

VIDEOGAMES 101: UNLEASHING THE POTENTIAL OF STUDENTS AND TEACHERS TO CREATE FUN STUFF

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Pablo Garaizar
Universidad de Deusto

Scratch Conference
25-27 July 2013, Barcelona

Outline

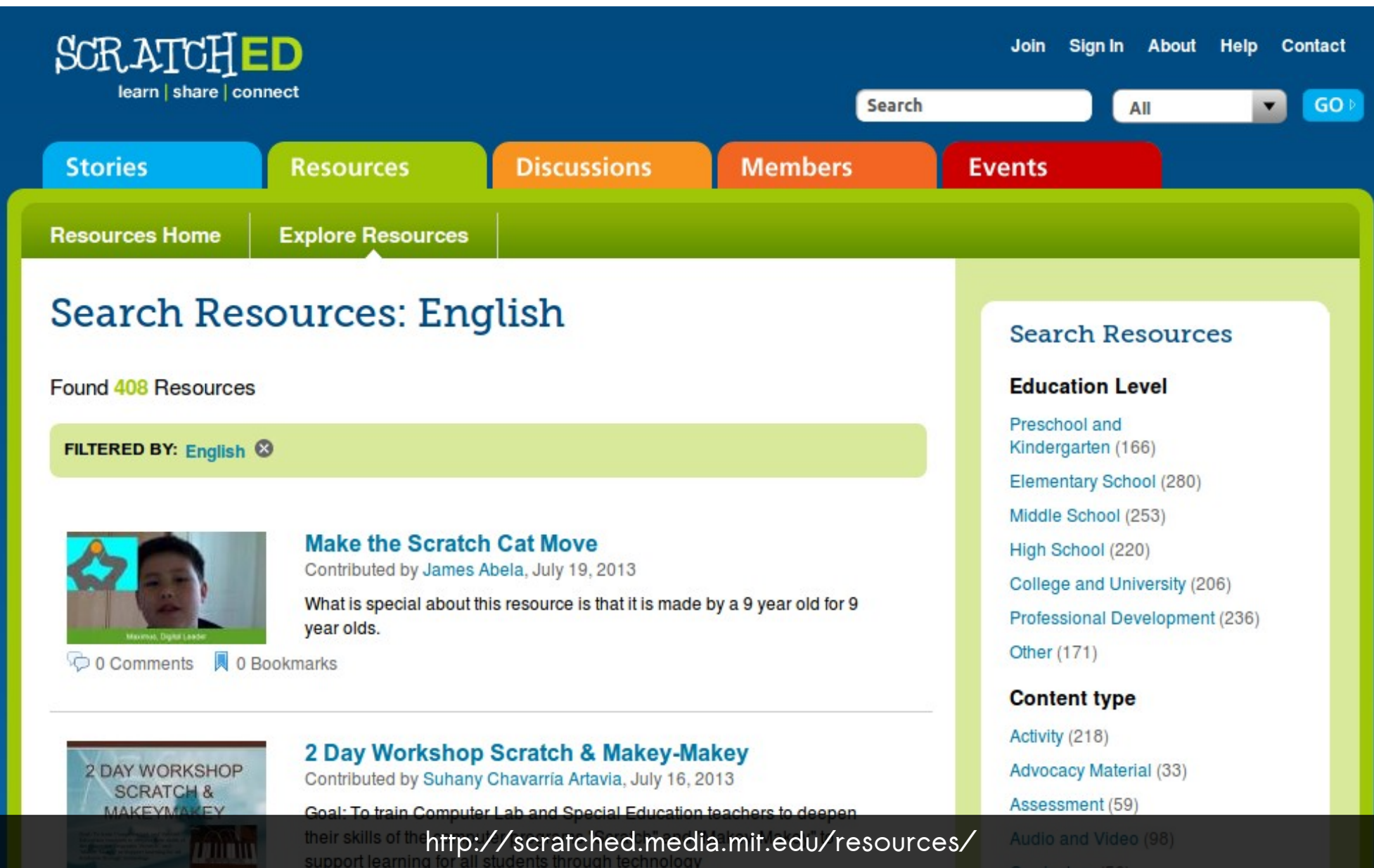
- Yet Another Video-game Course?
- Video-games 101:
 - Basics.
 - Video-games: *Snake*, *Break-out*, *Checkers*, *PacMan*, *Super-Tux*.
- Roadmap
- Conclusions

Yet Another Video-game Course?



There are hundreds of Scratch tutorials

Literally



The screenshot shows the ScratchED website interface. At the top, the logo 'SCRATCHED' is displayed with the tagline 'learn | share | connect'. Navigation links for 'Join', 'Sign In', 'About', 'Help', and 'Contact' are in the top right. A search bar with a 'GO' button is also present. Below the navigation bar, there are tabs for 'Stories', 'Resources', 'Discussions', 'Members', and 'Events'. The 'Resources' tab is active, showing a sub-header 'Search Resources: English'. A filter bar indicates 'FILTERED BY: English'. The main content area lists search results, including 'Make the Scratch Cat Move' and '2 Day Workshop Scratch & Makey-Makey'. A sidebar on the right provides filters for 'Education Level' and 'Content type'.

SCRATCHED
learn | share | connect

Join Sign In About Help Contact

Search All GO


Stories Resources Discussions Members Events

Resources Home Explore Resources

Search Resources: English

Found 408 Resources


FILTERED BY: English ✕



Make the Scratch Cat Move
Contributed by James Abela, July 19, 2013

What is special about this resource is that it is made by a 9 year old for 9 year olds.

0 Comments 0 Bookmarks



2 Day Workshop Scratch & Makey-Makey
Contributed by Suhany Chavarria Artavia, July 16, 2013

Goal: To train Computer Lab and Special Education teachers to deepen their skills of the Scratch and Makey-Makey technology support learning for all students through technology

Search Resources

Education Level

- Preschool and Kindergarten (166)
- Elementary School (280)
- Middle School (253)
- High School (220)
- College and University (206)
- Professional Development (236)
- Other (171)

Content type

- Activity (218)
- Advocacy Material (33)
- Assessment (59)
- Audio and Video (98)

<http://scratched.media.mit.edu/resources/>

Most of them are about video-games

Not all of them

The screenshot shows the ScratchED website interface. At the top, the logo 'SCRATCHED' is displayed with the tagline 'learn | share | connect'. Navigation links for 'Join', 'Sign In', 'About', 'Help', and 'Contact' are in the top right. A search bar and a dropdown menu set to 'All' are also present. Below the navigation bar, there are tabs for 'Stories', 'Resources', 'Discussions', 'Members', and 'Events'. The 'Resources' tab is active, showing a sub-navigation bar with 'Resources Home' and 'Explore Resources'. The main content area features a resource titled 'The History of Poison In American Food' by Bev Schol, dated November 28, 2012. It includes statistics for 0 comments, 0 bookmarks, and a 'Previously Featured' star. A brief description states it's a simplified representation of poisons in American food. Metadata includes the original author (Beverly), ages (N/A), curricular areas (Science), content types (Presentation), and keywords (Nutrition). A 'Resource Files' section is at the bottom left. On the right, a 'Related Resources' sidebar lists 'Make the Scratch Cat Move' and '2 Day Workshop Scratch & Makey-Makey'. The URL 'http://scratched.media.mit.edu/resources/history-poison-american-food' is visible at the bottom.

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Join Sign In About Help Contact

Search All GO

Stories Resources Discussions Members Events

Resources Home Explore Resources

The History of Poison In American Food

Contributed by [Bev Schol](#), November 28, 2012

0 Comments 0 Bookmarks Previously Featured

This is an over simplified representation of how poisons came to become common ingredients in American food. There is an interactive portion at the end.

Original Author: Beverly
Ages: N/A
Curricular Areas: Science
Content Types: Presentation
Keywords: [Nutrition](#)

Resource Files

Scratch Projects:

Related Resources

[Make the Scratch Cat Move](#)
What is special about this resource is that it is made by a 9 year old for 9 year olds.

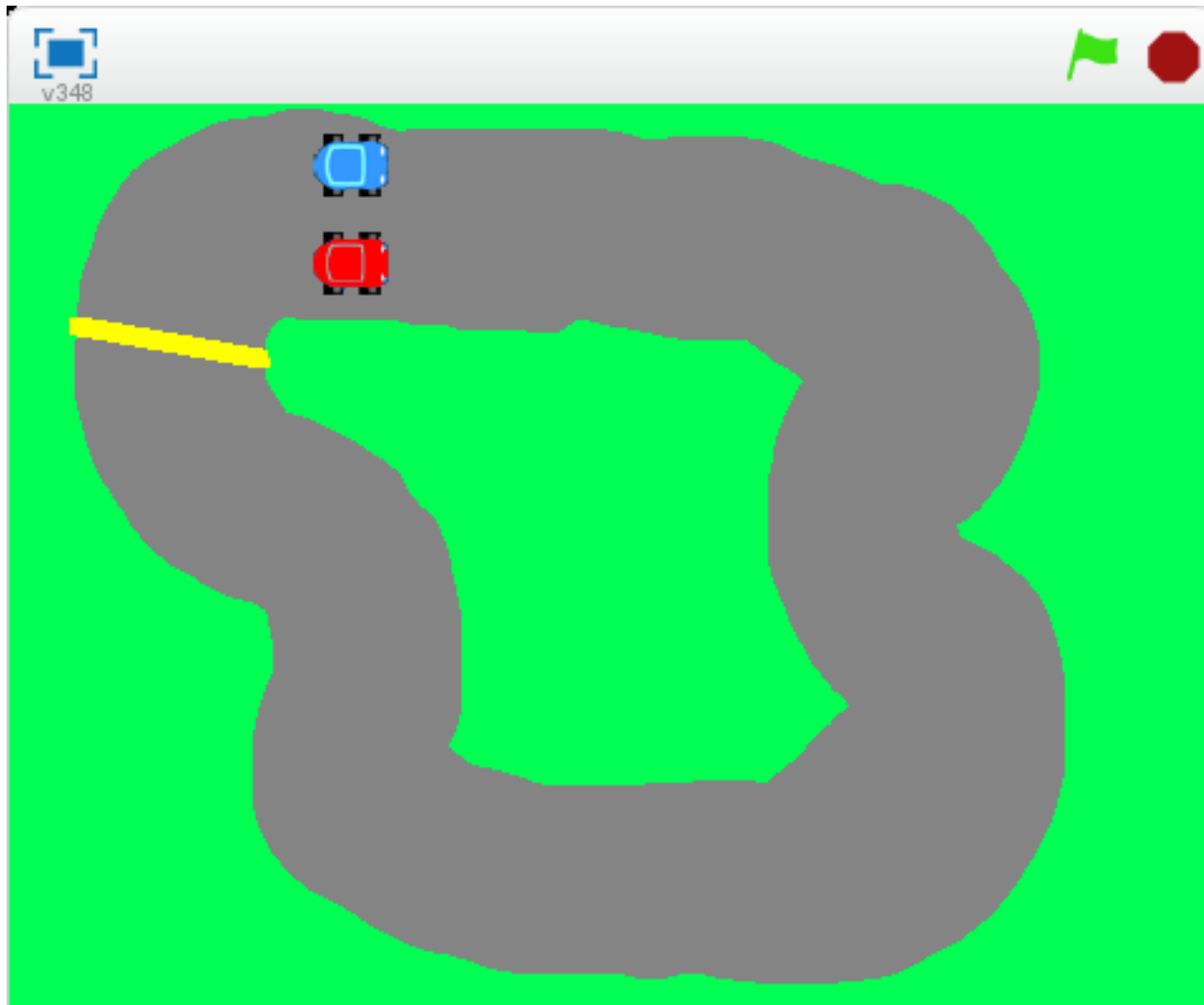
[2 Day Workshop Scratch & Makey-Makey](#)
Goal: To train Computer Lab and Special Education teachers to deepen their skills of the computer programs "Scratch" and "Makey-Makey" to support learning for all students through technology

[Additional Scratch Cards](#)
Add to your Scratch card collection with these designed for 3rd and 4th graders. These were my project for the #ccow online course. They can be used independently or with the "Please

<http://scratched.media.mit.edu/resources/history-poison-american-food>

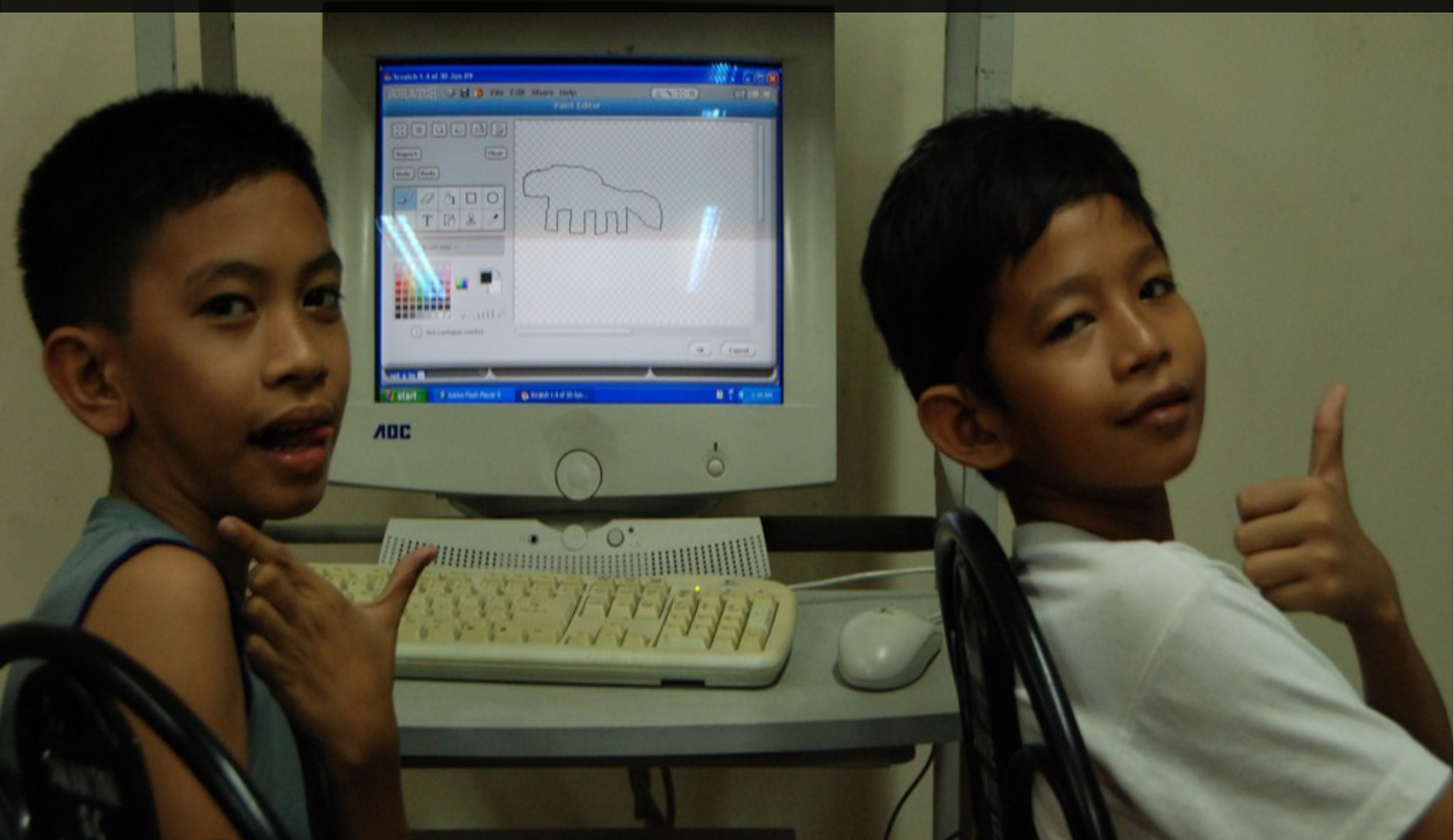
But usually they are too simple

No stages, no high-scores, simple physics, etc.



The 1-hour tutorial syndrome

I already know EVERYTHING about Scratch



Let's face big challenges

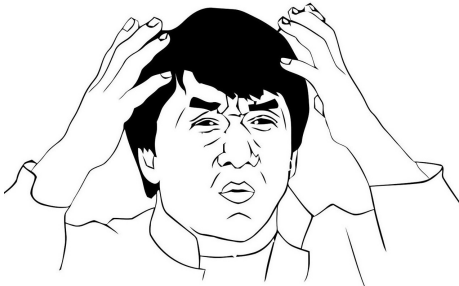
Design and create a real video-game, not a demo



<http://www.flickr.com/photos/nwinton/1805350177/>

But... Why a MOOC?

Nobody told you that 2013 is the anti-MOOC year?



Not everybody learns at the same pace

Some get it immediately and get bored, some others need more time



Video-tutorials are just canned content

But there is still place for creativity in their projects



We can overcome the 1-hour tutorial syndrome

Not only in Programming, but also in Maths, Physics or Arts

FOR
DUMMIES[®]



We wanted a simple platform

The course is currently at Udemy

[Discover](#)

Pablo Garaizar ▾



Programa Vídeo-juego...

by **Ruben Del Rio** and 1 others

[Manage this Course](#)

[i](#)[0](#)[Share](#)[⚙](#)

CURRÍCULO

SECTION 1

INTRODUCCIÓN

LECTURE 1: ☐ Introducción al curso Por llegar 🔑

LECTURE 2: ☐ Scratch 2.0 Preview Por llegar 🔑

SECTION 2

MECANISMOS BÁSICOS PARA REALIZAR UN VIDEOJUEG...

LECTURE 3: ☐ Introduccion Por llegar 🔑

LECTURE 4: ☐ Puntuación Por llegar 🔑

LECTURE 5: ☐ Bucles, fases y flujos del juego Por llegar 🔑

LECTURE 6: ☐ Tabla de Resultados, Niveles, Vidas, y Final del Ju... Por llegar 🔑

SECTION 3

"THE SNAKE"

LECTURE 7: ☐ Introducción

AVERAGE RATING No Reviews

ANUNCIOS

[Haz un Anuncio](#)

No announcements have been made so far

PREGUNTAS

[Apoyo técnico](#)

No questions have been asked so far

<http://udemy.com/scratch-20>

Video-games 101



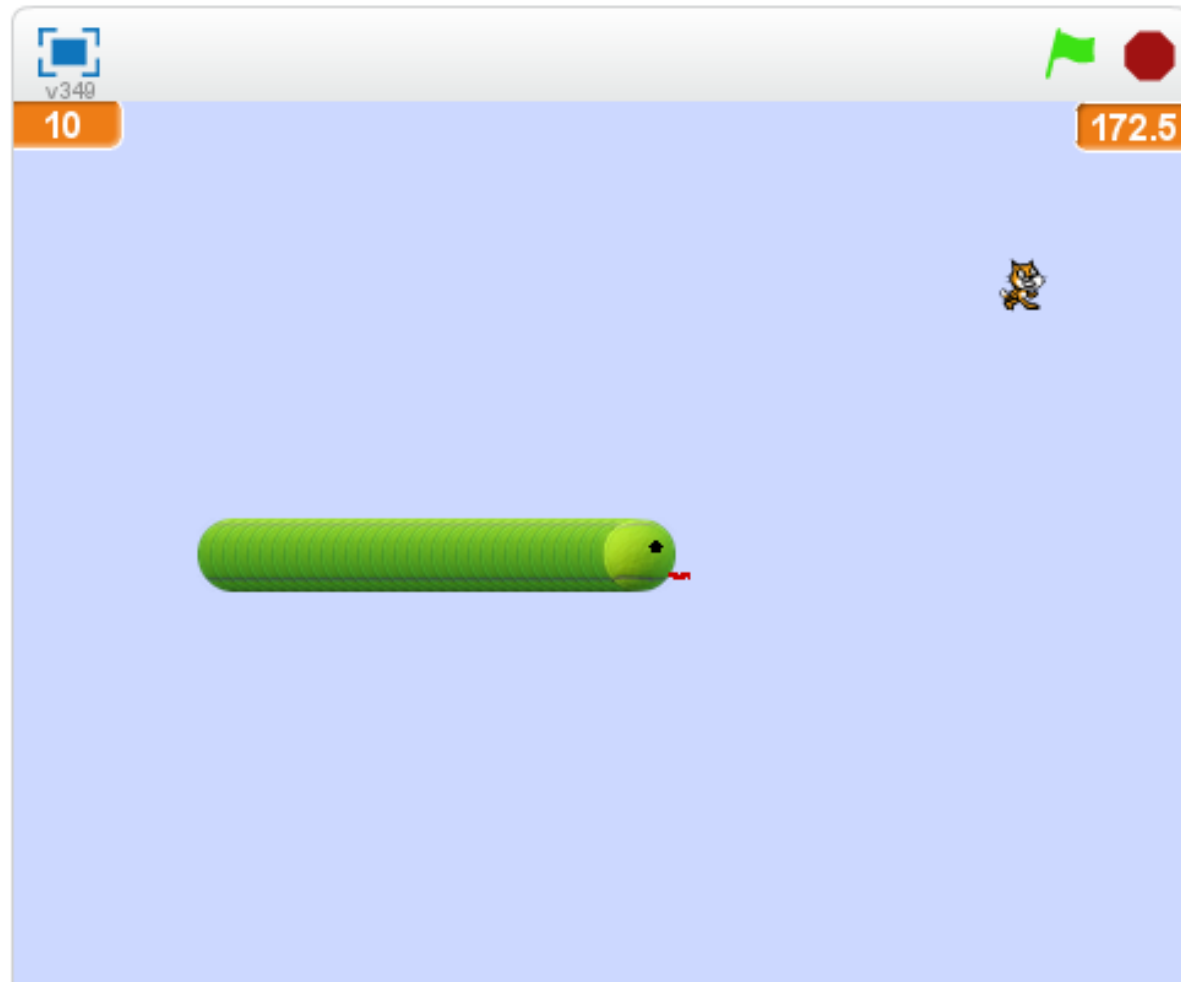
The basics

Loops, levels, scores, high-scores, end of the game, etc.



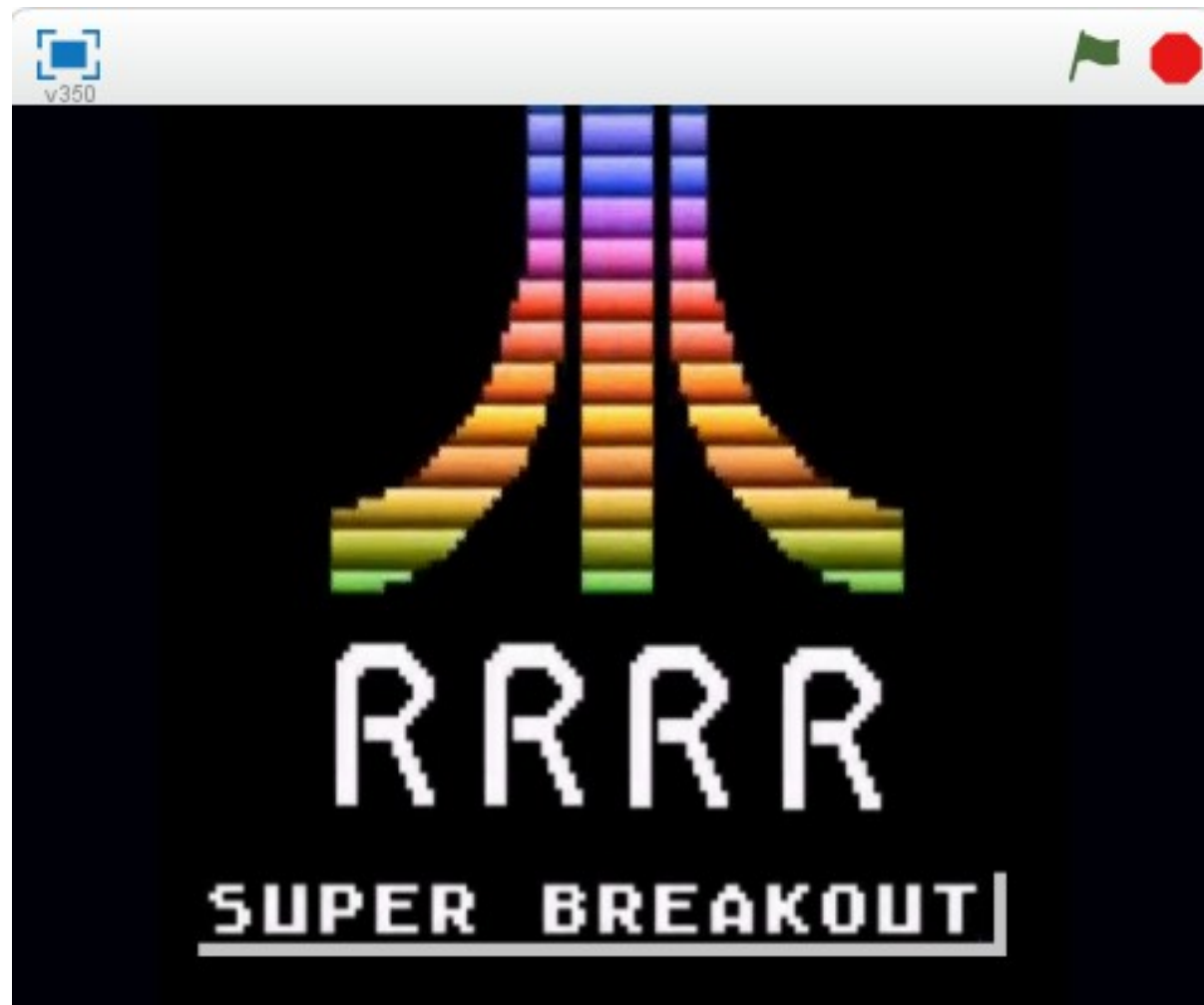
Snake

Clones, high-scores, destroy



Break-out

Basic physics, levels, power ups, destroy



Checkers

Mouse-based interactions, limited movements by the rules, 2-players, matching & destroy



Pac-Man

Tile-based game development, simple IA for ghosts, fancy scoring display, avoid & destroy



Super-Tux

Horizontal scrolling, relative physics, different levels, avoid



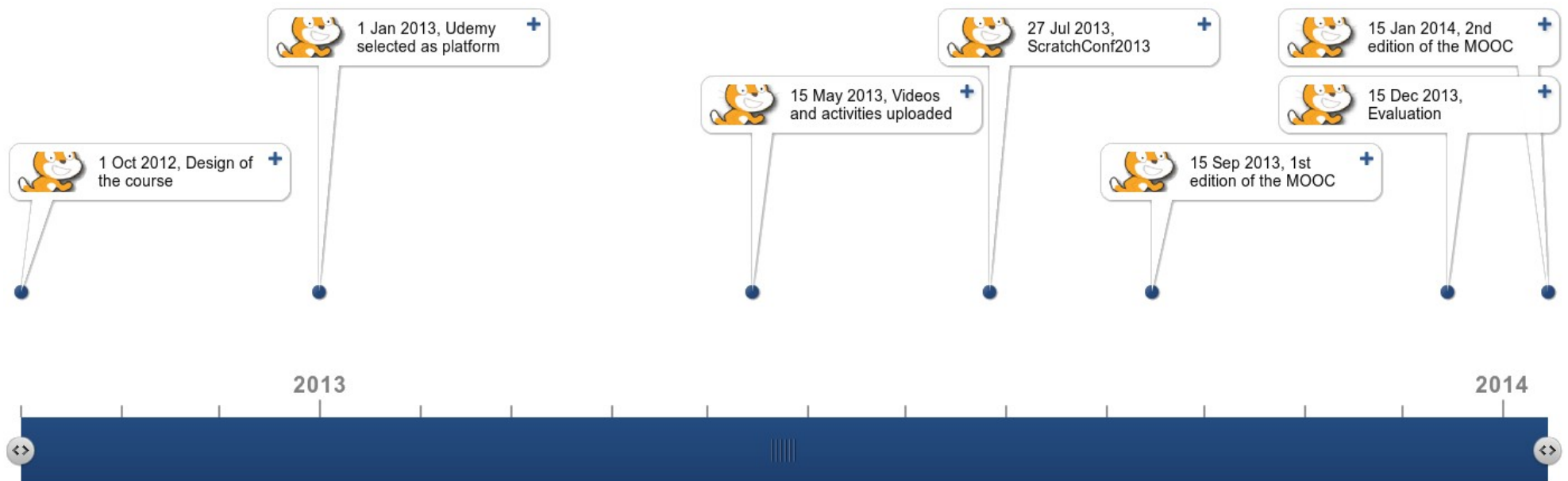
Roadmap



afrod.com.br

Roadmap

There is still work to do



Conclusions



Up to 60 videos & 40 activities

From the basics to real video-games

0

Twitter

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Like

Send

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Pinit

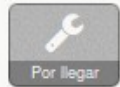
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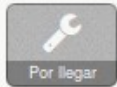
por **RUBEN DEL RIO (AND 1 OTHER)**

Categoría: **Education**

SECCIÓN 1: Introducción

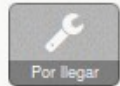


Clase 1:
Introducción al curso

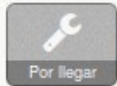


Clase 2:
Scratch 2.0 Preview

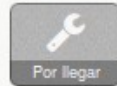
SECCIÓN 2: Mecanismos básicos para realizar un videojuego en Scratch



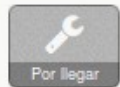
Clase 3:
Introducción



Clase 4:
Puntuación

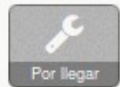


Clase 5:
Bucles, fases y flujos del juego

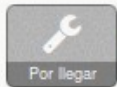


Clase 6:
Tabla de Resultados, Niveles, Vidas, y...

SECCIÓN 3: "The Snake"



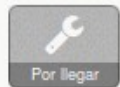
Clase 7:
Introducción



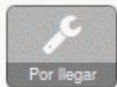
Clase 8:
Movimiento de la culebra



Examen 1:
Culebra comiendo al Gato



Clase 9:
Solución culebra comiendo Gato



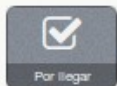
Clase 10:
Creando una culebra larga mediante clones



Examen 2:
Velocidad y longitud de la culebra



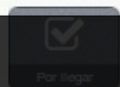
Clase 11:
Solucion Velocidad y longitud culebra



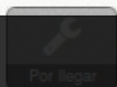
Examen 3:
Comiéndose la culebra a si misma



Clase 12:
Solución comiéndose la culebra a si misma



Examen 4:
Introducir detalles y fases



Clase 13:
Detalles



Examen 5:
Lista de resultados

Instructores



Ruben Del Rio

Ruben Del Rio

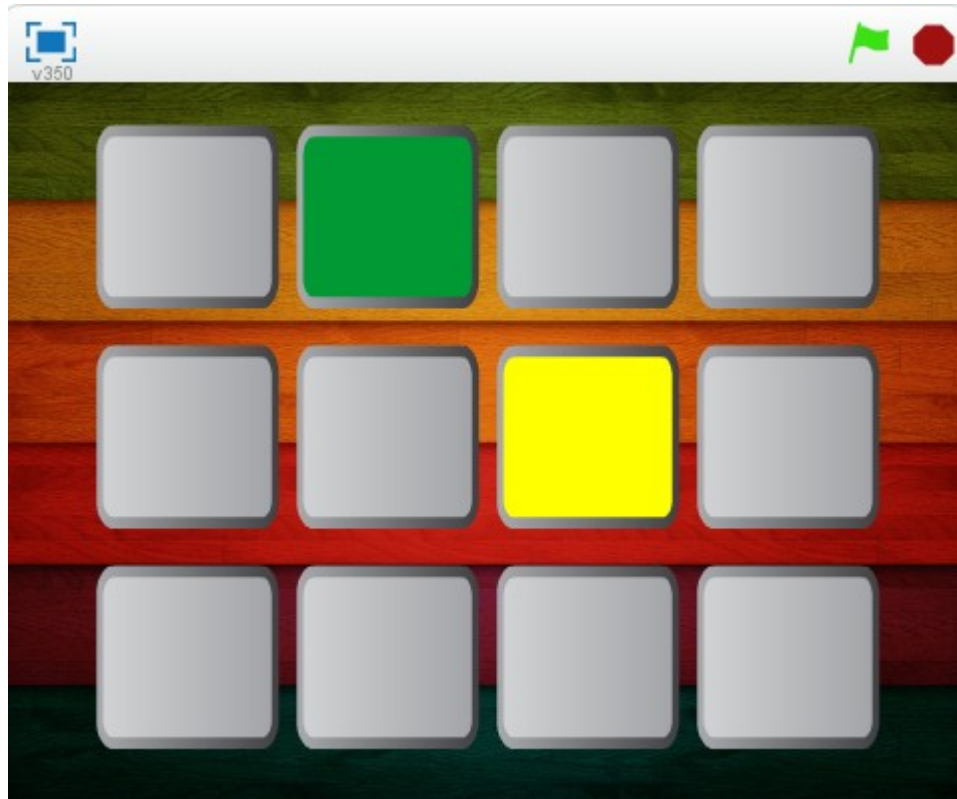
Pablo Garaizar

Preguntas Frecuentes

- ¿Por cuánto tiempo tengo acceso a los materiales del curso?
- ¿Me puedo llevar mis cursos conmigo donde sea que vaya?

There is still work to do

New video-games, new activities, new editions of the MOOC, etc.



We want to share it with the community

All the content is copyleft, we are open to suggestions, comments or criticism



<http://www.flickr.com/photos/waagsociety/8536919460/>

Thank you ;-)

and... happy scratching!



2rurio



txipi

References

- Resnick, M., Maloney, J., Monroy-Hernández, A., Rusk, N., Eastmond, E., Brennan, K., ... & Kafai, Y. (2009). Scratch: programming for all. *Communications of the ACM*, 52(11), 60-67.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Praha: Lidové Noviny.
- Salen, K. (2004). *Rules of play: Game design fundamentals*. The MIT Press.
- Scratch 2.0, <http://scratch.mit.edu>.

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* see references in each slide