



**From Scratch Day to  
Scratch every day**



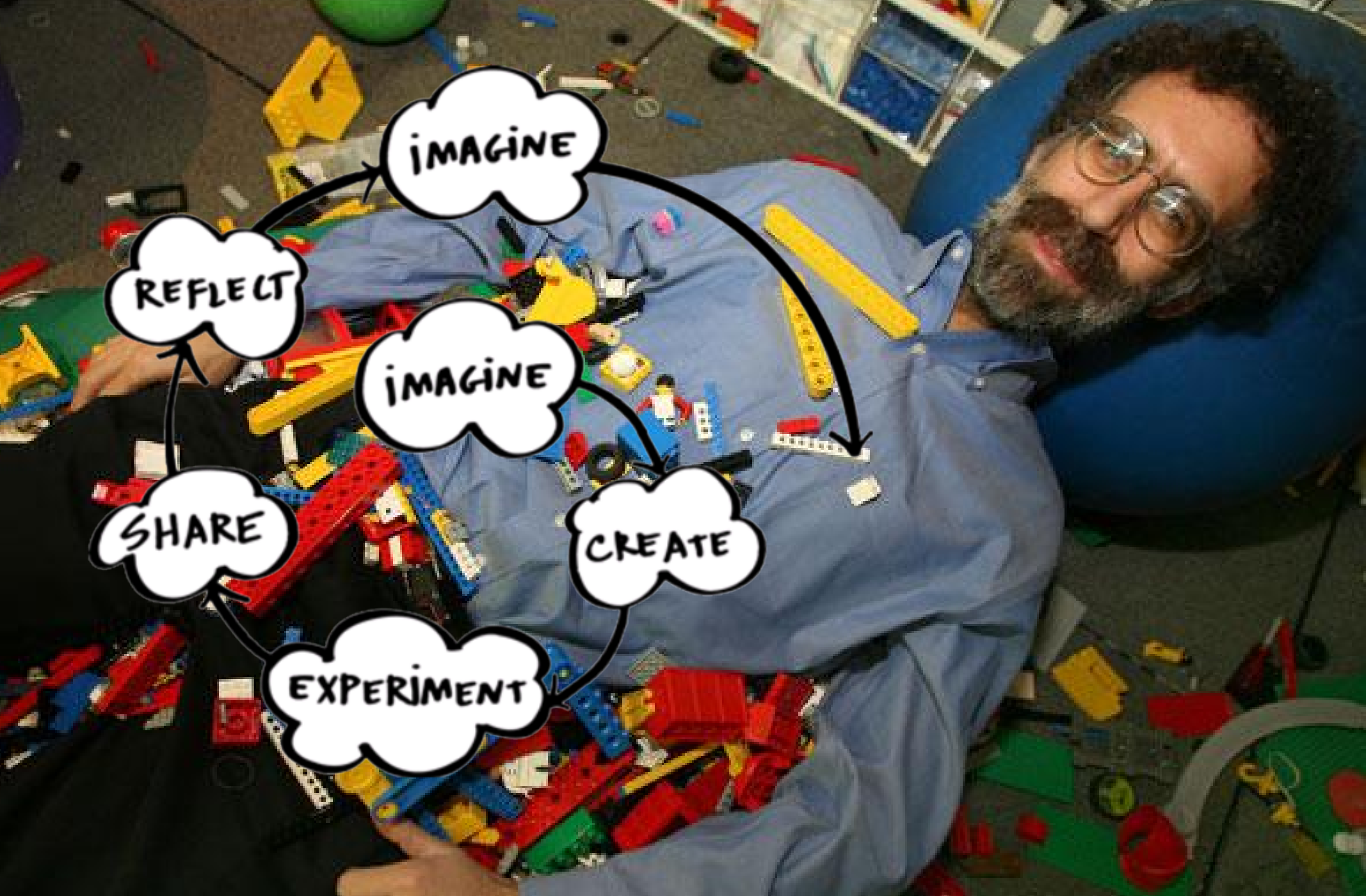
**First... What do I want?**



**I want them to enjoy**



**Shall we change the chip?**



Our inspiration: Mitchel Resnick's [essay](#)

eskola 2.0



**Eskola 2.0**

FA.exe - CPU - main thread, module FA

File View Debug Plugins Options Window Help

LEMTWHC / KBR... S

```

004EB370 6A 60 PUSH 60
004EB37F 68 C0425100 PUSH FA.005142C0
004EB384 E8 232E0000 CALL FA.004EE1AC
004EB389 BF 94000000 MOV EDI,94
004EB38E 8BC7 MOV EAX,EDI
004EB390 E8 ABF4FFFF CALL FA.004EA840
004EB395 8965 E8 MOV DWORD PTR SS:[EBP-18],ESP
004EB398 8BF4 MOV ESI,ESP
004EB39A 893E MOV DWORD PTR DS:[ESI],EDI
004EB39C 56 PUSH ESI
004EB39D FF15 48D04F00 CALL DWORD PTR DS:[<&KERNEL32.GetVersionI
004EB3A3 8B4E 10 MOV ECX,DWORD PTR DS:[ESI+10]
004EB3A6 890D C0B1B500 MOV DWORD PTR DS:[B5B1C0],ECX
004EB3AC 8B46 04 MOV EAX,DWORD PTR DS:[ESI+4]
004EB3AF 89 CB1B500 MOV DWORD PTR DS:[B5B1C1],EAX
004EB3B4 8B56 03 MOV EDX,DWORD PTR DS:[ESI+3]
004EB3B7 8915 D0B1B500 MOV DWORD PTR DS:[B5B1D0],EDX
004EB3BD 8B76 0C MOV ESI,DWORD PTR DS:[ESI+C]
004EB3C0 81E6 FF7F0000 AND ESI,7FFF
004EB3C6 8935 C4B1B500 MOV DWORD PTR DS:[B5B1C4],ESI
004EB3CC 83F9 02 CMP ECX,2
004EB3CF 74 0C JE SHORT FA.004EB3DD
004EB3D1 81CE 00800000 OR ESI,8000
004EB3D7 8935 C4B1B500 MOV DWORD PTR DS:[B5B1C4],ESI
004EB3DD > C1E0 08 SHL EAX,8
004EB3E0 03C2 ADD EAX,EDX
004EB3E2 A3 C8B1B500 MOV DWORD PTR DS:[B5B1C8],EAX
004EB3E7 33F6 XOR ESI,ESI
004EB3E9 56 PUSH ESI
004EB3EB 8B3D D0D04F00 MOV EDI,DWORD PTR DS:[<&KERNEL32.GetMod
004EB3F0 FFD7 CALL EDI
004EB3F2 66:8138 4D5A CMP WORD PTR DS:[EAX],5A4D
004EB3F7 75 1F JNC SHORT FA.004EB418
004EB3FA 8B48 3C MOV ECX,DWORD PTR DS:[EAX+3C]
004EB3FC 83C8 ADD ECX,EAX
004EB3FE 8139 50450000 CMP DWORD PTR DS:[ECX],4550
004EB404 75 12 JNZ SHORT FA.004EB418
004EB406 0FB741 18 MOVZX EAX,WORD PTR DS:[ECX+18]
004EB40A 3D 0B010000 CMP EAX,10B
004EB40F 74 1F JE SHORT FA.004EB430
004EB411 3D 0B020000 CMP EAX,20B
004EB416 74 05 JE SHORT FA.004EB41D
004EB418 > 8975 E4 MOV DWORD PTR SS:[EBP-1C],ESI
004EB41B EB 27 JMP SHORT FA.004EB444
004EB41D > 83B9 84000000 CMP DWORD PTR DS:[ECX+84],0E
004EB424 ^76 F2 JBE SHORT FA.004EB418
004EB426 33C0 XOR EAX,EAX
004EB428 39B1 F8000000 CMP DWORD PTR DS:[ECX+F8],ESI
004EB42E EB 0E JMP SHORT FA.004EB43E
004EB430 > 8379 74 0E CMP DWORD PTR DS:[ECX+74],0E
004EB434 ^76 E2 JBE SHORT FA.004EB418
004EB436 33C0 XOR EAX,EAX
004EB438 39B1 E8000000 CMP DWORD PTR DS:[ECX+E8],ESI
004EB43C > 8F95C0 SETNE AL
004EB441 8945 E4 MOV DWORD PTR SS:[EBP-1C],EAX
004EB444 6A 01 PUSH 1
004EB446 E8 8B3E0000 CALL FA.004EF2D6
004EB448 59 POP ECX
  
```

pVersionInformation  
GetVersionExA

pModule => NULL  
kernel32.GetModuleHandleA  
GetModuleHandleA

Registers (FPU)

```

EAX 00000000
ECX 0012FFB0
EDX 7C91E4F4 ntdll.KiFastSystemCallRet
ESP 7FFD5000
EBP 0012FFC4
ESI FFFFFFFF
EDI 7C920208 ntdll.7C920208
EIP 004EB370 FA.<ModuleEntryPoint>
  
```

C 0 ES 0023 32bit 0(FFFFFFFF)  
P 1 CS 001B 32bit 0(FFFFFFFF)  
D 0 SS 0023 32bit 0(FFFFFFFF)  
Z 1 DS 0023 32bit 0(FFFFFFFF)  
S 0 FS 003B 32bit 7FFDF000(FFF)  
T 0 GS 0000 NULL  
D 0  
O 0 LastErr ERROR\_MOD\_NOT\_FOUND (0000007E)  
EFL 00000246 (NO,NB,E,BE,NS,PE,GE,LE)  
ST0 empty -UNORM BCBC 01050104 00000000  
ST1 empty 0.0  
ST2 empty 0.0  
ST3 empty 0.0  
ST4 empty 0.99609375000000000000  
ST5 empty 0.99960937499999943601  
ST6 empty 1.00000000000000000000  
ST7 empty 1.00000000000000000000  
FST 4020 Cond 1 0 0 0 Err 0 0 1 0 0 0 0 0 (EQ)  
FCW 027F Prec NEAR,53 Mask 1 1 1 1 1 1

Address	Hex dump	ASCII
0051C000	00 00 00 00 F8 E1 4E 00	....°BN.
0051C008	EB C5 4F 00 30 C1 4F 00	0+0.0+0.
0051C010	40 C1 4F 00 50 C1 4F 00	0+0.P+0.
0051C018	60 C1 4F 00 70 C1 4F 00	+0.P+0.
0051C020	90 C1 4F 00 00 C1 4F 00	±0.±+0.
0051C028	C0 C1 4F 00 D0 C1 4F 00	0+0.±+0.
0051C030	E0 C1 4F 00 F0 C1 4F 00	0+0.-+0.
0051C038	10 C2 4F 00 30 C2 4F 00	0+0.0+0.
0051C040	50 C2 4F 00 70 C2 4F 00	P+0.P+0.
0051C048	90 C2 4F 00 B0 C2 4F 00	
0051C050	D0 C2 4F 00 30 C3 4F 00	
0051C058	E0 C3 4F 00 50 C3 4F 00	
0051C060	60 C3 4F 00 70 C3 4F 00	
0051C068	80 C3 4F 00 90 C3 4F 00	
0051C070	00 C3 4F 00 10 C4 4F 00	
0051C078	20 C4 4F 00 30 C4 4F 00	
0051C080	40 C4 4F 00 50 C4 4F 00	
0051C088	60 C4 4F 00 70 C4 4F 00	
0051C090	80 C4 4F 00 90 C4 4F 00	
0051C098	A0 C4 4F 00 B0 C4 4F 00	
0051C0A0	C0 C4 4F 00 D0 C4 4F 00	
0051C0A8	E0 C4 4F 00 F0 C4 4F 00	
0051C0B0	10 C5 4F 00 30 C5 4F 00	
0051C0B8	30 C5 4F 00 50 C5 4F 00	
0051C0C0	50 C5 4F 00 70 C5 4F 00	
0051C0C8	70 C5 4F 00 90 C5 4F 00	
0051C0D0	90 C5 4F 00 B0 C5 4F 00	
0051C0D8	00 C6 4F 00 20 C6 4F 00	
0051C0E0	20 C6 4F 00 40 C6 4F 00	
0051C0E8	40 C6 4F 00 60 C6 4F 00	
0051C0F0	60 C6 4F 00 80 C6 4F 00	

```

0012FFC4 7C817067 RETURN to kernel32.7C817067
0012FFC8 7C920208 ntdll.7C920208
0012FFCC FFFFFFFF
0012FFD0 7FFD5000
0012FFD4 805512FA
0012FFD8 0012FFC8
0012FFDC 890EB020
0012FFE0 FFFFFFFF End of SEH chain
0012FFE4 7C839AC0 SE handler
0012FFE8 7C817070 kernel32.7C817070
0012FFFC 00000000
  
```

and... what about learning computer programming?

**Eh!  
I'm only  
11!**







**Solution: Let's play!**

- Movimiento
- Control
- Apariencia
- Sensores
- Sonido
- Números
- Lápiz
- Variables

Nueva variable

Borrar variable

i

fijar i a 0

cambiar i por 1

mostrar variable i

esconder variable i

Nueva lista

Borrar una lista

lista\_uno

añade cosa a lista\_uno

borrar 1 de lista\_uno

insertar cosa en 1 de lista\_uno

reemplazar 1 de lista\_uno con

item 1 de lista\_uno

longitud de lista\_uno

Objeto 1  x: -12 y: -60 dirección: 90

Programas Disfraces Sonidos

```

al presionar bandera verde clicada
  fijar i a 1
  por siempre
    repetir 3
      mover 10 pasos siguiente disfraz
      rebotar si está tocando un borde
      esperar 0.3 segundos
    pensar item i de lista_uno por 2 segundos
    cambiar i por 1
  si i = longitud de lista_uno + 1
    fijar i a 1
  
```

Mouse cursor, Pin, Scissors, Rotate, Scale

Green flag, Red stop sign



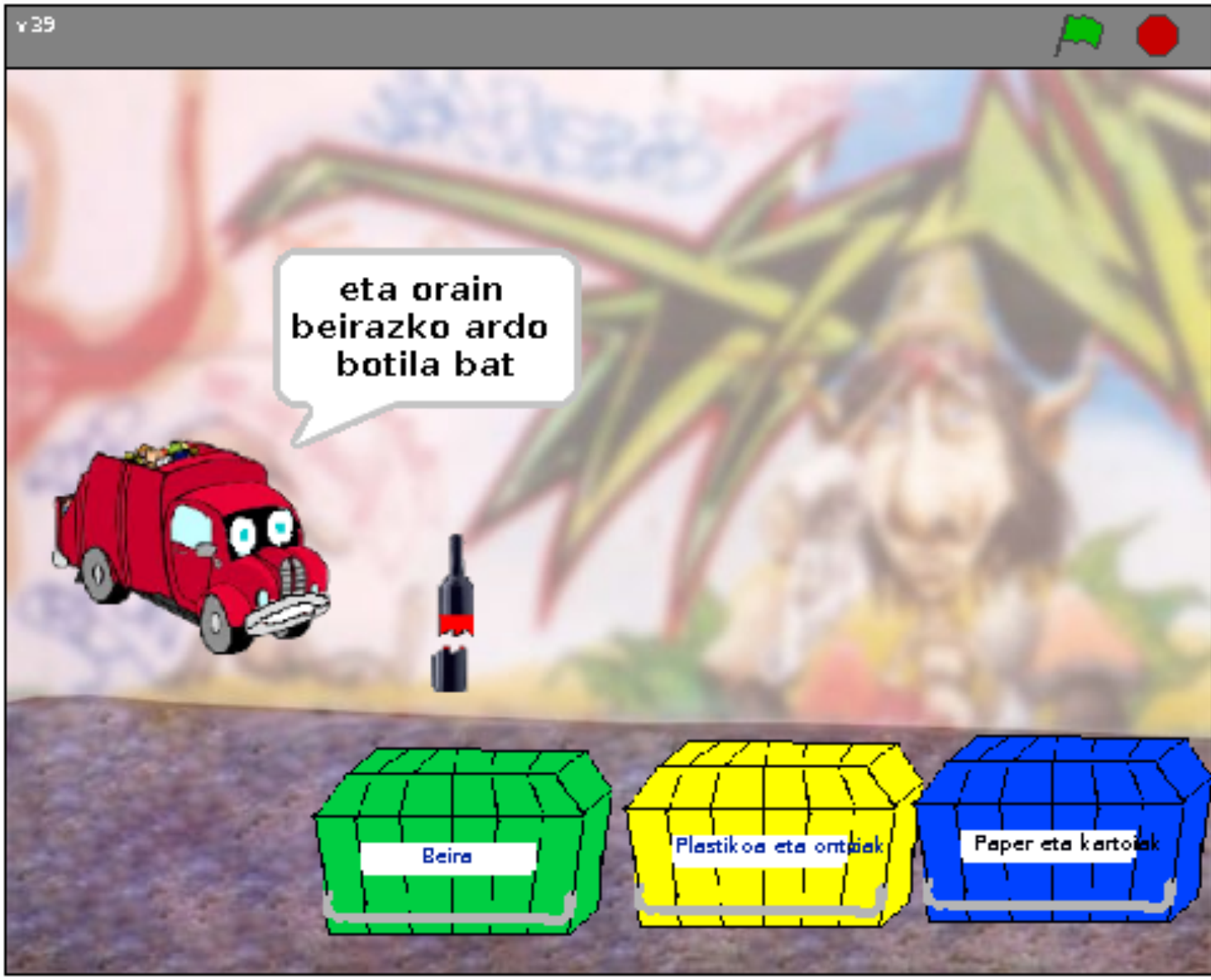
x del ratón: 210 y del ratón: 206

Stage thumbnails: Forest background, Cat character (Objeto 1)

...with Scratch!



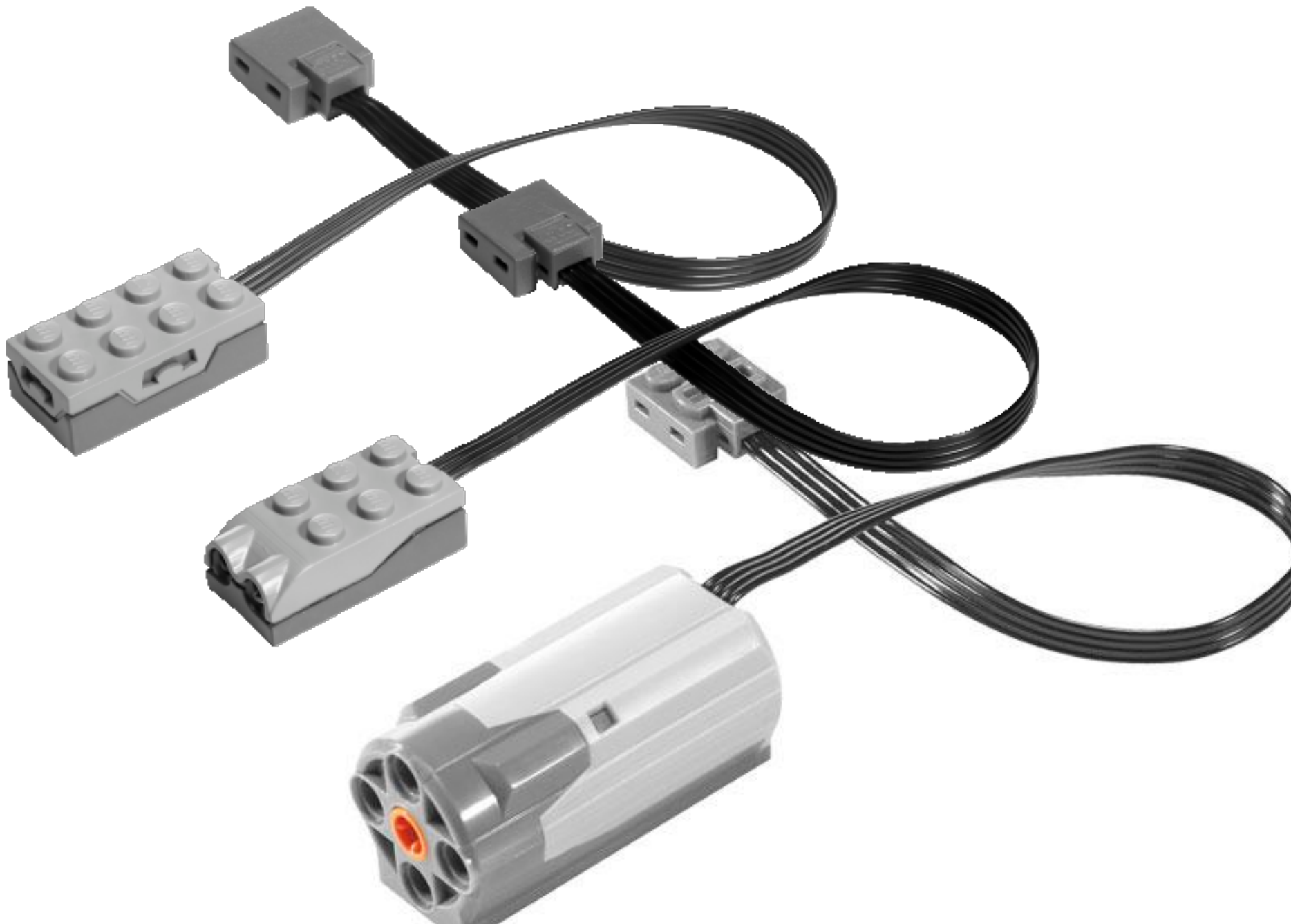
**We program games!**



**We program animations!**



**and with Lego...**



**with sensors and engines,**



**with sticks, wire,  
corde and meccano...**



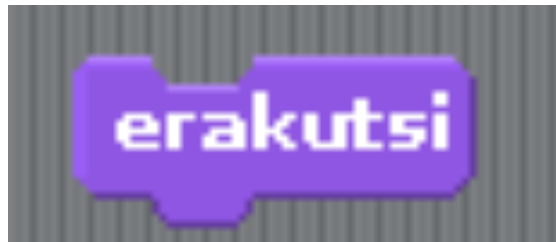
**...We construct things that  
move!**





**but... What do we learn?**

1°



2°



3°



**We learn to think logically**



**We learn to solve problems**



I've got it!  
If it was  
not +1 is -1

**We learn to doubt  
It's no one's fault**

```
sakatzean
jarri 90 begira
ezkutatu
joan -250 x-ra joan -40 y-ra
```

```
buuuu jasotzean
jarri 90 begira
esan Aaaaaahhhh! 1 segundoan
jarri -90 begira
jo miau soinua
errepikatu 25 aldiz
```

```
hasi jarri
erakutsi
erre
mi
0.1
hurrengo
esan kaixo! 1 segundoan
jarri -90 begira
esan Zelako baso beldurgarria! 2
1 segundo itxaron
bidali denei Saguzaharra
```

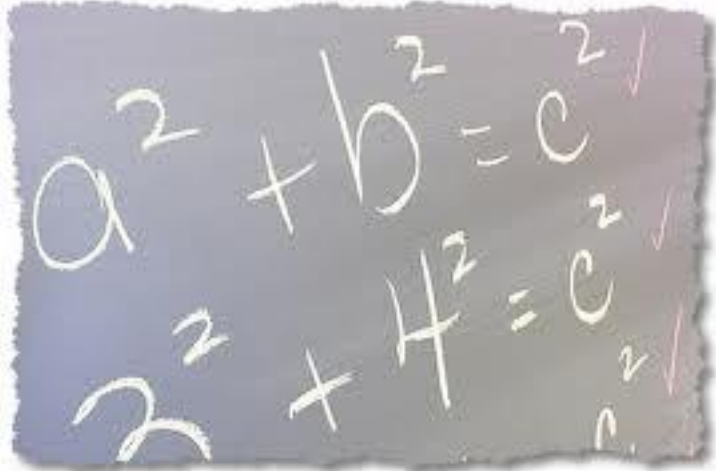
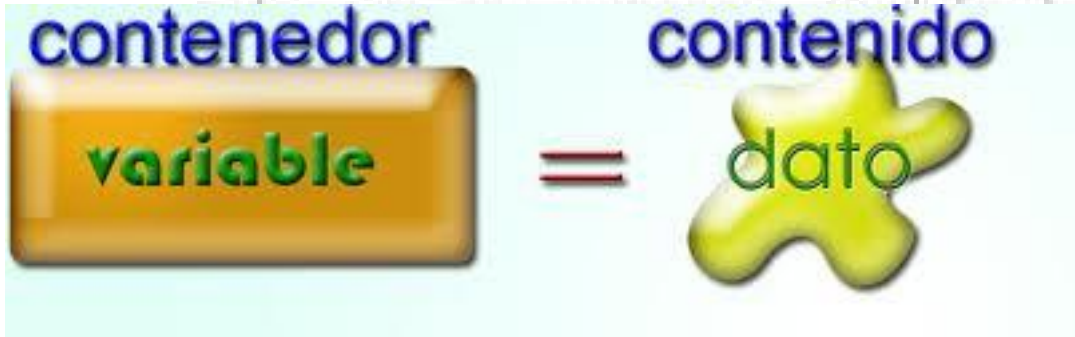


**We learn to do complex things**

```
ezkutatu
```



The car increases its V in a 25%



**We learn maths**



**We learn informatics**



imagina • programa • comparte

Inicio proyectos galerías soporte for ma

Bienvenido, [borjario](#) | [Salir](#)

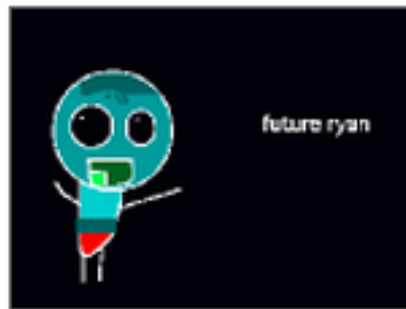
Tienes [6 mensajes](#)

### Proyectos Más Recientes

[Ver más](#)



[Homework 6 - Wordle](#)  
por [JamieJacobson](#)



[future ryan in ...](#)  
por [itswaynequys](#)



[the forbidden ...](#)  
por [mynameis4489](#)

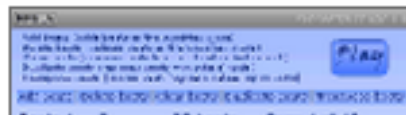


### Proyectos Destacados


[Ver más](#)



[Joe The Clown](#)




**NEWS**



Want to talk about your experiences with Scratch?

[Saber más](#)

**ScratchEd**



Do you help people learn Scratch? Join ScratchEd, our new online community for educators.

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[Scratch Estudio de Diseño](#)

**We learn from others**





**But, the most  
important...  
We have fun!!!**

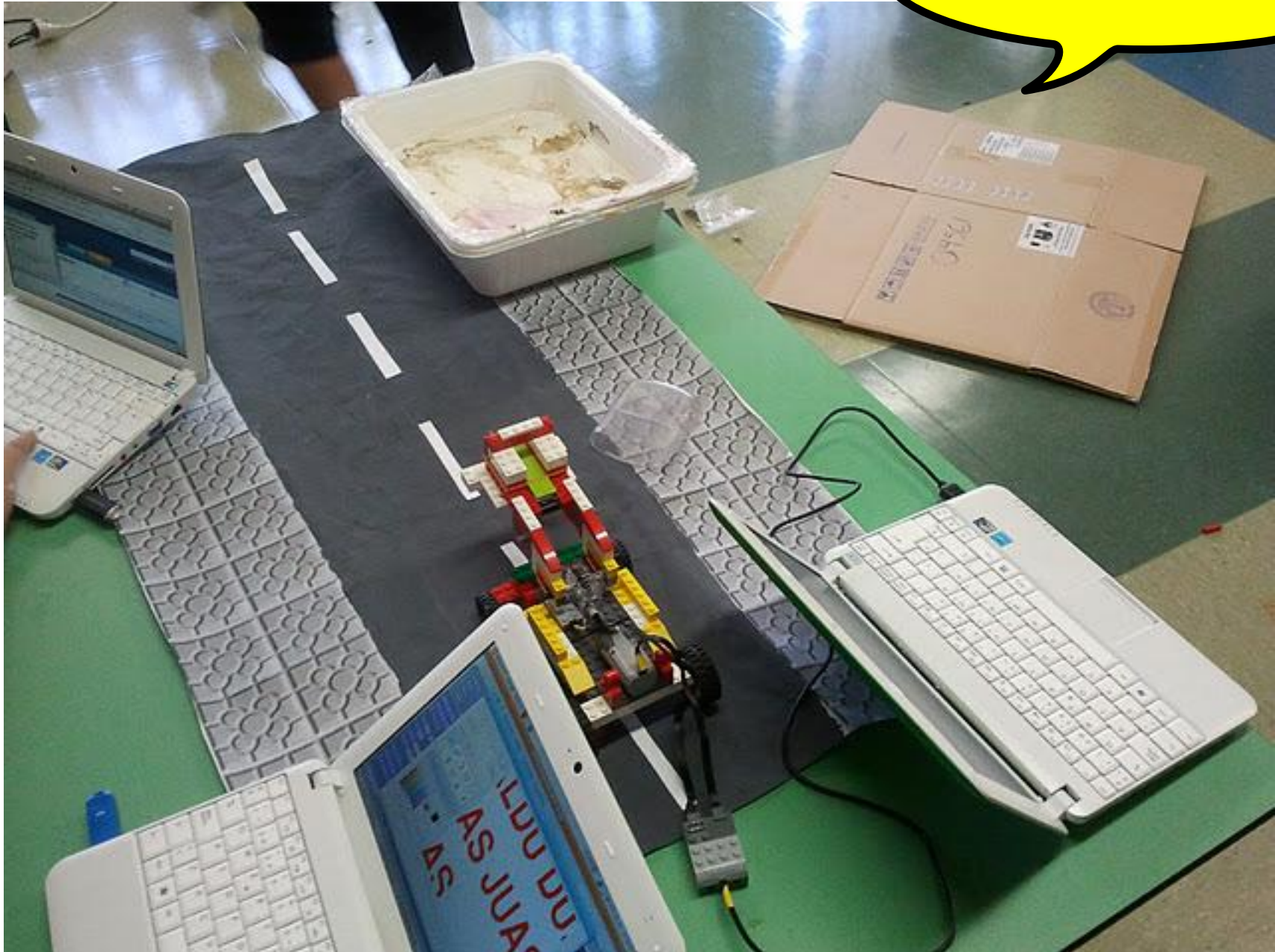
**Discovering**



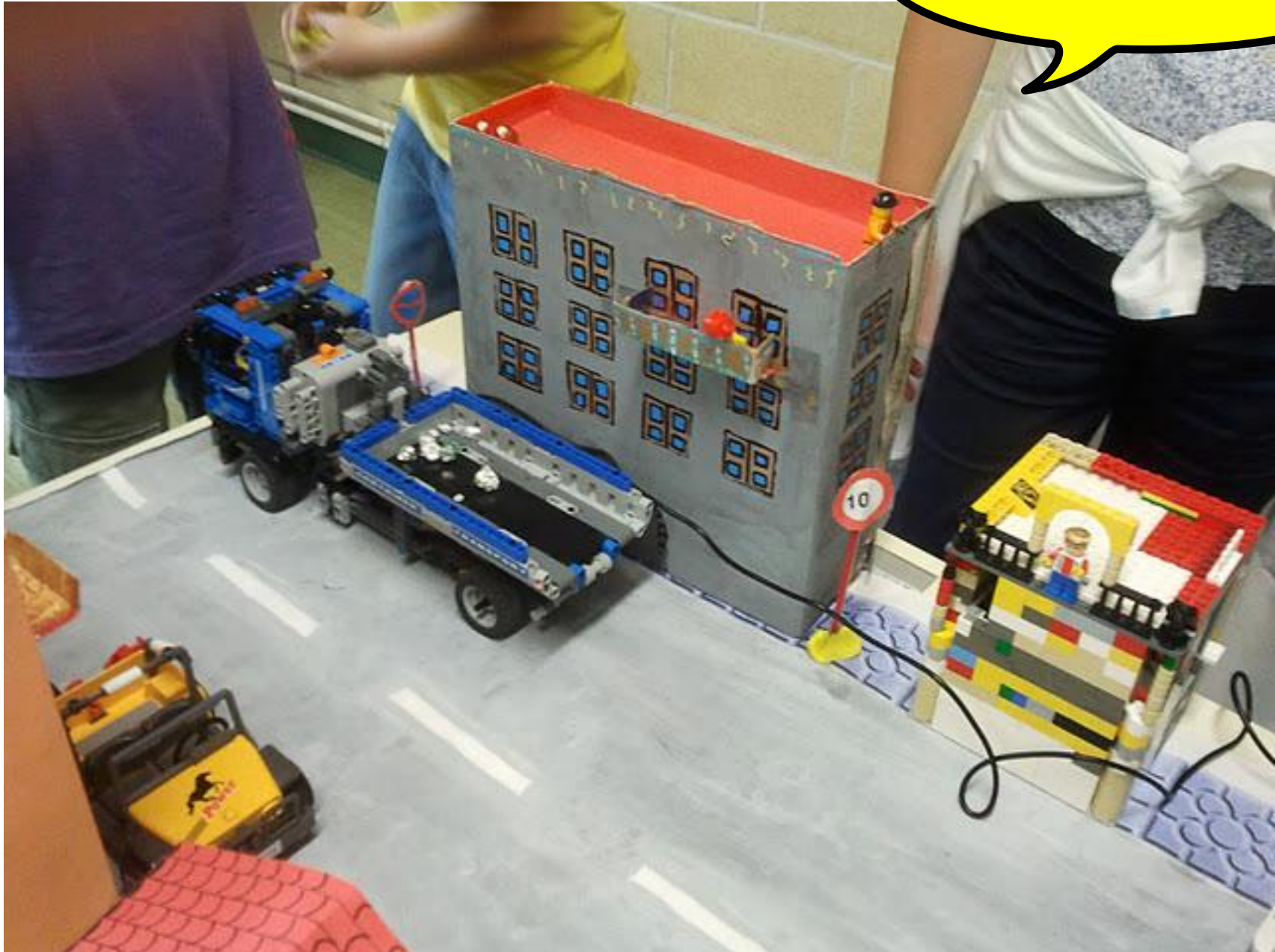
Learning



Trying



Checking



Adjusting



**Building**



Explaining





Real world is hell!!

Valuing





**And the sharing day  
arrives...**



**A handful of volunteers  
ready to help...**



**Everybody collaborates**



**Meanwhile, parents at  
workshop**



**The show starts!!!**



**We're passionate**



**We have fun!**





**We get ready for the future...**



**...jolasten!!!**

<b>Dates</b>	<b>Actions</b>
January 11th	Project difusion
January 14th-18th	Emailing campaign
January 23rd	Project presentation to teachers / educators
February-March	Teachers' training
March 15th - April 15th	Teams inscription
March - May 10th	Project development in schools
May 18th	SCRATCH EGUNA

# Scratch Eguna 2013: timing

**hó**  
Alhóndiga Bilbao

**TABAKALERA**  
**T**  
**STM**  
San Telmo Museoa

**isuri**

Universidad de Deusto  
Deustuko Unibertsitatea  
**Deusto**

**SMART**  
**TRILOGIC**  
**aulaBLOG**

**CAMP**  
**tecnológico!**

**escola 2.0**  
Eskola 2.0  
Eusko Jaurlaritzaren  
Gobernua Vasco

**DigiPen**  
INSTITUTE OF TECHNOLOGY  
EUROPE - BILBAO

**Universidad del País Vasco**  
Euskal Herriko Unibertsitatea

**Telefónica**  
Cátedras Telefónica

**Virtualware**  
**RO-BOTICA**  
**Lavri**  
**URDANETA**

# Collaborators

- [www.scratcheguna.eu](http://www.scratcheguna.eu)
- <http://www.youtube.com/scratcheguna2012>
- <http://www.slideshare.net/scratcheguna>

BP 20:

- [“Scratch Eguna”: Acercando Scratch a las aulas, desde la Educación Primaria \(I\)](#)
- [“Scratch Eguna”: Acercando Scratch a las aulas, desde la Educación Primaria \(II\)](#)

Video SMART <http://youtu.be/-JFhbEfoU6E>

Video EITB <http://bit.ly/nMsPvv>

EL PAIS

[http://elpais.com/diario/2011/05/21/paisvasco/1306006816\\_850215.html](http://elpais.com/diario/2011/05/21/paisvasco/1306006816_850215.html)

Ficoba workshops:

- <https://plus.google.com/u/0/105716046698836770148/photos>



**Thank you!!!**