FORETELL: Flood and Fire Safety Awareness in Virtual World

eTwinning Thematic Conference:
"Learning to Think in a Digital Society"

Athens, Greece, 28-30 September 2017

About the FORETELL project

The objectives:

1. Awareness of **good practices against floods and fires,** in a **safe** and **challenging** manner;
2. Exploit **experiential learning pedagogies** (e.g. 'learning by doing') in on-line interactive **3D virtual settings**;
3. Empower **teachers** to **adopt novel approaches** in their teaching;
4. Provide **open digital educational material** about flood and fire protection

The partners:

1. **Hellenic Open University (Project Coordinator):** Development of the 3D virtual learning environments;
2. **University of Malta, Faculty of Education:** Design of the educational games;
3. **Fire Safety and Civil Protection Directorate General of Bulgaria:** Development of the good practices scenarios & educational material;
4. **FELCOS Umbria, Italy:** Implementation of the 3D VWLE in schools.

FORETELL Web Site

http://foretell.eap.gr

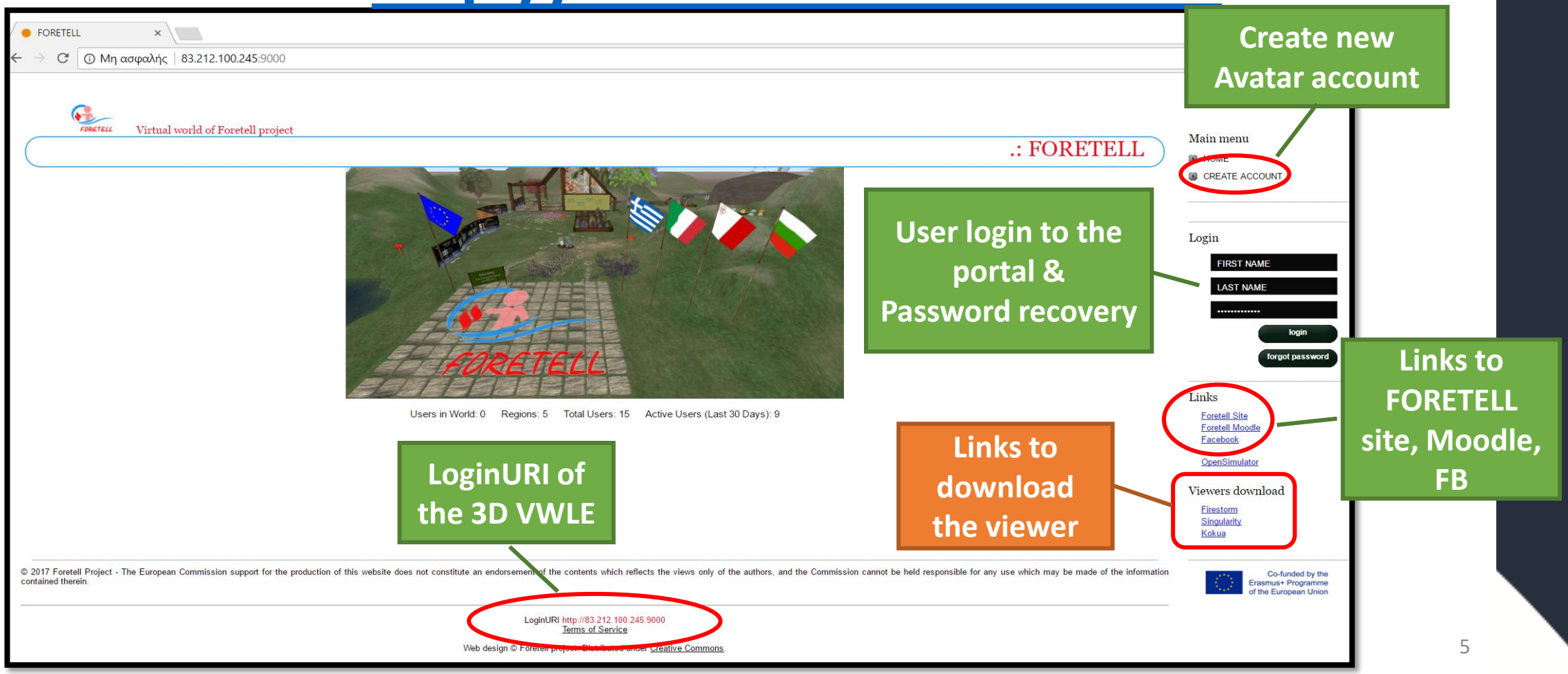
The 3D VW Platform

- **Open-source alternative of Second Life**
- **Self-hosting**
- **Possibility to operate behind firewalls, on the local network of the school**
- **3D modeling ‘in-world’ to create/edit objects**
- **Scripting language to make objects interactive**
- **High quality graphics**
- **Customisable Avatars**
- **Import and backup of objects & virtual regions**
- **‘In-world’ communication through Text or Voice**
- **Possibility to embed Moodle content in the 3D virtual world**

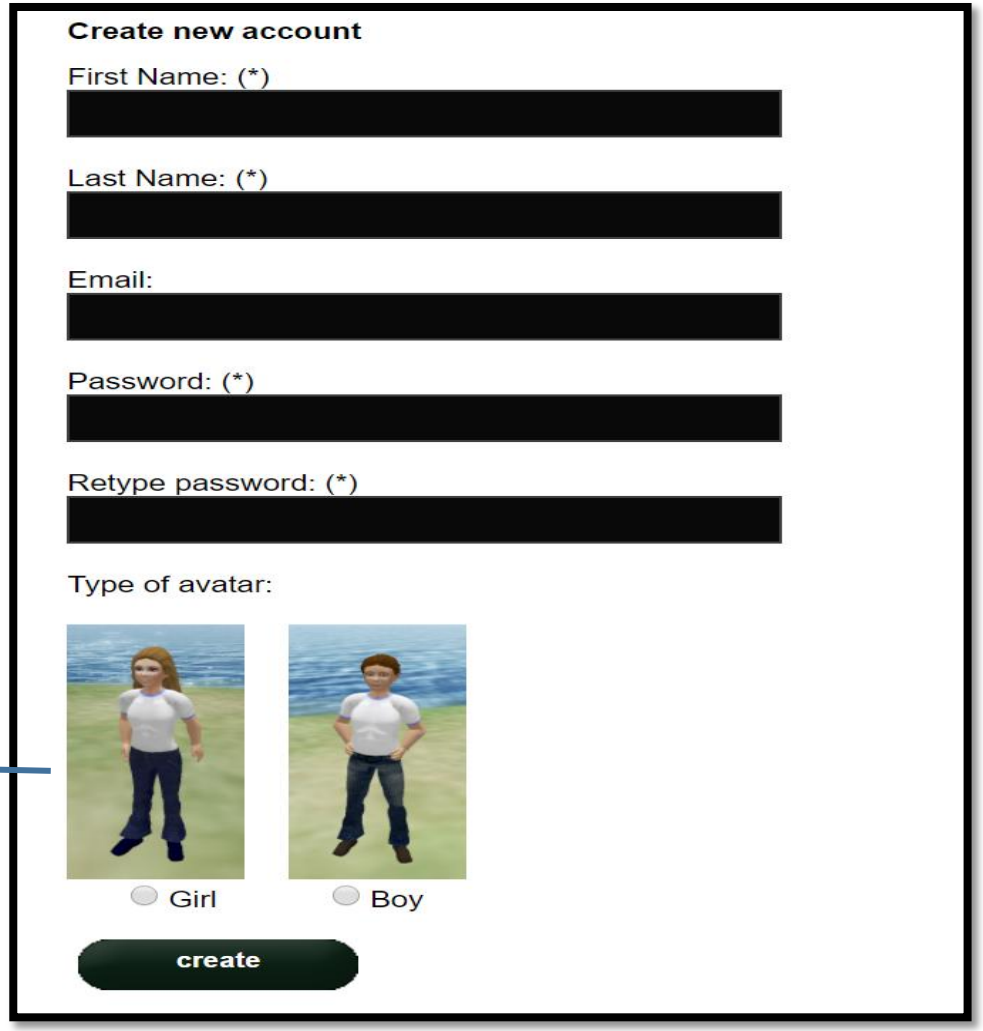
http://opensimulator.org

Avatar Registration Home Web page

URL: http://83.212.100.245:9000



“CREATE ACCOUNT” web form



Pre-made Avatars to select

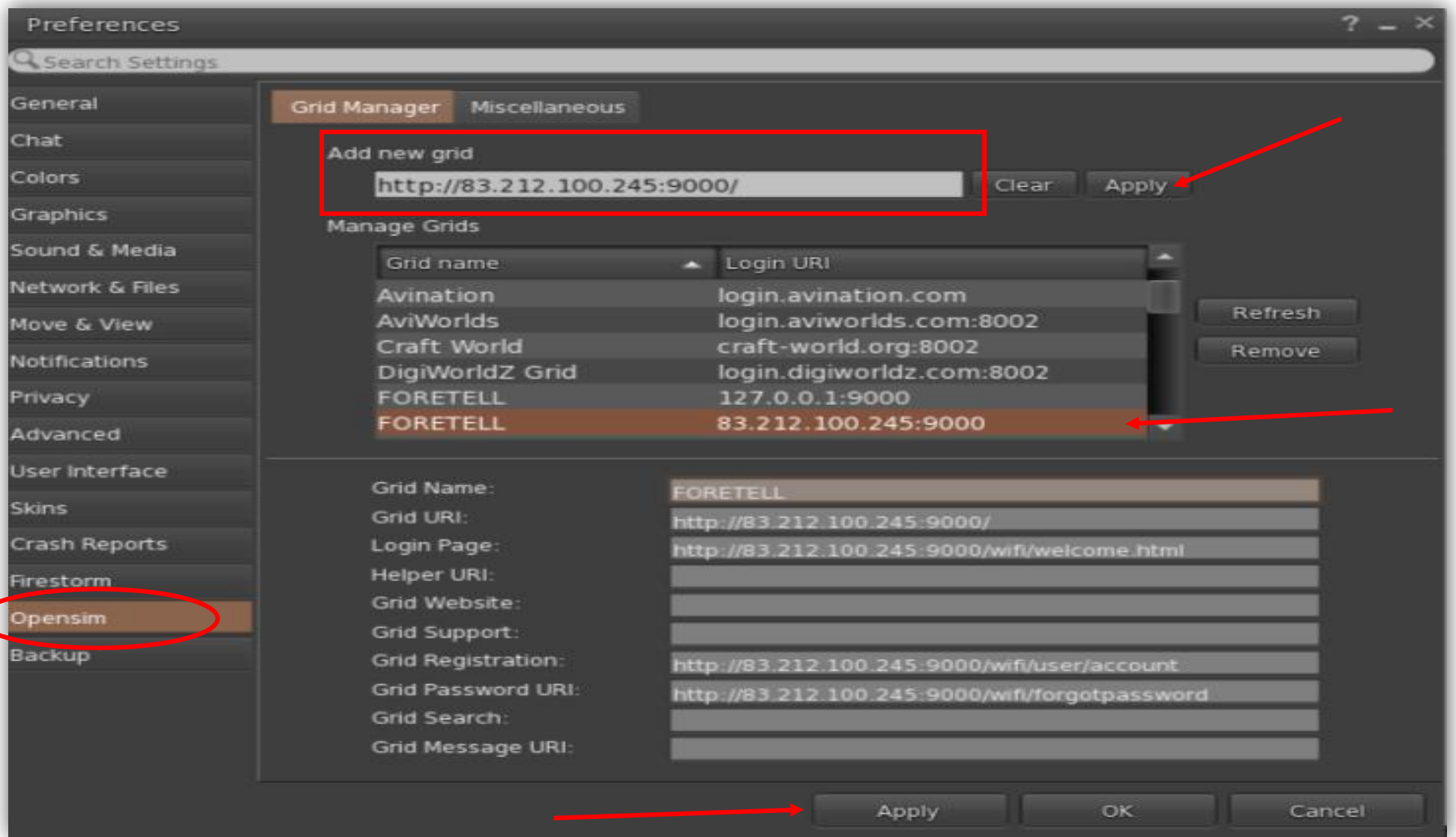
Recommended System Requirements

Opensimulator recommended viewers:	**Firestorm, Singularity, Kokua**
Operating system	**Windows 7, Windows 8.1, Windows 10 (64 bit)** (**MacOS X** and **Linux** are also supported)
Computer processor	**2 GHz or better**
Computer RAM	**4 GB or more**
Screen resolution	**1024 x 768 pixels or higher**
Graphics Cards for **Windows** or **MacOS X**	• **NVIDIA Graphics cards** 9000 Series: 9600, **9800** 200 Series: 275 GTX, 295 GTX • **ATI Graphics Cards** 4000 Series: **4850, 4870**, 4890 5000 Series: 5850, 5870, 5970
Internet connection	**Broadband connection is required (Cable or DSL)**

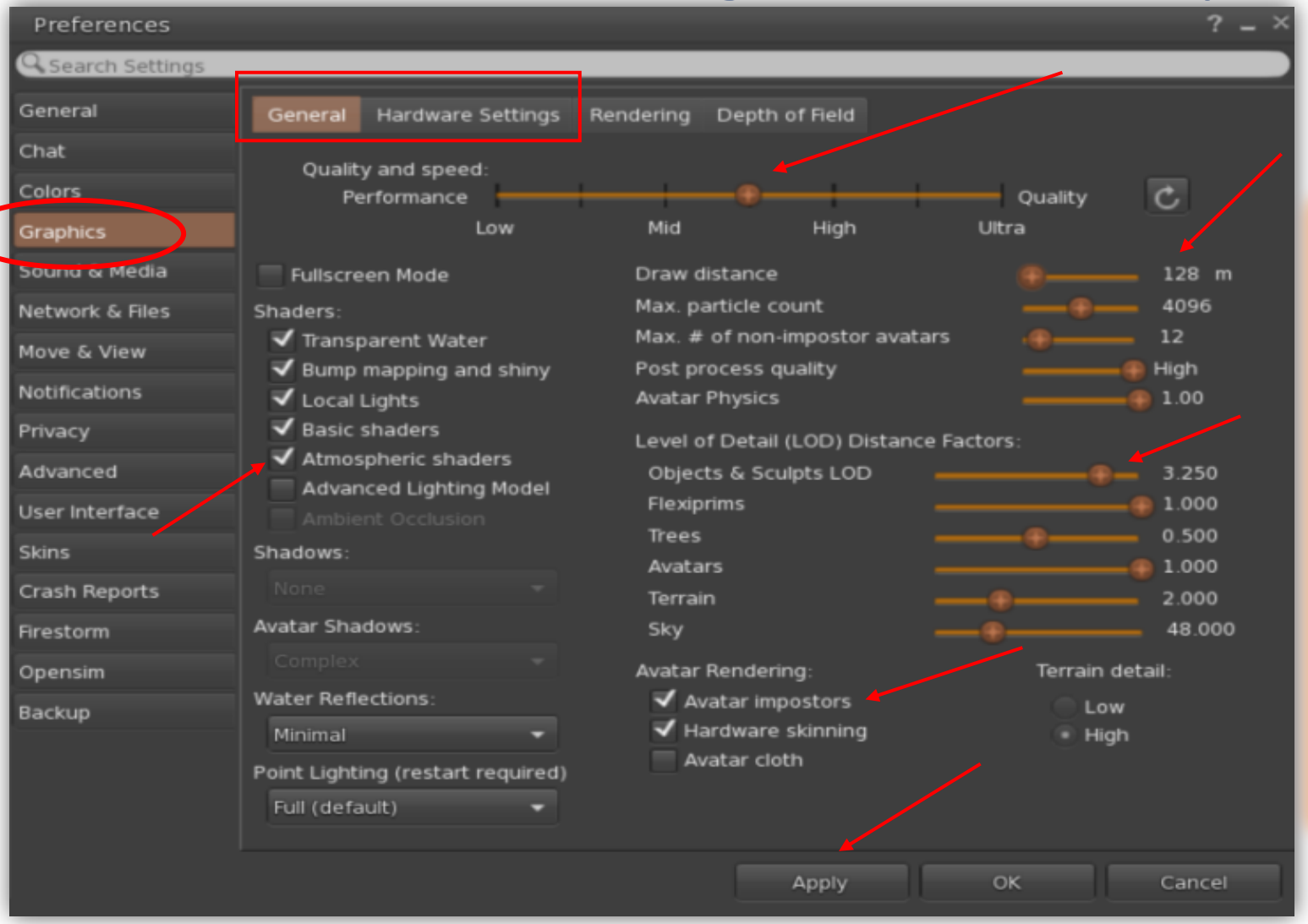
Viewer configuration: Menu ‘Preferences’

Press CTRL + P

Add the FORETELL Grid

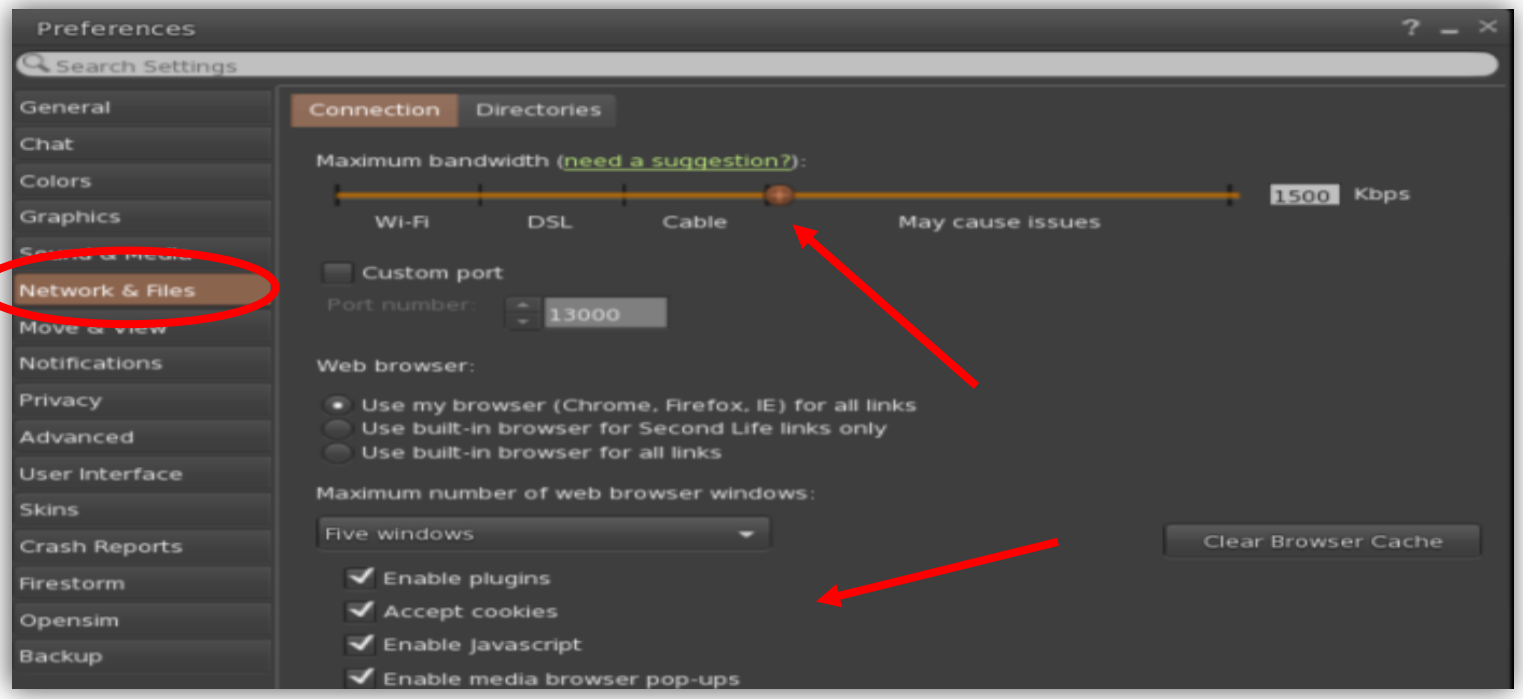


Configure the Graphics



In case of viewer lag:

- *Set **Quality and Speed** to **Low***
- *Reduce **Draw distance***
- *Disable **Anisotropic Filtering** and **Antialiasing***
- *Disable **Atmospheric shaders***



RECOMMENDATION:

Use the following **maximum settings** for bandwidth:

- Any type of **wireless** connection, including home wireless: **500**
- Hardwired **DSL**: **1000**
- Hardwired **cable** or better: **1500**

Login to the 3D VWLE of FORETELL

The Introductory Area of FORETELL

Demo video: https://youtu.be/n4nB4Jo7RPw

Configure the Environment

On the top of viewer's interface, open:

- Menu "**World**",
  Click on "**Environment Editor**" -> "**Environment Settings...**",
  Check the box "**Always use parcel/region settings**",
  Press "**OK**".

- Menu "**World**", click on "**Sun Position**" and check "**Estate Time**".

Welcome ‘in-world’!

Enjoy your visit!

The Narrative

- The **VW** is a **video game** to **train household robots** in regards to keeping humans safe from **flood and fire**.
- The **players** are the **‘Trainee Operators’**, i.e. a **role-model** for robot behaviour.
- Players’ **actions** are **monitored** during their participation in the scenarios.
- The **players** receive their **mission** at the beginning of each scenario.

Scenario 1: Fire at Home

Demo video: https://youtu.be/8mCkgCmKs0U

- **Single-player**.
- Takes place entirely **within a house**.
- **Replicated in two (2)** independent houses.
- **Four sub-scenarios** that play out **randomly**:
  1. the player is asked to **identify potentially dangerous situations** that are set up in the house,
  2. carry out appropriate **actions to deal** with them,
- Success leads to the **second set of four sub-scenarios**.
- The new sub-scenarios **present a situation of fire**.
- The player moves through them **resolving each of the situations**.
- Upon **successful completion**, the player is **teleported back to the Quiz Area** to take a **quiz.**

Scenario 2: Flood at Home

Demo video: https://youtu.be/hO6nis8D7_E

- **Single-player**.
- Takes place entirely **within a house**.
- **Replicated in two (2)** independent houses.
- Consists of **three sub-scenarios** that are **triggered in succession**:
- The player is asked to:
    1. **prepare a disaster backpack** with essential items found in the house,
    2. **prepare the house** to leave it during the flood,
    3. **get to the highest point** of the building when leaving is not an option.
- The player's **performance is evaluated three times**, once after each sub-scenario.
- The player **decides themselves** when they feel they have finished successfully.
- **Fail in a sub-scenario** leads to **teleporting back to the Introductory Area.**
- Upon **successful completion**, the player is **teleported back to the Quiz Area** to take a **quiz.**

Scenario 3: Fire Outside & Fire in School

Demo video: https://youtu.be/XMv2Zf2EuzQ

- **Single-** or **Multi-player**.
- Takes place on a **camping ground**.
- Consists of **three sub-scenarios** that are **triggered in succession**.
- The players are asked to:
  - **Find a safe place** for their tents and start a campfire,
  - **Wait on the correct safe spot** and **call for help** when the campfire gets out of hand,
  - Find their **way outside to safety** when the school is on fire.
- All sub-scenarios have a **time limit (5 min**.)
- The **timer is visible** to all players at all times.
- Players are **encouraged to chat** amongst themselves, **discuss**, and **help** each other.
- **All players fail** the scenario **if one fails to clear it in** within the time limit. They are then **teleported back to the Introductory Area**.
- **Upon successful completion**, all players are **teleported to the Quiz Area** to take a **quiz**.

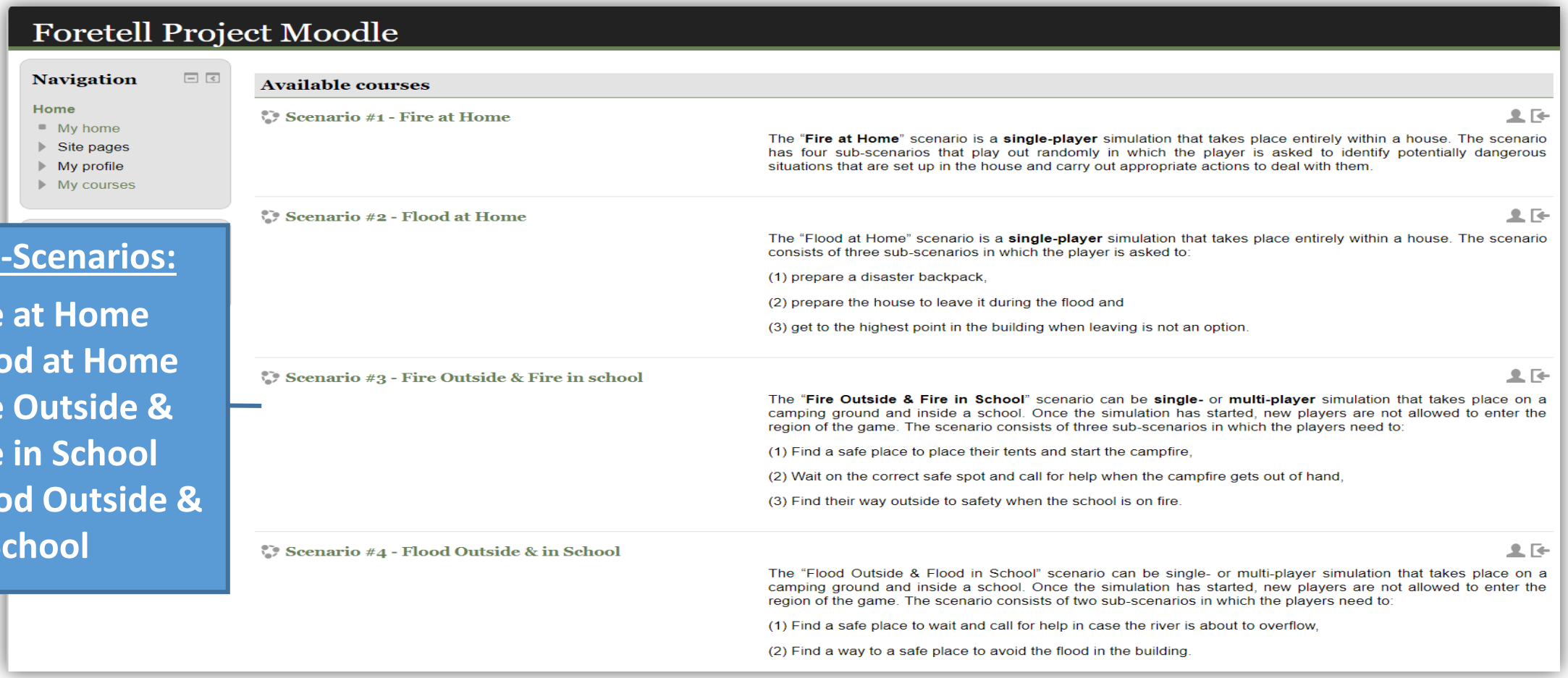
Scenario 4: Flood Outside & Flood in School

Demo video: https://youtu.be/HGX8eINE2Tc

- **Single-** or **Multi-player**.
- Takes place on a **camping ground**.
- Consists of **two sub-scenarios** that are **triggered in succession**.
- The players are asked to:
  - **Wait on the correct safe place** and **call for help** in case the river is about to overflow,
  - Find a way to **a safe place** to avoid the flood in the building.
- All sub-scenarios have a **time limit (5 min**.)
- The **timer is visible** to all players at all times.
- Players are **encouraged to chat** amongst themselves, **discuss**, and **help** each other.
- **All players fail** the scenario **if one fails to clear it in** within the time limit. They are then **teleported back to the Introductory Area**.
- **Upon successful completion**, all players are **teleported to the Quiz Area** to take a **quiz**.

FORETELL Moodle site

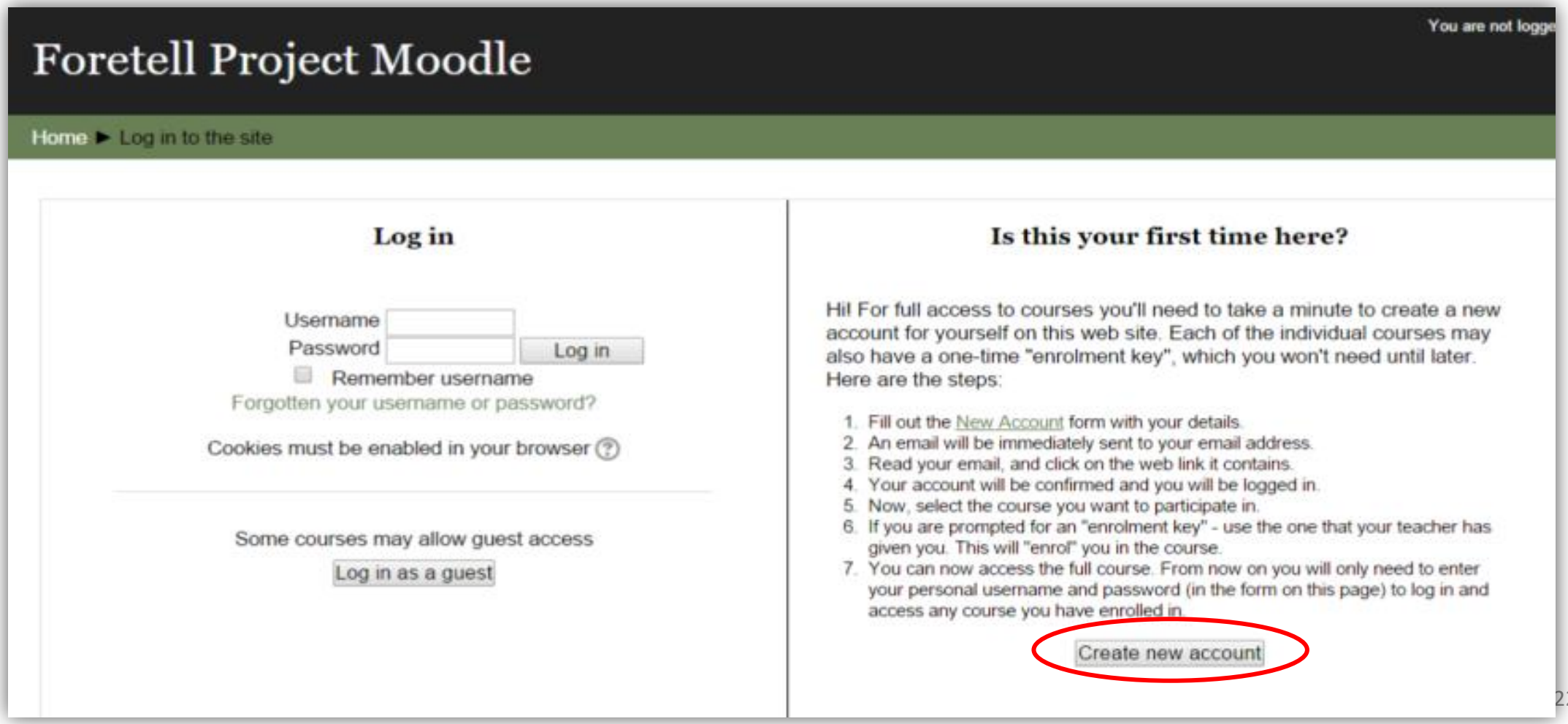
URL: http://foretell.eap.gr/moodle/



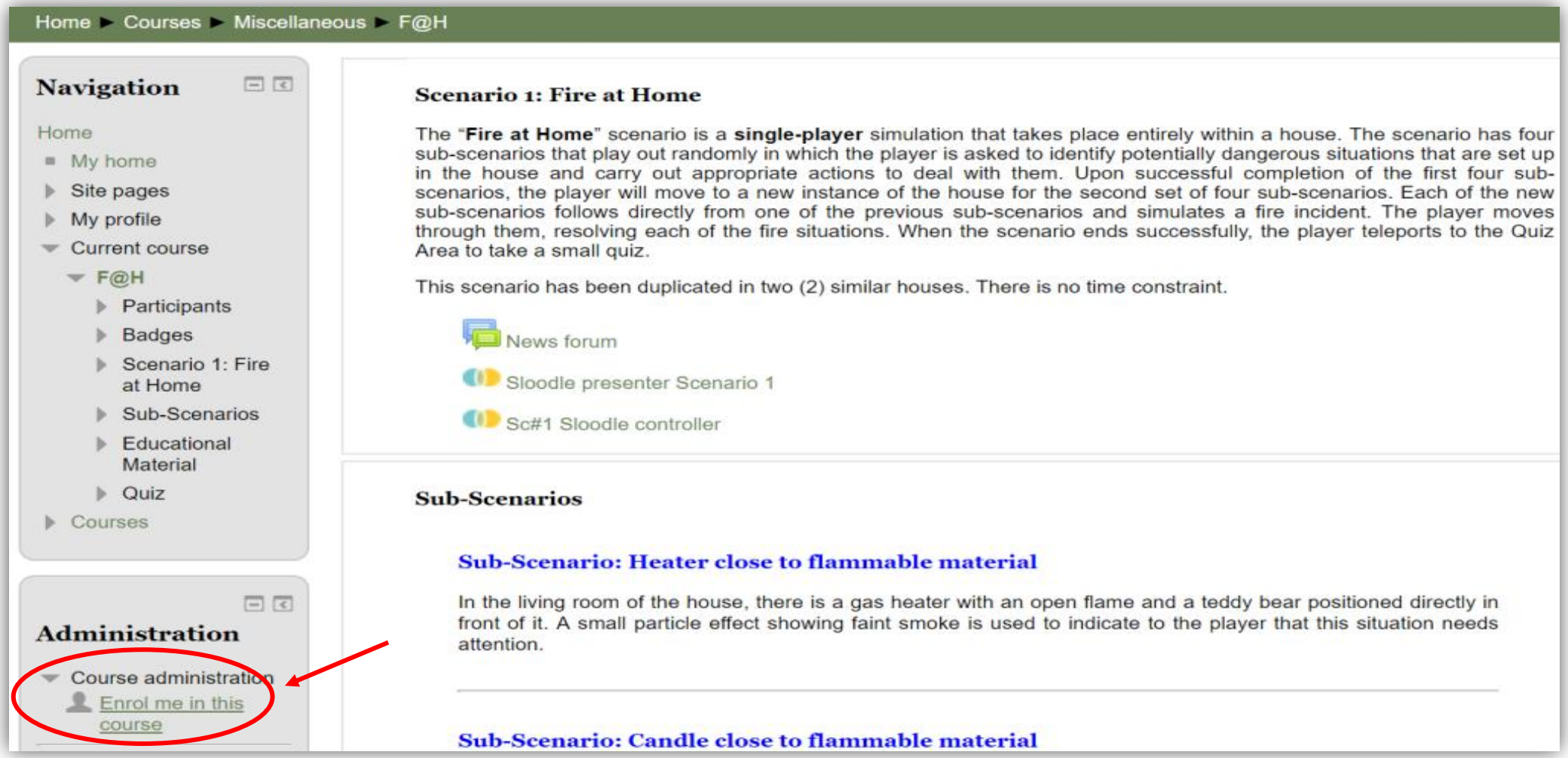
Courses-Scenarios:

1. Fire at Home
2. Flood at Home
3. Fire Outside & Fire in School
4. Flood Outside & in School

Registration/Login to Moodle



Enrollment in the courses-scenarios



Thank you !

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