



Co-funded by
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Power of digitalization in fighting against climate change



Greek Student Works



May 2025

5th High School of Agrinio · Greece





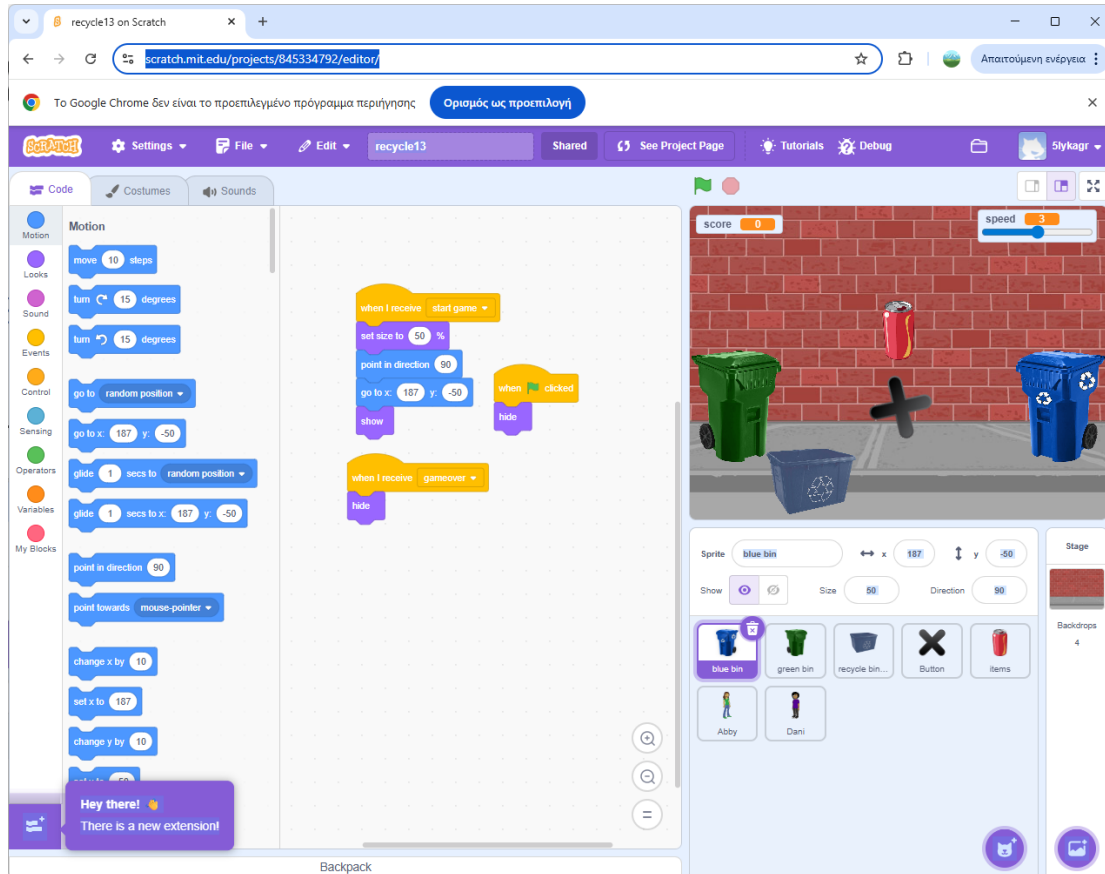
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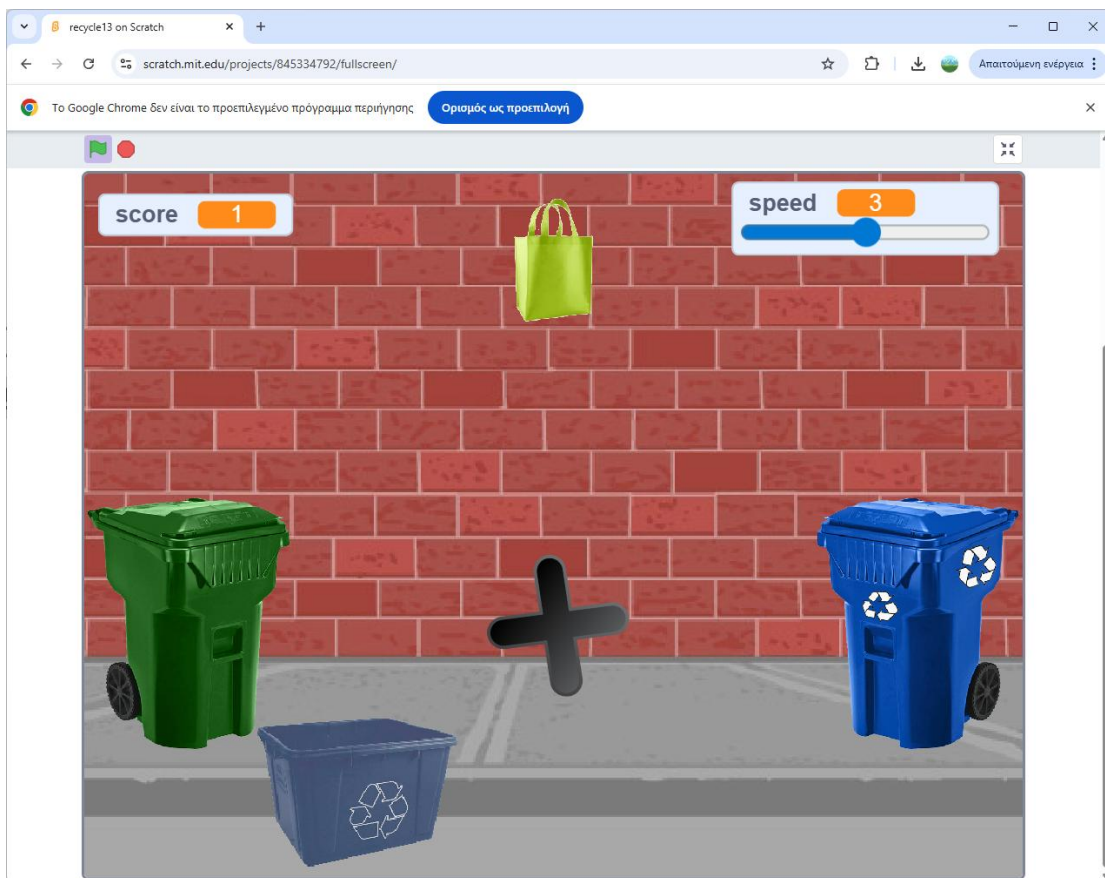
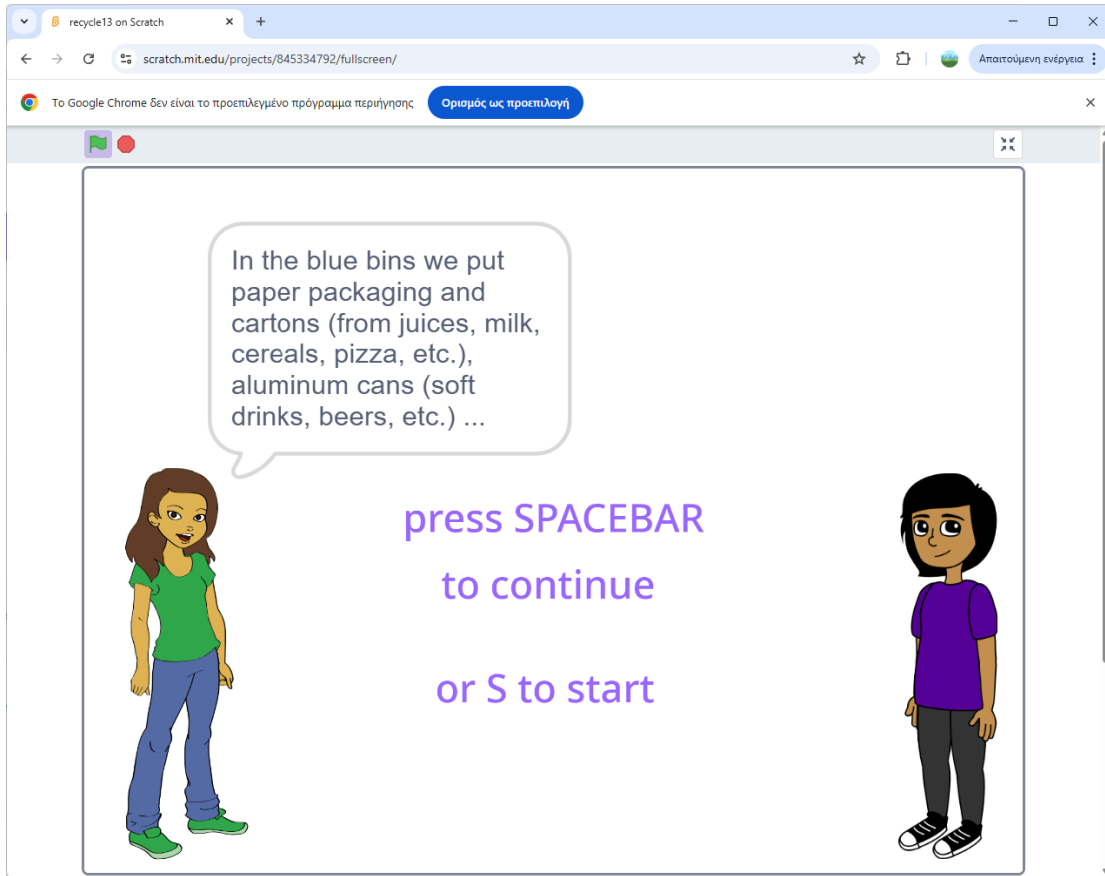
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2nd WP "Increasing GREEN in education"

Scratch Project

<https://scratch.mit.edu/projects/845334792/editor/>

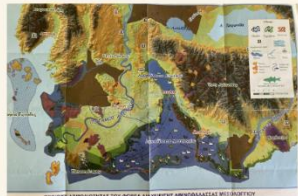






Canva Poster

https://www.canva.com/design/DAFhBhJptH8/414yTpwDTEktm_A6RnLanQ/edit?utm_content=DAFhBhJptH8&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton



Map of the wetland Etoloakarnania, Western Greece



Messolonghi Lagoon



An environmental park full of winged and aquatic species.

The Lagoon is famous for the avgotaracho,



the stilt houses (pelada) and the biggest saltworks in Greece.



WETLANDS OF UNIQUE BEAUTY IN DANGER



Climate change threatens the wetland's sustainability due to temperature rise: the water's biodiversity changes, species are in danger, the sandbar islands erode. Expected sea level rise will flood the salterns and the nearby farmland causing disastrous implications in the economy of the region.

Steps to face the ecological disaster

The Management Unit of Messolonghi National Park is an environmental agency that focuses on informing and raising awareness among the population,



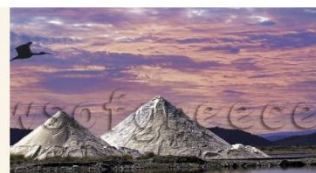
and on struggling for the rescue of the saltworks in the National Park of Messolonghi wetland.



on promoting ecotourism and co-operation with the local community,

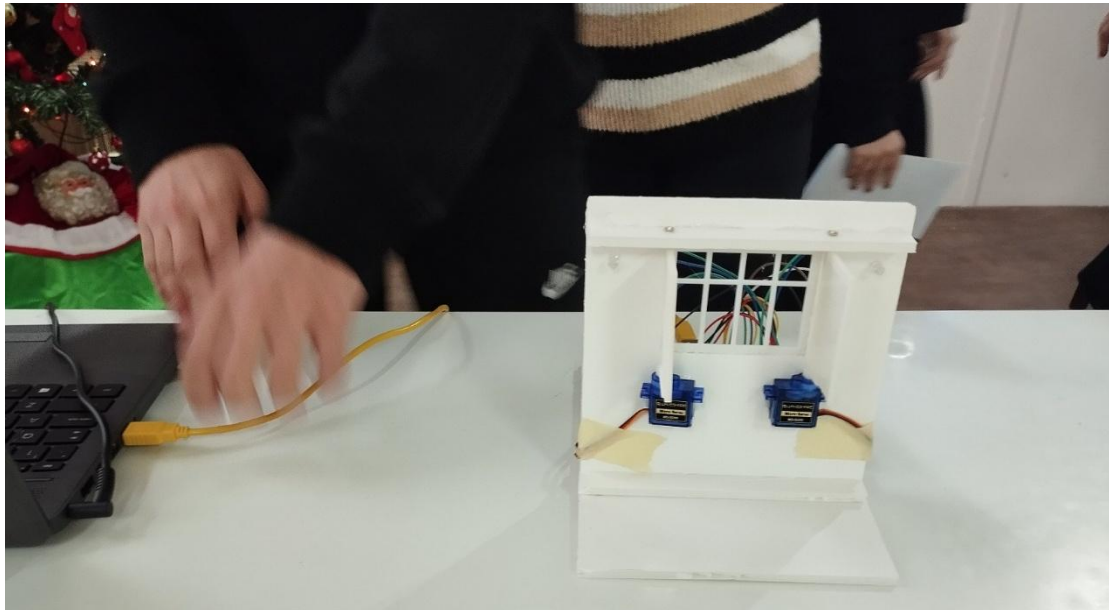


on supervising the area of the National Park



3rd WP "Design development to prevent climate change"

Arduino project



Code in Arduino environment

```
#include <Servo.h>

Servo windowServo;

// Pins
const int SERVO_PIN = 9;
const int BUTTON_PIN = 2;

// Angles (tune these for your mechanical setup)
const int CLOSED_ANGLE = 0; // window closed position
const int OPEN_ANGLE = 90; // window fully open position

bool isOpen = false; // current window state
bool lastButtonState = HIGH; // because of INPUT_PULLUP

void moveWindowTo(int targetAngle) {
```



```
int currentAngle = isOpen ? OPEN_ANGLE : CLOSED_ANGLE;

if (targetAngle > currentAngle) {
    for (int a = currentAngle; a <= targetAngle; a++) {
        windowServo.write(a);
        delay(20); // move slowly, adjust for speed
    }
} else {
    for (int a = currentAngle; a >= targetAngle; a--) {
        windowServo.write(a);
        delay(20);
    }
}

void setup() {
    windowServo.attach(SERVO_PIN);
    pinMode(BUTTON_PIN, INPUT_PULLUP);

    // Start with window closed
    windowServo.write(CLOSED_ANGLE);
    isOpen = false;
}

void loop() {
    bool buttonState = digitalRead(BUTTON_PIN);

    // Detect button press (transition from HIGH to LOW)
    if (lastButtonState == HIGH && buttonState == LOW) {
        // Toggle state
        if (isOpen) {
            // Close window
            moveWindowTo(CLOSED_ANGLE);
        }
    }
}
```



```
        isOpen = false;
    } else {
        // Open window
        moveWindowTo(OPEN_ANGLE);
        isOpen = true;
    }

    delay(200); // simple debounce
}

lastButtonState = buttonState;
}
```

4th WP “POfDigi Guide to Best Practices for 'educators' (IO)”

3D Design in ScetchUP





Ecoland presentation



An eco-friendlier building for our school “5th High School of Agrinio”



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Methodology

- 01**
Team
formation
- 02**
Project
update
- 03**
Software
training
- 04**
Photographs
with drone
- 05**
3D-modelling
of the school
- 06**
Presentation
of the work






Team

The students who are members of our Robotics team and participated in the previous phases of the project

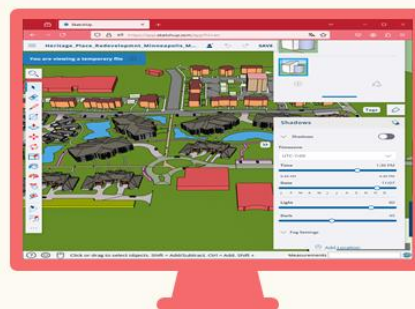


Project update

Aims of the project
Mobility Requirements



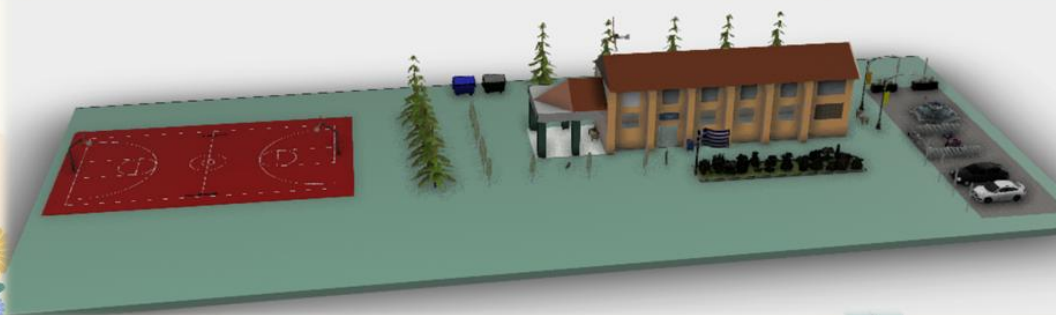
Software training



Photographs with drone



3D-modelling



Eco-friendly additions

- Solar panels
- Wind turbine
- Compost and recycling bins
- Vegetable garden
- Several trees





Whoa!

Click me - Our project!!!



Thank you

5th High School of Agrinio



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