

URBAN TRANSPORT AND SUSTAINABLE MOBILITY PROGRAMME

**WORKSHOP and OUTING:
“Mobility and Air Quality +
Research Outing”. Life+Respira
Project”**

Secondary Education

Description of the Activity



CLASSROOM WORKSHOP

“Mobility and Air Quality + Research Outing”. Life+Respira Project”

TARGET STUDENTS:	ESO (Secondary education, first stage) and Adapted Curricula
DURATION:	2 sessions
REQUIREMENTS:	<ul style="list-style-type: none"> ▪ One group/class per workshop. ▪ Up to 2 consecutive workshops, with 15’ break in between. ▪ One teacher per group/class. ▪ Classroom with digital whiteboard and internet connection. ▪ Preparatory classroom work recommended.

CURRICULUM APPROACH

Objectives	<ul style="list-style-type: none"> ▪ Arouse interest in scientific research and emphasise the importance of social and citizens’ commitment. ▪ Raise awareness about the importance of air quality. ▪ Promote sustainable, non-polluting mobility habits. 	
Content	CONCEPTS	<ul style="list-style-type: none"> ▪ Scientific method and technological innovation. ▪ Atmospheric pollution and climate change. ▪ Health impact and prevention. ▪ Transport and air quality. ▪ Healthy and sustainable mobility. ▪ Volunteer work and social action.
	PROCEDURES	<ul style="list-style-type: none"> ▪ Use of ICT. Viewing and interpreting pollution graphs and thematic maps. ▪ Trip around the school’s surroundings carrying portable air pollution analysers for data collection and interpretation of the urban space. ▪ Group dynamics to reflect upon and develop proposals for improving the school’s environment.
	ATTITUDES AND VALUES	<ul style="list-style-type: none"> ▪ Active and collaborative attitude, with a willingness to contribute solutions individually and as part of a team. ▪ Analytical and committed attitude so as to understand the impact of our mobility habits. ▪ Recognition of the value of volunteer work.

RESOURCES:

- Mobile air pollution analysers.
- PowerPoint presentation (knowledge pill, map of the Pamplona Region, links to videos, link to Google Maps and air quality measurements.)
- Video footage of typical and representative cycling routes + associated pollutant level graphs.
- Worksheet for completing during the outing.

COMMENTS:

For the successful performance and outcome of the workshop, it is important that the students should be motivated and attentive to ensure their active participation in the new learning activities.

For the outing around school's immediate surroundings, different groups will be formed and assigned different roles in assessing the factors affecting air quality.

The group/class will be accompanied by a responsible teacher throughout the route (the start of the outing can be made to coincide with the beginning of a new class period).

ACTIVITIES
Introduction to the Life Respira Project, climate change and air quality in the Pamplona Region.
Practice in performing measurements with the air pollution analysers in the school's surroundings.
Reviewing the measurement data collected with the mobile air pollution analysers in the school's surroundings and final summing up.
Compiling on Google Maps the observations made during the outing.
Watching a video of the route travelled by one of the Project's volunteer cyclists and interpreting the associated pollution graphs and maps.
Final summing up.

DESCRIPTION OF THE ACTIVITY



he presentation of the Project, the equipment, the technical means and the methodology used in the LIFE_RESPIRA Project will stimulate the students' interest in understanding the impact of transport on urban air quality and the resulting health consequences, and will help encourage them to take on the

role of researchers and environmentally responsible citizens.

The workshop includes an outing during which the students will get first-hand experience of how the data are collected, by carrying the air pollution analyser devices on a route around the school's surroundings. In addition, they will gather information on the route in order to interpret the measurement results, taking into account the existing influencing factors (traffic intensity, trees, street shape, weather conditions, etc.). The pollutant level variation data are obtained back in the classroom, where the entire set of resulting information will be interpreted. Through this activity, the students contribute to the research and reinforce their role as active citizens.

The LIFE+RESPIRA research on urban air quality is carried out by means of an innovative monitoring system using mobile analysers carried by volunteer urban cyclists. Video footage of a typical route within the Pamplona Region will be shown, recorded with a sports camera fitted on the cyclist's helmet, while at the same time displaying on a dynamic graph how the level of one of the pollutants measured by the device changes as the volunteer urban cyclist carrying it advances along the route. Pollution distribution maps resulting from the readings taken are also displayed in order to establish a relationship between traffic intensity in the streets of the Pamplona Region (and other influencing factors) and the pollution levels measured.

There will be a final summing up on the impacts of air pollution on citizens' quality of life and health and on climate change.



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