



The Fyris River Walk

A concept for promoting awareness and action for biodiversity in Swedish schools

SUMMARY

Ecological literacy is of key importance to understand ecosystem complexity and the required transformative actions needed to protect and restore biodiversity. We argue for a broad advancement of **nature-based learning** throughout the entire school system. Following the concept of **The Fyris River Walk**, high school students can develop ecological literacy and fascination for biodiversity, as well as the agency needed to preserve biodiversity.

INTRODUCTION

Ecological literacy is fast declining in our modern society yet is of paramount importance for awareness and the solutions needed to address the current biodiversity crisis. This decline is also evident among school children. However, the Swedish school system is a great arena through which ecological literacy can be promoted. Through nature-based learning, practical activities give students first-hand experience of biodiversity. Such activities should be developed in close adherence to the *aims, goals and central contents* of the **school curriculum** and follow key aspects of **education for sustainable development**.¹ Moreover, outdoor education “generates a number of positive effects on students’ learning, health, physique, as well as their personal and social development”.²

In Uppsala, we have developed an outdoor education day in which high school students experience biodiversity through practical activities. This “Fyris River Walk” may serve as a concept for promoting awareness and action for biodiversity in Swedish schools.

THE FYRIS RIVER WALK

The Fyris River Walk [Fyrisåvandringen] is a collaborative project with several practical stations highlighting different aspects of

sustainable development and the 17 global goals. It is an annual event open to all high schools in Uppsala. The walk is 5 km long, contains several practical stations, and takes 5,5 h to complete (Fig. 1).

To meet school requirements, the entire content has been developed in close collaboration with teachers and principals. Comprehensive handouts for teachers and students provide guidance and suggestions for in-depth work following the activities.³



Fig 1. The Fyris River Walk (blue line) with its nine stations. At station ⑤ students analyze the chemical and biological (eDNA) properties of the water. At station ⑧ students investigate the biodiversity of the river water and discuss the importance of the surrounding wetland ecosystem.

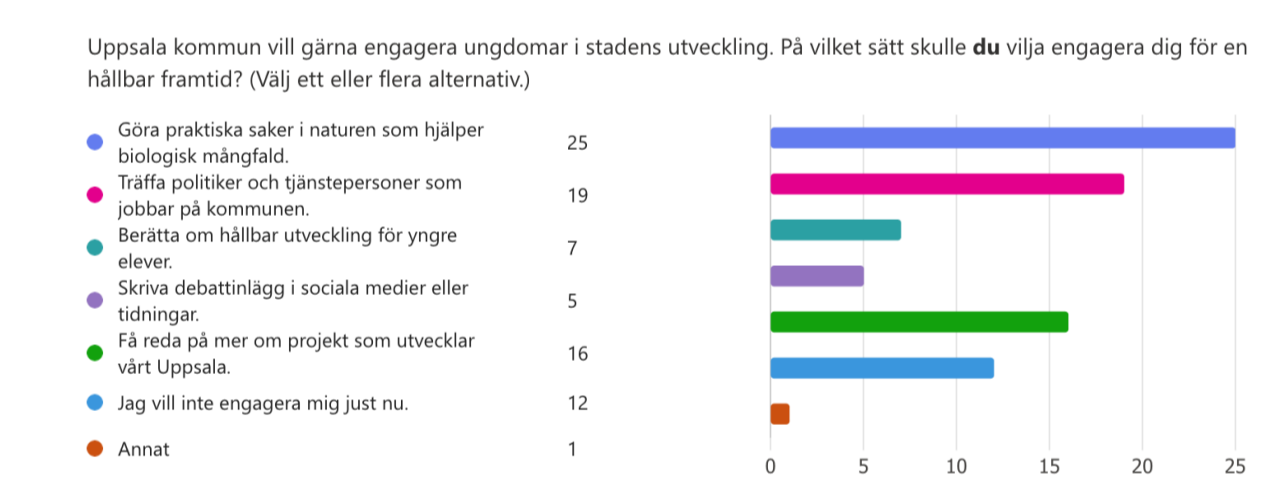
All stations have connections to ecological sustainability, with two practical activities focusing on biodiversity and ecosystem function. At station ⑤ (Bouleråker), students conduct citizen science, taking water samples that are analyzed in university facilities for chemical and biological (eDNA) contents. At station ⑧ (Övre Föret), in the wetlands of the Årike Fyris nature reserve, students investigate the biodiversity of the water. They also experience the biodiversity from a landscape perspective (including migratory birds), discuss the ecosystem services of the wetlands and debate solutions to the various effects that human activities have on biodiversity.



The global goals for sustainable development, of which goals 6, 13, 14 and 15 are integral to biosphere sustainability. Yet all goals are connected. Thus, quality education (goal 4) of school children is needed for biosphere sustainability.

RESULTS

From the start in 2022 to the current 2025-2006 school year, participation has increased annually from 150 to 700 students. The overall response from teachers and students has been very positive. According to questionnaire responses (n = 57), students value “**education outdoors** to learn new things” at 4.12 (scale: from 1 [low] to 5 [high]). When given options of possible involvement in local sustainability initiatives, students rank *practical tasks helping biodiversity* highest, followed by *meeting politicians and city officials*.



Student participation in the environmental analysis conducted at Bouleråker has yielded important data on chemical and biological fluctuations in the Fyris River and raised student awareness of environmental monitoring and its role in sustainability.

CONCLUSION

Education for sustainable development through **nature-based learning** can help increase the **ecological literacy** among school children. Following the overall positive response to the Fyris River Walk, Uppsala city officials have now contacted us to develop means of engaging high school students in city development. We are now planning for activities that engage high school students in practical actions for biodiversity.

REFERENCES

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- Faskunger *et al.*, 2018. Teaching with the Sky as a Ceiling.
- Teacher’s and Student’s guides to the Fyris River Walk are available at www.upplandsstiftelsen.se/fyrisavandringen.



Johan Lindell, PhD
Outdoor educator
johan.lindell@upplandsstiftelsen.se
www.upplandsstiftelsen.se



Maria Brandt
Nature interpreter
maria.brandt2@uppsala.se
www.biotopia.nu



Karl Lundén, PhD
Researcher, eDNA coordinator
karl.lunden@slu.se
www.slu.se

The **Fyris River Walk** [Fyrisåvandringen] is a collaborative project between Upplandsstiftelsen, KUPP, Biotopia, Upplandsmuseet, Uppsala Vatten and SLU. The concept was initiated through a LONA grant to Upplandsstiftelsen and Uppsala kommun to promote outdoor teaching at the high school level.

