Empowering Spatial Literacy and Sustainability through Informal STEAM Education and Hands-On Learning

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SUMMARY

Cartography and geospatial sciences have evolved significantly from ancient maps to today's advanced digital tools, playing a vital role in addressing environmental challenges aligned with the Sustainable Development Goals (SDGs). This presentation draws on over 24 years of experience in informal science education, emphasizing the power of STEAM approaches and hands-on learning to make complex scientific concepts accessible and engaging.

Through projects like the Saharan Dinosaurs exhibition and the Monastir Science Festival, implemented at Tunisian institutions such as the Monastir Science Palace and Tunis Science City, we have demonstrated how informal education and science communication effectively disseminate scienctific information to diverse audiences, including students, citizens, and decision-makers.

By leveraging interactive exhibits, workshops, and storytelling, these initiatives promote spatial literacy, foster environmental awareness, and empower communities to actively participate in sustainable development. Building on this foundation, a new mobile interactive exhibition focused on spatial information for students is currently under development, aiming to strengthen geospatial skills through immersive, practical experiences.

This contribution highlights the essential role of informal STEAM education and experiential learning in bridging the gap between geospatial technology and society, fostering an informed citizenry capable of contributing meaningfully to sustainable futures.