

# Create Your Own Digital Escape Room for Learning

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# Agenda

- Introduction into digital escape rooms for educational purposes
  - Learn what a digital escape room is and how it can be used for educational purposes.
  - Demos
- Designing a digital escape room
  - Learn how to design a digital escape-room for learning purposes.
- Implementing a digital escape room
  - Learn which freely available tools you can use to develop and set up a digital escape-room according to your needs (Hubs.mozilla, learningapps, forms.google)

# Content

- Intro + Demo
- Choose a learning topic, then
  - choose a room in [hubs.mozilla.com](https://hubs.mozilla.com)
  - setup puzzles with [learningapps.ch](https://learningapps.ch)
  - setup a help system with [forms.google](https://forms.google.com) or just by placing hints
- put everything together and play it

# What are ESCAPE ROOMS?

An Escape Room is a realistically recreated thematic room

- in which a group of players
- must solve various puzzles
- within a certain time,
- in order to leave the room as a winner



# What are digital ESCAPE ROOMS?

Instead of a real room, a digital version is used.

Examples:

- Browser-based online escape rooms
- Computer-based escape rooms,
- Virtual Reality escape rooms



# What are educational ESCAPE ROOMS?

Same principle ...

...for educational purposes



# Learning with Escape Rooms

## Playing Escape Rooms

- Introduction to new topics
- Review of existing knowledge
- Developing knowledge through solving problems
- Getting/training knowledge in a guided way

## Creating Escape Rooms

- Engaging with knowledge by creating Escape Rooms



# Elements of an Escape Room

- Digital room representation
- Story
- Puzzles
- Help-System





# Learning Elements of Escape Rooms

## Puzzles

- Dealing/solving thematic problems

## Story

- Guidance and handling of Knowledge

## Gameplay

- Cooperative learning in a team



# Demo «no more walls»

## Website

[http://www.school-break.eu/escape-rooms-2?tx\\_category=eng&Format=online](http://www.school-break.eu/escape-rooms-2?tx_category=eng&Format=online)

## Game

<https://sites.google.com/view/nomorewalls/>

## Teacher-Guide

[http://www.school-break.eu/wp-content/uploads/2020/07/Teacher-Guide-No-more-walls\\_Online-version.pdf](http://www.school-break.eu/wp-content/uploads/2020/07/Teacher-Guide-No-more-walls_Online-version.pdf)

## No more walls (Online)



Escape room developed by the UOC Research Group GAME, Faculty of Information and Communication Sciences in collaboration with The Centre d'Estudis per la Pau J.M. Delàs. The mission of Centre Delàs is to strengthen the culture of peace and the construction of a disarmed society

Spain

### Learning Objectives:

- Raise awareness about migration processes in Europe
- Highlight the problems related to borders, refugees, militarism, hate speech and surveillance.

GAME SPA ENG

Teacher Guide SPA ENG

(for +14 years old)

# Demo «The House of Dr. Hayka»

Topic:

5 Scientists and their discoveries

Setup: Begin of the story

<http://bit.ly/drhayka>

Game (is part of setup)

<https://hub.link/3Kkdixr>

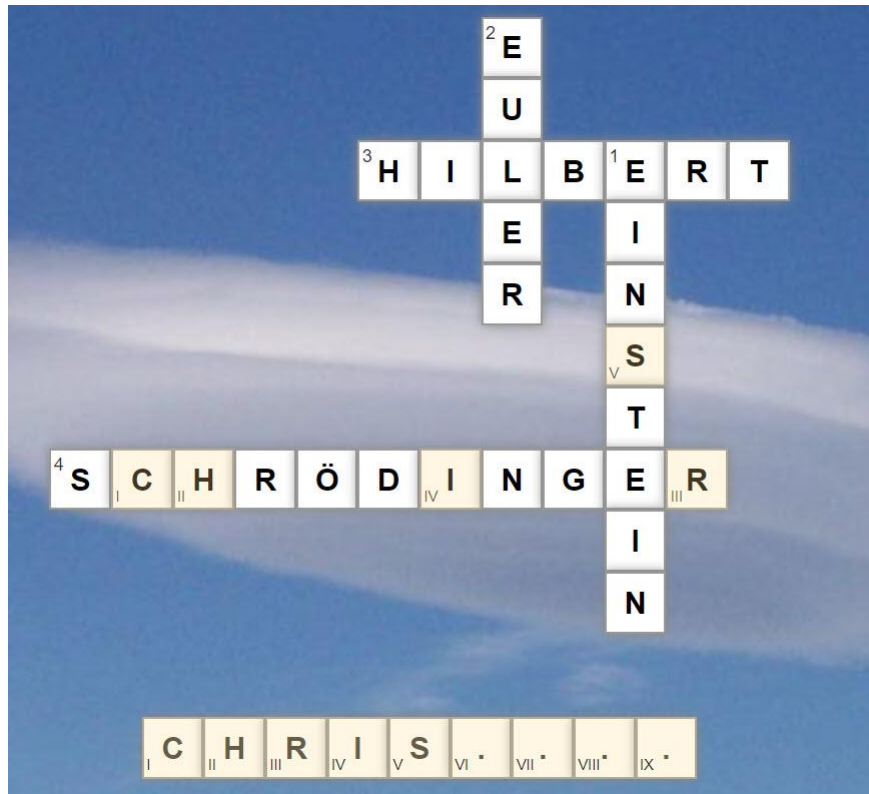


# Demo «The House of Dr. Hayka»

- Carefully look around: realize, that you have to press “g” to access the house
- You see 3 puzzles and an opening-link for escaping the room
- Analyse the puzzles
- Use the Help System
- Escape!



# Demo «The House of Dr. Hayka»



- This puzzle is looking for names of scientists
- Solving the puzzle provides a hint
- The hint CHRIS.... Can be used in the Wordgrid puzzle

# Demo «The House of Dr. Hayka»

Z	V	W	F	B	Z	M	X	B	U	D	A	V	I	D	H	I	L	B	E	R	T	V	Z
C	H	R	I	S	T	I	A	N	G	O	L	D	B	A	C	H	H	O	K	Y	I	W	J
T	Q	C	P	Z	V	C	Z	K	C	M	B	Z	T	Z	R	C	D	E	M	L	K	L	G
D	W	Z	F	B	S	J	O	Q	M	L	E	O	N	H	A	R	D	E	U	L	E	R	H
H	G	U	A	J	P	B	G	B	E	B	R	S	D	C	W	Q	S	O	L	J	Z	V	I
L	W	E	H	M	X	S	P	E	L	S	T	E	E	W	E	Q	V	X	D	U	B	G	G
S	M	Q	H	D	M	V	P	E	L	T	E	P	X	I	R	M	V	V	I	C	Q	G	C
M	A	R	G	Q	W	Z	M	E	R	W	I	N	S	C	H	R	Ö	D	I	N	G	E	R
J	R	S	P	C	N	G	X	C	G	B	N	X	Q	S	V	R	U	Z	E	S	L	P	T
E	Q	N	H	E	G	G	O	N	H	G	S	N											
M	F	N	P	U	D	L	Q	F	V	N	T	Y											
X	G	E	D	M	E	I	O	H	M	O	E	Z											
N	V	G	W	D	V	Y	O	W	M	G	I	U											
F	U	Z	D	C	H	L	L	X	A	C	N	B	E	I	T	U	E	N	Q	A	M	E	W

1. DAVIDHILBERT
2. ALBERTEINSTEIN
3. ERWINSCHRÖDINGER
4. CHRISTIANGOLDBACH
5. LEONHARDEULER

- This puzzle is looking for the full names of the 4 scientists as well as another one
- Look for CHRIS.... Will lead to CHRISTIANGOLDBACH
- The Order of the names (1,2,3,4,5) will provide a hint for the Pair-Building puzzle

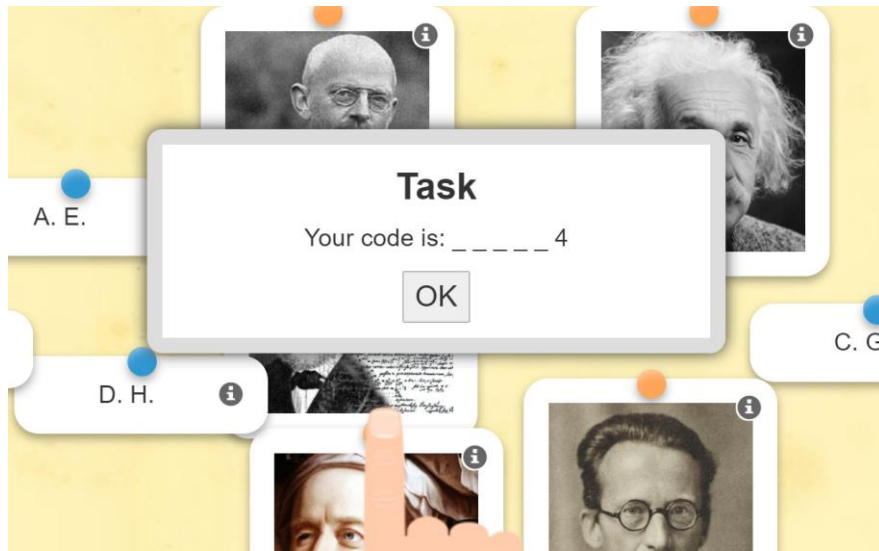
# Demo «The House of Dr. Hayka»

- This puzzle pairs the portraits of the scientists to ist names.
- The order of the names is provided by the hints of the Wordgrid puzzle (1=D.H, ... 5=L.E.)
- The «I»button provides the first 4 digita of the Code (which is 3 1 4 3 3 \_



# Demo «The House of Dr. Hayka»

- The last digit of the opening code is 4
- That leads to an opening code of 314334





# Demo «The House of Dr. Hayka»

- The last digit of the opening code is 4
- That leads to an opening code of 314334



# Demo «The House of Dr. Hayka»

Debriefing room / go further

<https://hub.link/HppSv7W>



# Creating Digital Escape Rooms

- Define: Topic & learning goals
- Choose or develop: Digital Escape Room representation
- Find a Story
- Create Puzzles
- Setup a Help-System



# Playing Digital Escape Rooms

- Setup Team & Briefing
- Start Escape Room
  - Introduction to the story
  - Timer-start
  - Gameplay
  - Timer stop
  - Scoring / Award
- Debriefing

A digital timer display showing the time 29:43 in a large, black, segmented font. The timer is positioned above three colored buttons: a blue button labeled 'Bearbeiten', a yellow button labeled 'Reset', and a red button labeled 'Stopp'.

Bearbeiten Reset Stopp

<https://webuhr.de/timer/#countdown=00:30:00&date=2021-11-30T23:07:50&sound=xylophone&loop=1>

# Tools for Creating a digital Escape Room

## Tools:

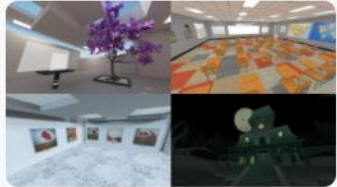
- **Digital Escape Room** ([hubs.mozilla.com](https://hubs.mozilla.com))  
Base for the story, in which the actions are integrated
- **Puzzles**, specific to the learning topic ([learningapps.ch](https://learningapps.ch))  
Helps to achieve the learning goals and provides the opening code (door to escape)
- **Help system**, help to move on if you get stuck ([forms.google.com](https://forms.google.com))  
Helps to find the opening-code for the door to escape the room

# Digital Escape Room: Mozilla Hubs

<https://hubs.mozilla.com/>

Share a virtual room with friends. Watch videos, play with 3D objects, or just hang out.

Create Room



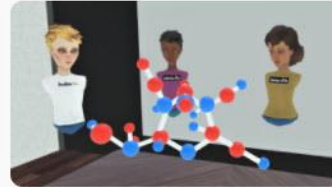
### Instantly create rooms

Share virtual spaces with your friends, co-workers, and communities. When you create a room with Hubs, you'll have a private virtual meeting space that you can instantly share - no downloads or VR headset necessary.



### Communicate naturally

Choose an avatar to represent you, put on your headphones, and jump right in. Hubs makes it easy to stay connected with voice and text chat to other people in your private room.



### An easier way to share media

Share content with others in your room by dragging and dropping photos, videos, PDF files, links, and 3D models into your space.

# Using Mozilla Hubs

Save the link, the 6-digit code is only valid for 72 hours

The screenshot shows the Mozilla Hubs website. At the top, there's a navigation bar with 'hubs by mozilla', 'Hubs Cloud', 'Spoke', 'Docs', 'Source', 'Community', and a user profile 'Signed in as w.b...@baseinstitute.ch'. The main content area features a large header with the text 'Share a virtual room with friends. Watch videos, play with 3D objects, or just hang out.' and a 'Create Room' button. Below this are three feature cards: 'Instantly create rooms', 'Communicate naturally', and 'An easier way to share media'. At the bottom, there's a 'Favorite Rooms' section with three room thumbnails: 'Bubbly Determined Area', 'Prudent Knowledgeable Sphere', and 'Delightful Different Camp'. A red arrow points from the 'Have a room code?' button at the bottom of the screenshot to the 'Have a room code?' button in the next image.

hubs by mozilla

Enter code:

Have a letter code?

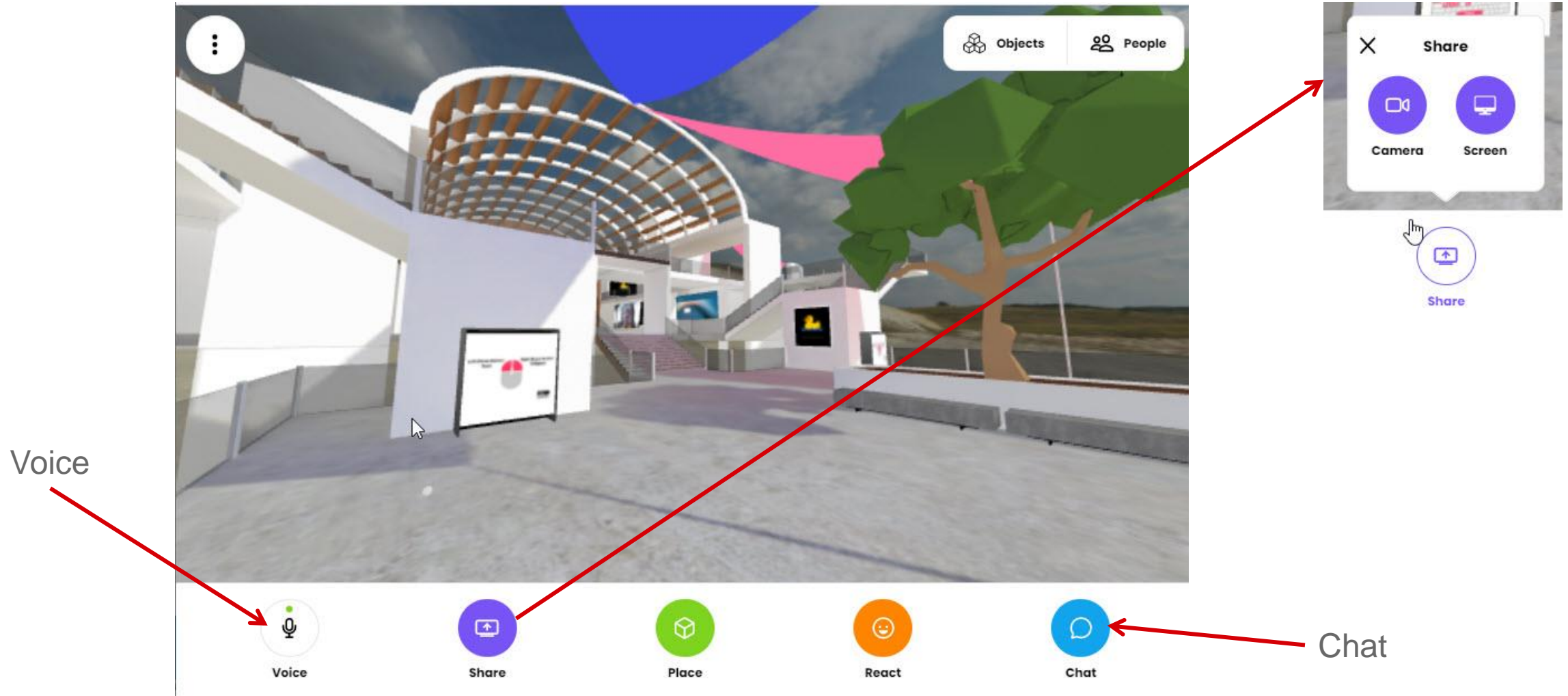
A numeric keypad with buttons for digits 1-9, 0, and symbols for ABC, a square with an X, and a square with a diagonal line. The keypad is part of a larger form for entering a room code.

Create a new room

Have a room code?

<https://hubs.mozilla.com/>

# Communication in Mozilla Hubs





# Placing objects: Files, Weblinks, Pictures, 3D-Objects into Mozilla Hubs



Custom Object

Upload or paste a URL to an image, video, model, or scene. Models can be found on [Sketchfab](#) and [Google Poly](#), or our [collection](#).

Object URL or File

Accepts glb, png, jpg, gif, mp4, and mp3 files

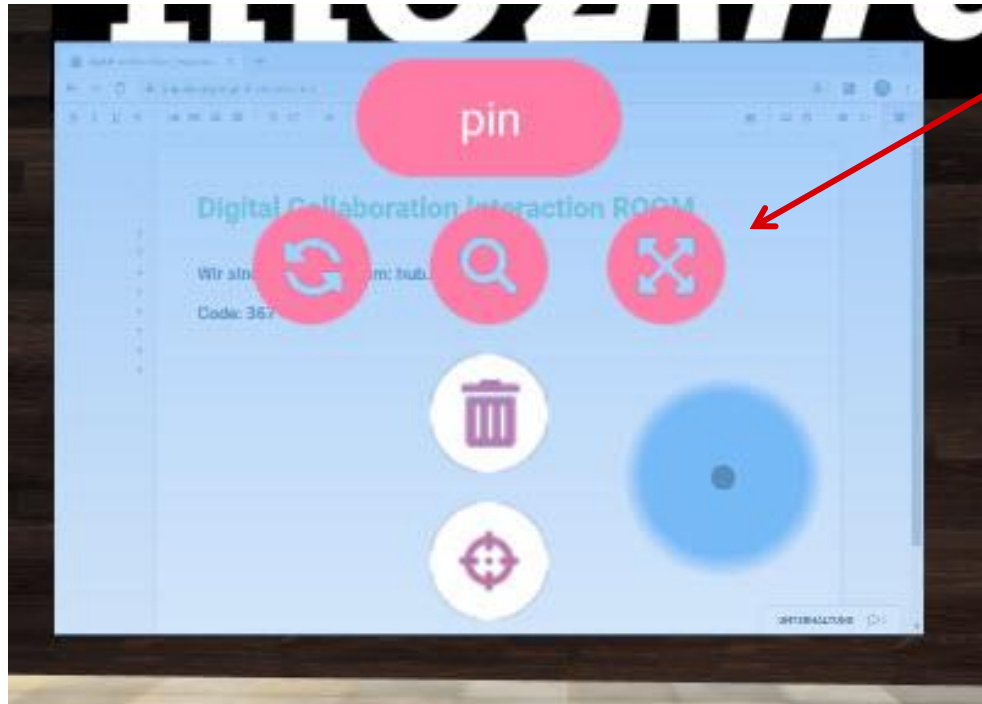
Create Object

Weblink

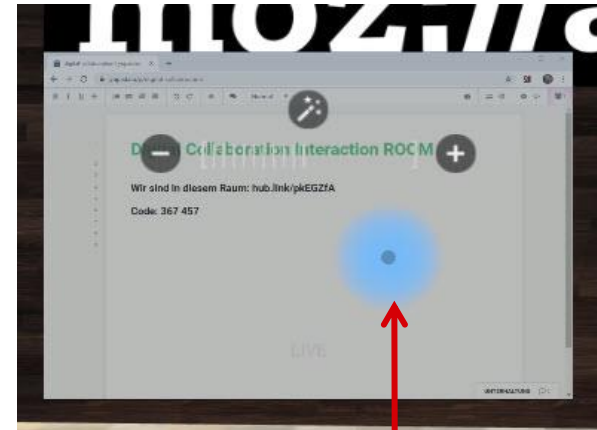
Local jpg or pdf

# Place object

click object – hit space bar



Size



Click & hold left Mouse  
move yourself (cursor)

# Control in Mozilla Hubs

Move & Act

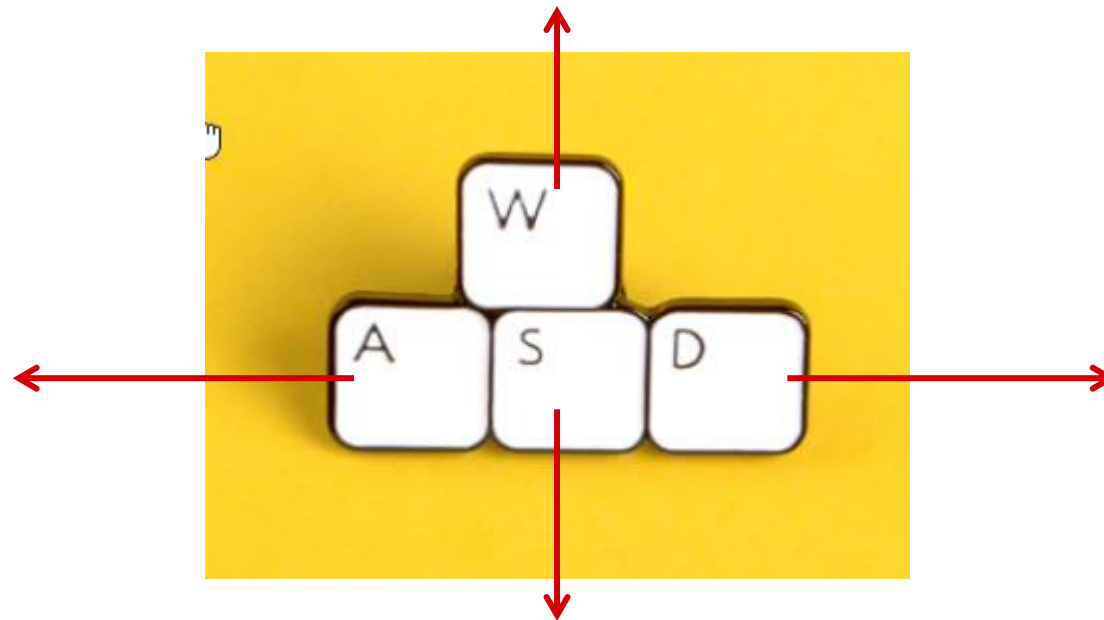
hubs  
moz://a



**WASD: Move**  
**G Key: Fly Mode**

**SPACE: Show Menus**  
**TAB: Toggle Menus**

move (Shift = fast)



look



# Documentation Mozilla Hubs

<https://hubs.mozilla.com/docs/welcome.html>

## Hubs Documentation

Create and Join Rooms

Hubs Features

Sharing Avatar Links Privately

User Settings

Room Settings

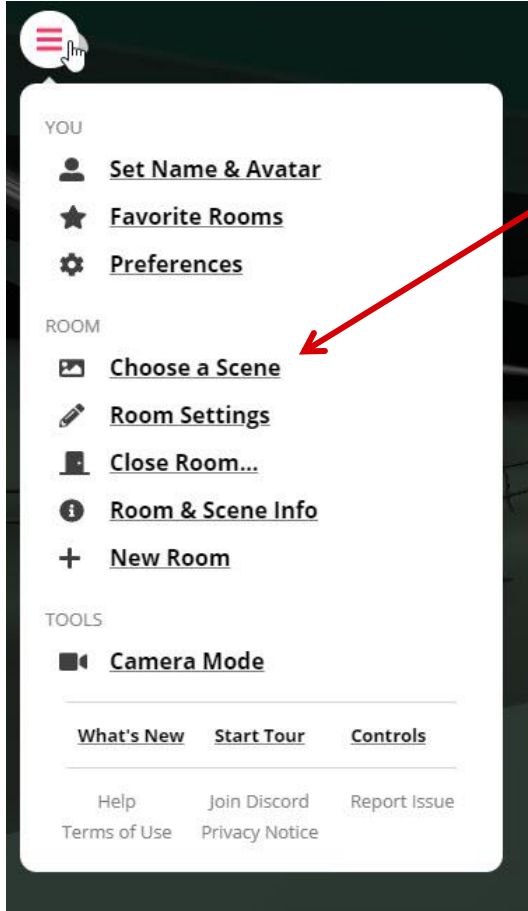
Controls

Discord Bot

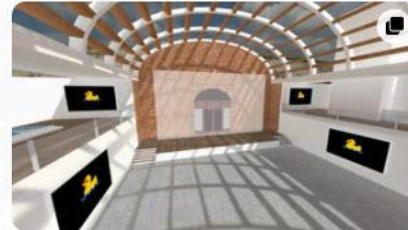
Troubleshooting

FAQ

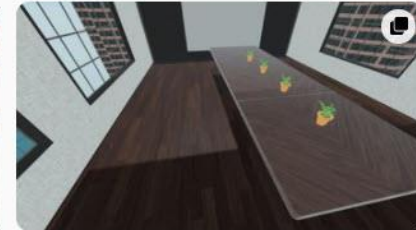
# Room scenes (host)



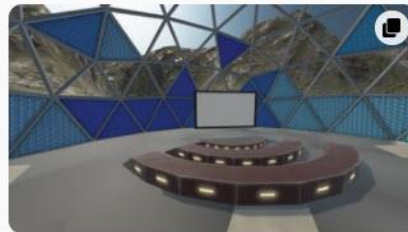
Hello WebXR Main Hall  
Diego Goberna



Gathering Hall  
Hubs Team



Conference Room A  
MissLiviRose



Outdoor Meetup  
Hubs Team



Hubs School v1.0  
Hubs Team



Maze Challenge  
Hubs Team



Round Table Room  
Hubs Team



Cudillero Diorama  
Hubs Team



Hubs Commons  
Hubs Team

# Puzzles: LearningApps

<https://learningapps.org/createApp.php>

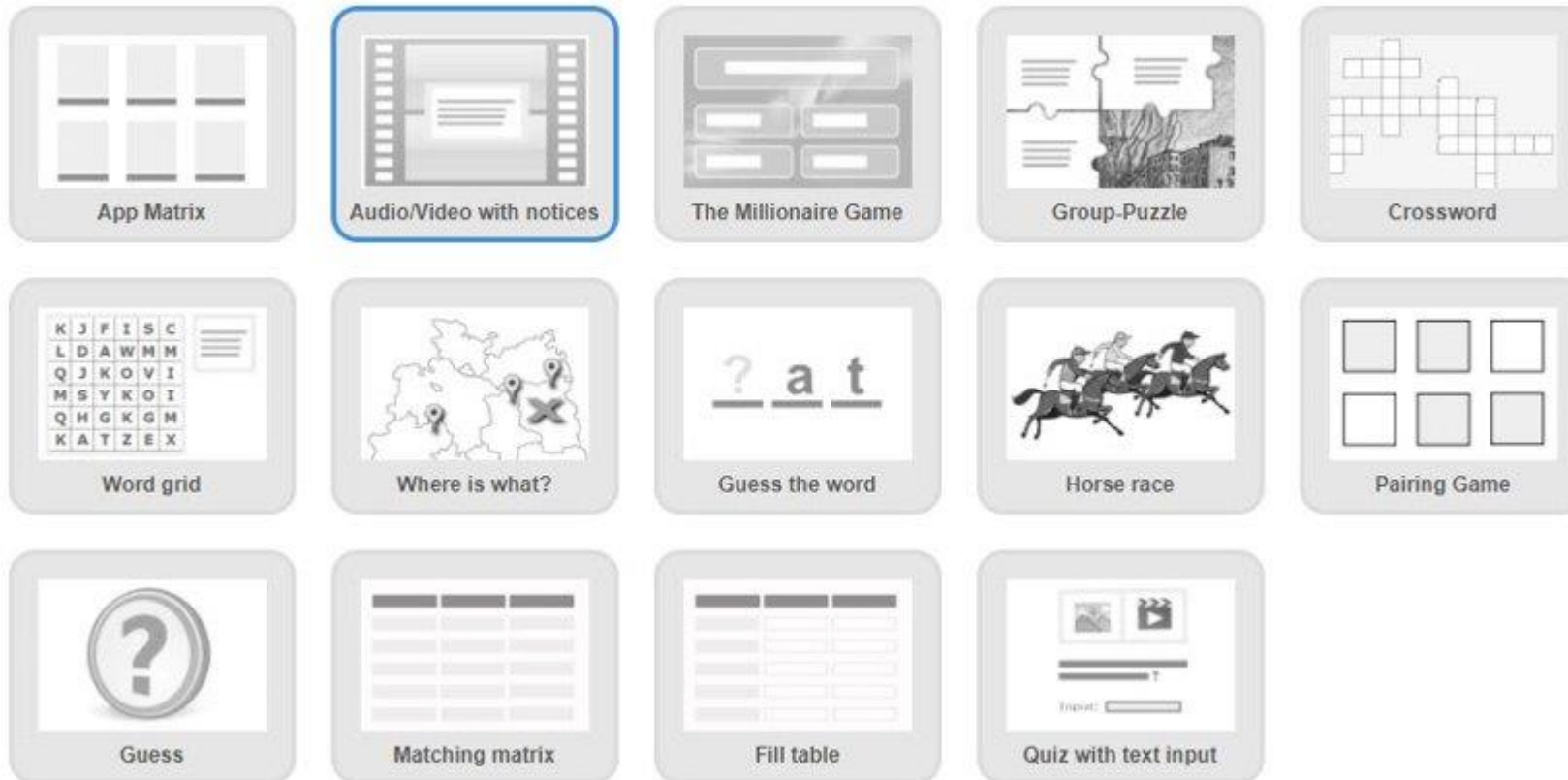
## Create your own app



- Free, web-based authoring software and platform to support learning and teaching processes with small interactive, multimedia learning modules.
- Many different puzzles: Multiple choice, matching exercises, close tests, etc.
- Using puzzles via Weblink or QR-Code

# Using LearningApps

<https://learningapps.org/createApp.php>



# Task 1



- **Define: Topic for learning**

Examples:

- Learning Pythagoras formula  $a^2+b^2=c^2$
- Distinguish the verb forms of “to go”
- Knowing the 4 P of Marketing
- ...



## Task 2



- Register to <http://hubs.mozilla.com>
- Choose a Digital Escape Room representation  
(Scene in Hubs-Mozilla)
- Think about a story (why are you locked in this room?)
- Train to move and the placement of objects in hubs-mozilla

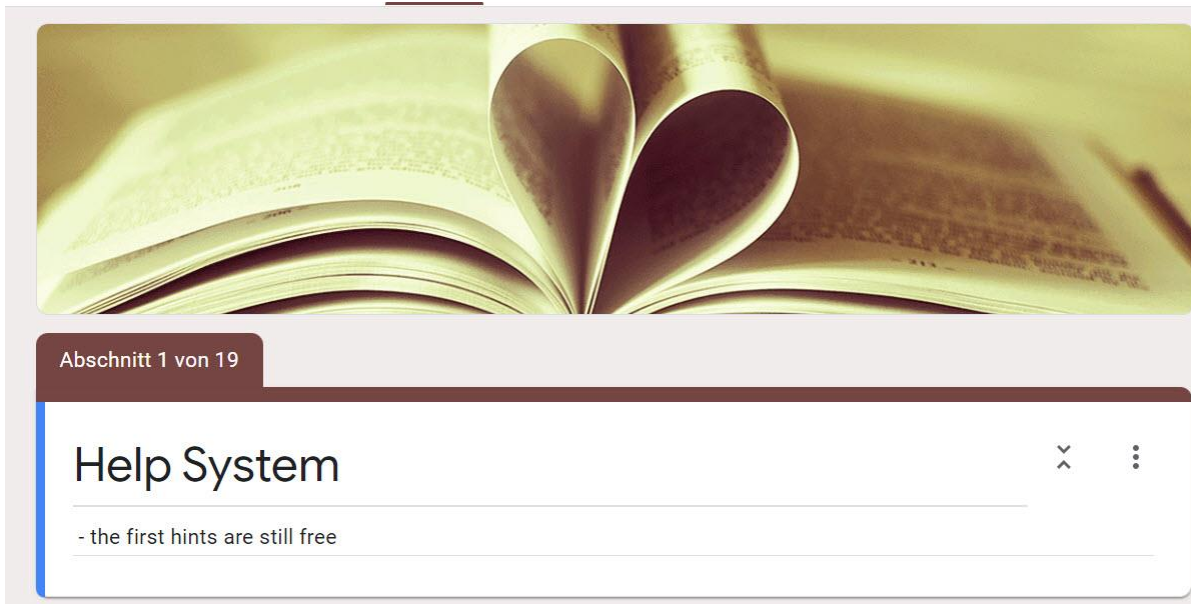
## Task 3



- Create one (or more) Puzzle with [learningsapps.ch](https://learningsapps.ch)
- Go to: <https://learningapps.org/createApp.php>
- Browse Apps - Play a few apps and then choose one for your topic.
- Click on: Create similar app.
- Edit texts/images according to own specifications.
- Finish, show preview and play it.
- Register if you want to save the app.

# (Task 4)

- Register to docs.google.com
- Setup a Help-System with forms.google.com



# Help System: forms.google.com

<https://docs.google.com/forms>

The screenshot shows the Google Forms editor interface. At the top, it indicates 'Abschnitt 1 von 5' (Section 1 of 5). The form title is 'The house of Dr. Hayka' with the subtitle 'an Escape-Room Adventure'. The question type is set to 'Multiple-Choice-Frage'. The question text is 'Choose'. There are three options listed: 'Start your adventure' with a sub-option 'Gehe zu Abschnitt 2 (Your adventure begins here ...)', 'End the adventure' with a sub-option 'Gehe zu Abschnitt 4 (End the advent...', and 'Option hinzufügen oder "Sonstiges" hinzufügen'. A context menu is open over the question, showing options: 'Ansehen', 'Beschreibung', '✓ Basierend auf der Antwort zum Abschnitt wechseln' (highlighted), and 'Reihenfolge der Optionen ändern'. At the bottom, there is a navigation bar with 'Nach Abschnitt 1 Weiter zum nächsten Abschnitt' and a help icon.

## - Create sections

- Switch to section based on the answer
- Check an answer, block if wrong

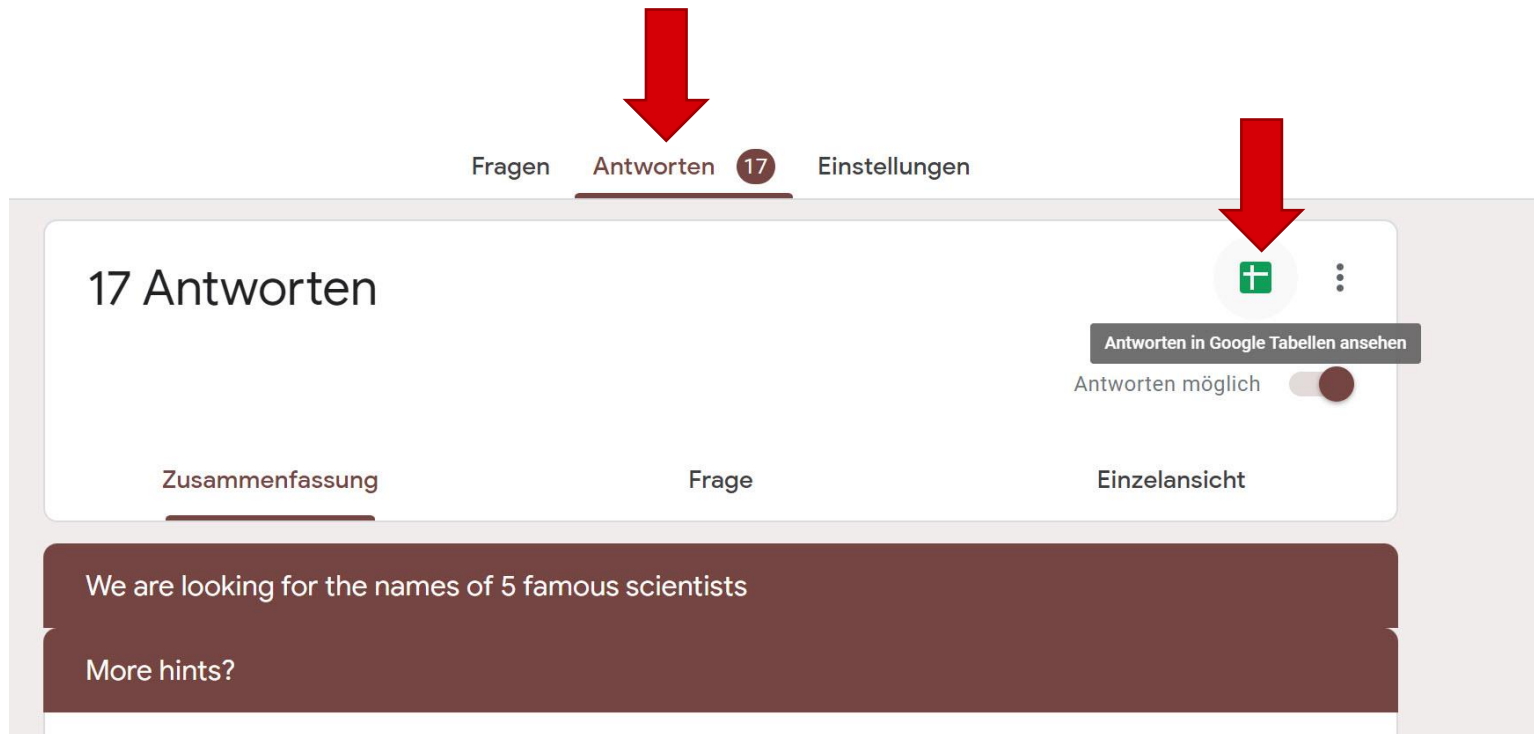
# Help System: forms.google.com

The screenshot shows the 'Einstellungen' (Settings) page in Google Forms. At the top, there are navigation tabs: 'Fragen', 'Antworten' (with a '26' notification badge), and 'Einstellungen' (which is selected and underlined). Below the tabs, the 'Präsentation' (Presentation) section is expanded, showing options for 'PRÄSENTATION DES FORMULARS' (Presentation of the form) and 'NACH ABSENDEN DER ANTWORT' (After sending the reply). The 'NACH ABSENDEN DER ANTWORT' section is highlighted with a red arrow pointing to it from the right. Below this section, there is a text input field for a confirmation message. A red arrow points to the input field from below. The text in the input field reads: 'Bestätigungsnachricht' (Confirmation message) followed by 'Room-Link: https://hub.link/3Kkdixr .... Thanks for starting or'. To the right of the input field are two buttons: 'Speichern' (Save) and 'Abbrechen' (Cancel). There are also two toggle switches for 'Fortschrittsanzeige einblenden' (Show progress indicator) and 'Zufällige Reihenfolge der Fragen' (Randomize question order), both of which are currently turned off.

- **Giving information only after registering**

- Settings
- Presentation
- After sending the reply
- Confirmation message

# Help System: forms.google.com



- **Spreadsheet**
- For all answers
- Available after click on "Send"

# Task 5

- Putting everything together
- Place Weblinks of puzzles
- Place Weblink of Help-system
- Place Weblink for door to open with code (hubs.mozilla)



# Please work now on

- Task 1 – choose a topic
- Task 2 – start hubs.mozilla, choos a room
- Task 3 – start learningapps.ch, create a puzzle
- (Task 4) – no time today
- Task 5 – Plaxe your puzzle in your hubs.mozilla room

Play it!





# Thanks for participation

You will finde more here ....

