)
acaso (numero)
avantisempre
ripetisempre
fine
accendiluce
spegniluce
sensore1_tocco
sensore3_luce
se_tocca
se_chiario
se_scuio
sinoache_chiario
sinoache_scuio
altrimenti

Codice in NQC_Baby



Codice in NQC

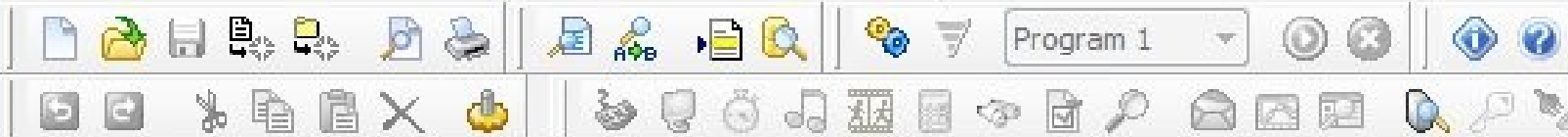




Brick Command Center



File Edit Search View Compile Tools Window Help



- Functions
- Subroutines
- Tasks



1_simple.nqc

```
task main()
{
  OnFwd(OUT_A);
  OnFwd(OUT_B);
  Wait(400);
  OnRev(OUT_A+OUT_B);
  Wait(400);
  Off(OUT_A+OUT_B);
}
```

1: 1

no port

Insert

Lehen Hezkuntza

Ikasketarako tresna

Miaketan cinarritutako ikasketa



Ezaugarri Esanguratsuak

SCRATCH



File Edit Share Help

Motion

Control

Looks

Sensing

Sound

Operators

Pen

Variables



Jodi



x: 9

y: 96

direction: 90

Scripts

Costumes

Sounds

when green flag clicked

forever

glide 0.75 secs to x: 10 y: 100

glide 0.75 secs to x: 10 y: -35

when right arrow key pressed

repeat 12

turn 30 degrees

when left arrow key pressed

repeat 12

turn 30 degrees

when up arrow key pressed

repeat 10

change whirl effect by 20

repeat 10

change whirl effect by -20

set whirl effect to 0

when down arrow key pressed

switch to costume touch-toes1

wait 1 sec

move 10 steps

turn 15 degrees

turn 15 degrees

point in direction 90

point towards

go to x: 9 y: 96

go to

glide 1 secs to x: 9 y: 96

change x by 10

set x to 0

change y by 10

set y to 0

if on edge, bounce

x position

y position

direction

3 Trampoline



x: 103 y: -394

New sprite:



Jodi



Trampol...



Stage



Argazkiaren jatorria <http://www.natuba.com>



Irudiaren jatorria <http://www.robotica-personal.es>



WeDo + Scratch

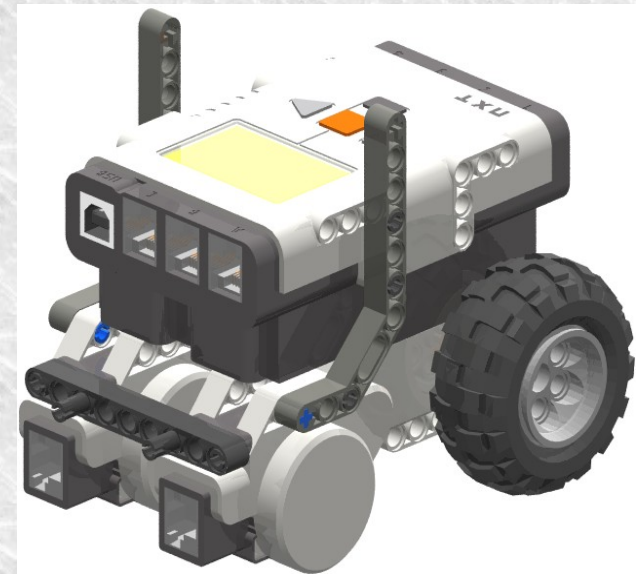
Bigarren Hezkuntza

Ikasketarako tresna
+ Ikasketa Objektua

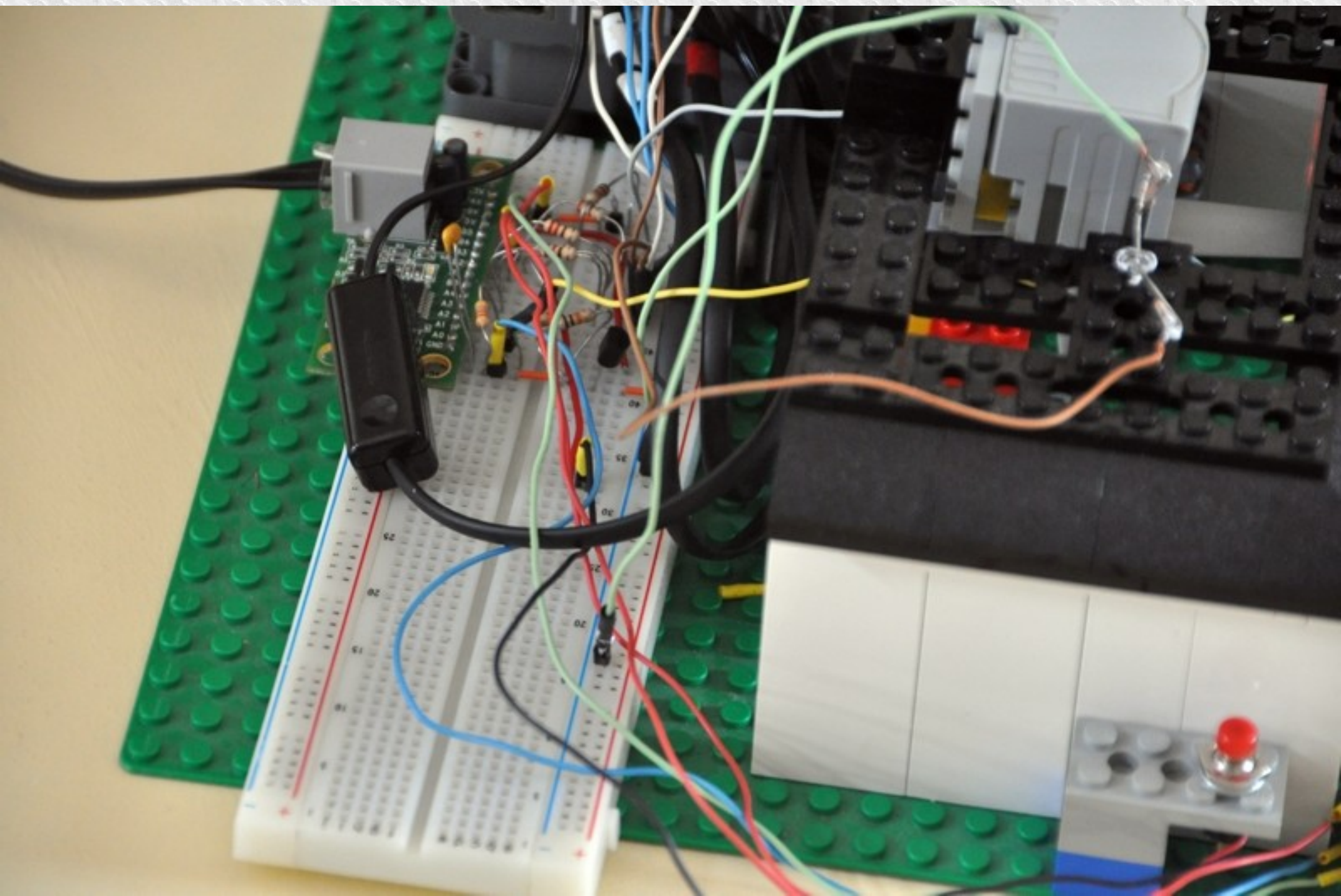
Teknologia

Kurrikulum Ezberdinak gela

Zientziak



- Zientzia-, teknologia- eta osasun-kulturarako gaitasuna
- Ikasten ikasteko gaitasuna: problema-soluzioa
- Informazioa tratatzeko eta teknologia digitala erabiltzeko gaitasuna
- Matematikara gaitasuna
- Gizarterako eta herritartasunerako gaitasuna: taldean lana
- Norberaren autonomiarako eta ekimenerako gaitasuna



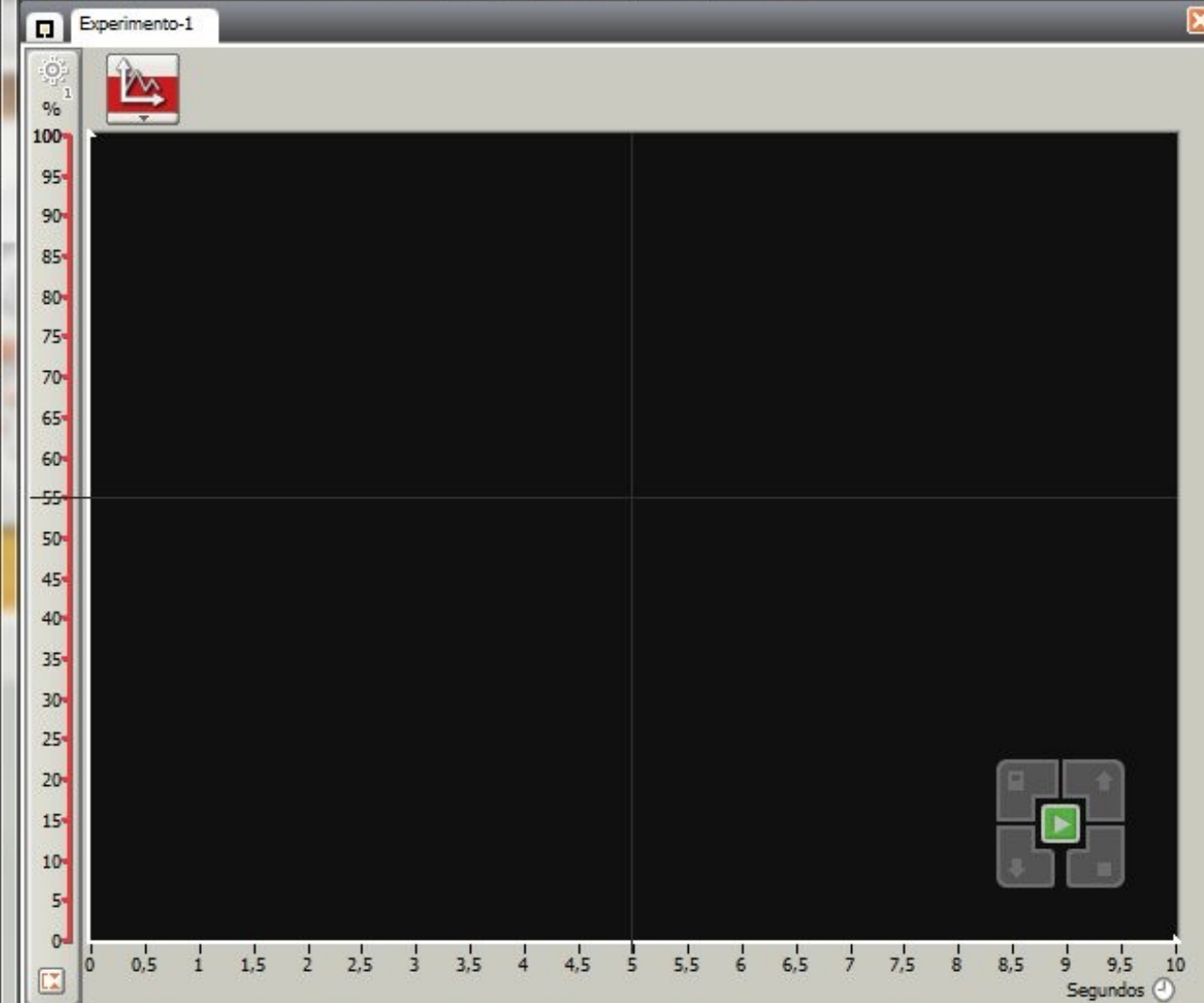


Tabla de conjunto de datos

Iniciar tiempo					

Robot Educator

 **Common Palette**

 **Complete Palette**

 **Data Logging**

Select:

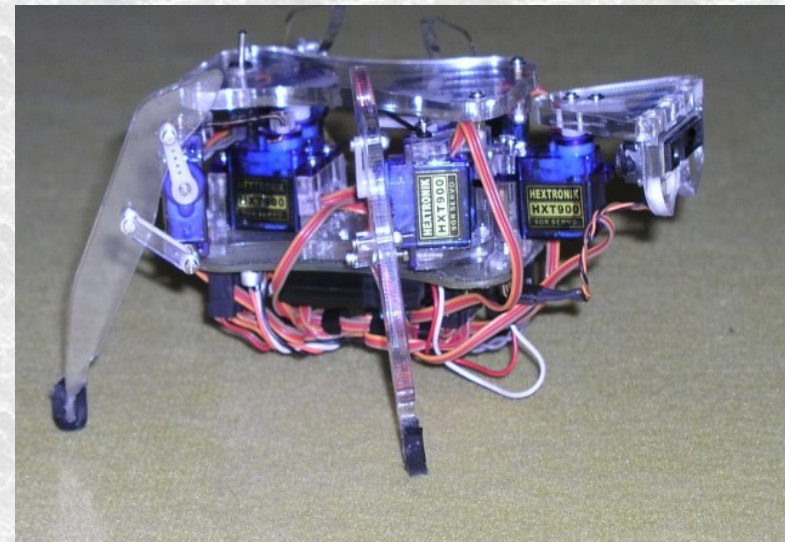
- ☐ Speaker
- ☐ Touch Sensor
- ☐ Light Sensor
- ☐ Motor
- ☐ All
- ☐ Ultrasonic S
- ☐ Display
- ☐ Lamp
- ☐ Sound Sen
- ☐ Temperatu

Gráfico

El gráfico es una representación visual del registro, y muestra pronósticos y/o con utilzando uno o más ejes y un eje x, escala del eje y, personalizar el color y ocultar o eliminar gráficos.

Lanbide Heziketa

Ikasketarako tresna
+ Ikasketa helburua
+ Enprendizajerako aukera

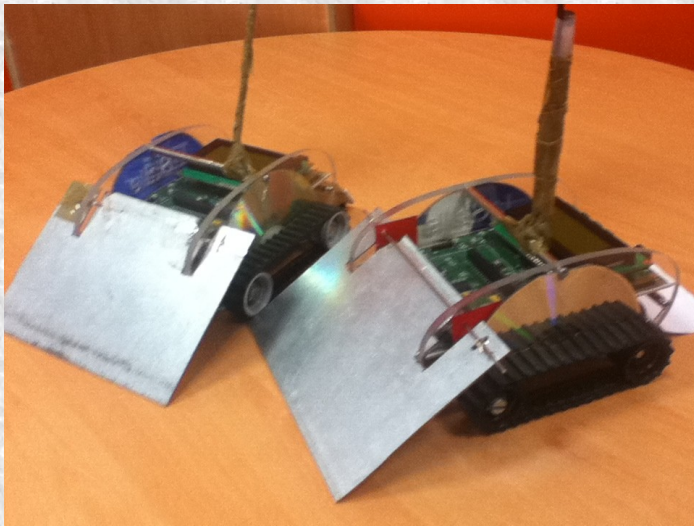


Material profesionalaren erabilpena

Microbotekin **esperientziak**

Unibertsitatean

Ikasketarako tresta
+ Ikasketa objektua
+Ikerketa



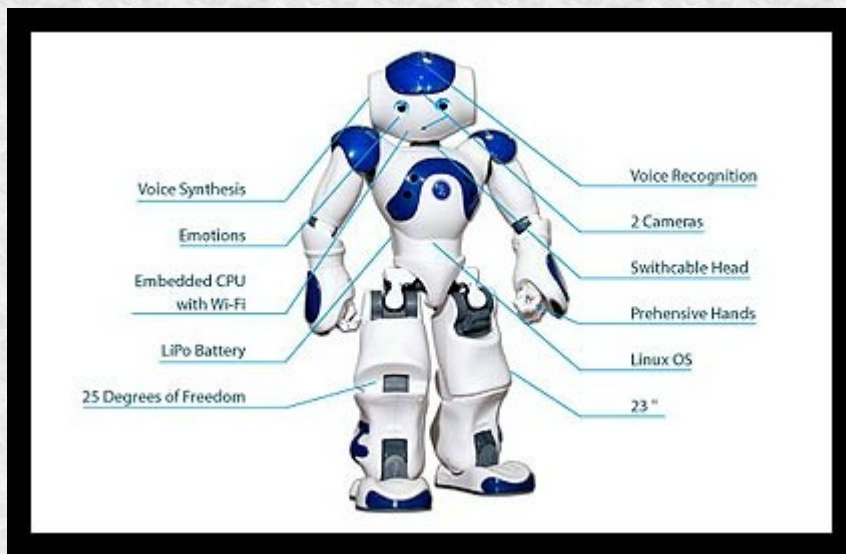
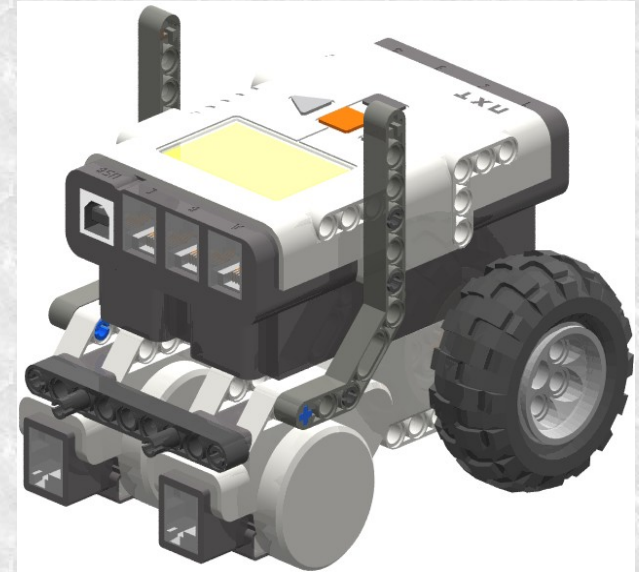
LS Maker (La Salle)

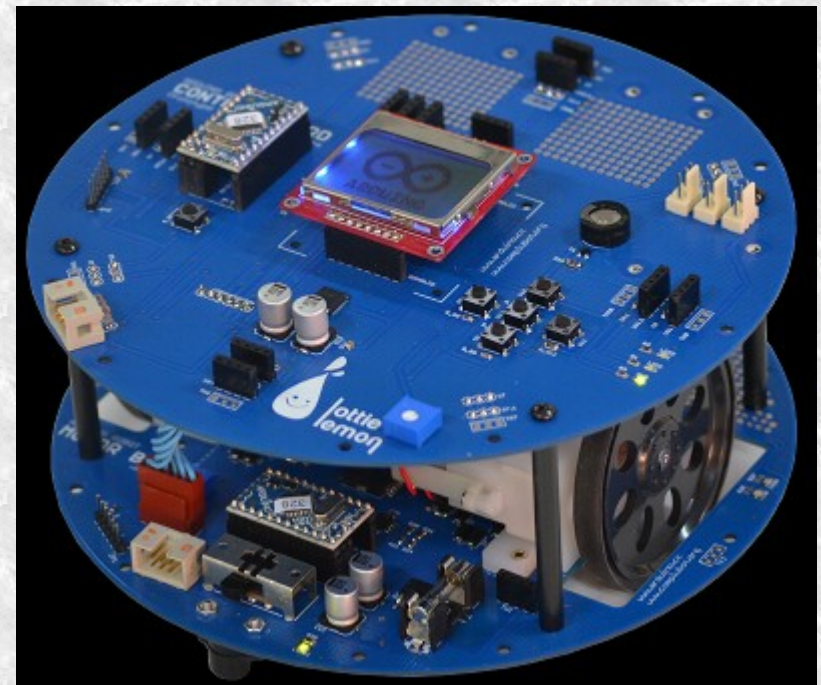
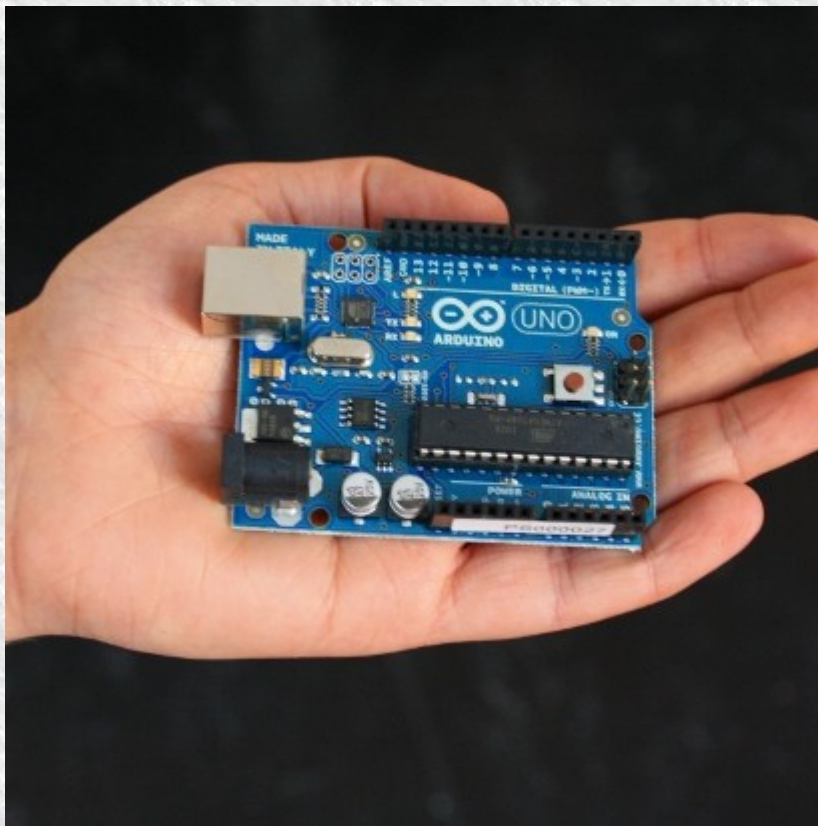


LEGO MINDSTORMS NXT ingeniaritzetan ikasketarako tresna gisa (UPC)

***Proiektua: LEGO MINDSTORMS NXT plataforma
PBL metodologiekin batera erabili Informatika Industrialean (UPV-EHU)***

HARDWAREA / SOFTWAREA



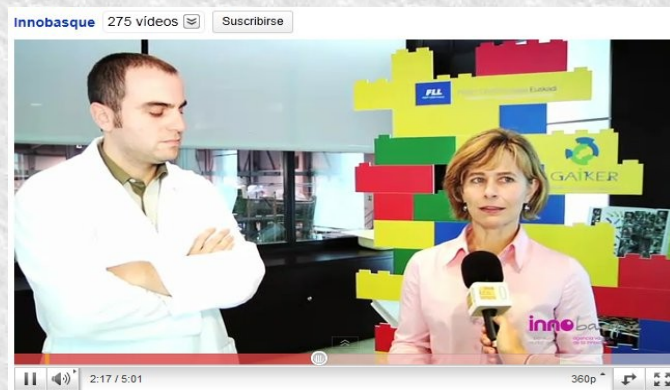
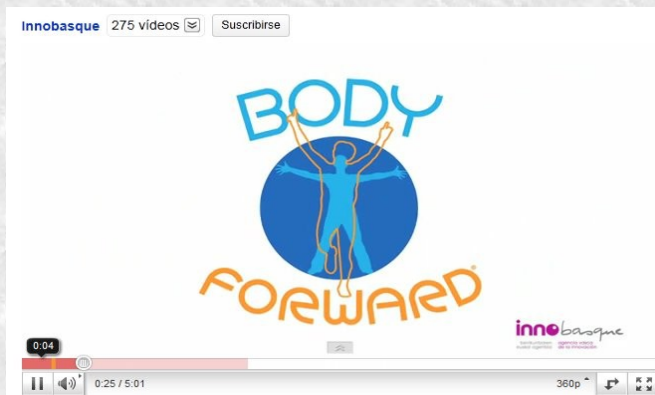


Arduino Lottie Lemon



Enchanting

Zientzia, Teknologia eta Berrikuntza Programa



Lehiaketak



RoboCup España





Periferian



CURSOS DE ROBÓTICA

¡ APRENDE A CONSTRUIR Y PROGRAMAR ROBOTS DURANTE TODO EL AÑO !

¡ GRUPOS PARA TODAS LAS EDADES !

"Queremos crear un mundo donde la ciencia y la tecnología sean reconocidas... donde los niños también sean los líderes de la ciencia y la tecnología" David Kasper F.R.S.K. Founder (For Inspiration and Recognition of Science and Technology)"

LEGO education

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[Twitter: @roboticadidact](https://twitter.com/roboticadidact)
badajozrobotica@gmail.com

f t YouTube

Google

ASOCIACIÓN DE ROBÓTICA EDUCATIVA

924 255 351



ESTE VERANO TU HIJO EN...

CAMPAMENTOS TECNOLÓGICOS!

KIDDYBOTS week

¡Nuevo!

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LEGO education

Nuevo KiddyBOTS para los mas peques

ESKERRIK ASKO!!!



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