

AZORES

Understanding How Students Learn – A Neuroscience-Based Approach Through Outdoor & Experiential Learning

Course Duration: one week, from Monday to Saturday, 30 hours

Location: Azores | Portugal

Number of Participants: Min. 6 – Max. 20



**Pedagogical
Innovation
Centre**

COURSE DESCRIPTION

This experiential course blends the latest neuroscience research with outdoor learning and field-based activities in the unique natural environment of the Azores. Through a balance of theory and practice, participants will explore how the brain learns best, how emotions and environment shape memory and attention, and how to design lessons that are both engaging and brain-friendly.

The course emphasizes active learning, field observation, and collaborative problem-solving, providing educators with concrete tools for integrating neuroscience-informed strategies into their teaching practice.

LEARNING OUTCOMES

Participants to the course will learn to:

- Understand the key principles of neuroscience relevant to teaching and learning.
- Recognize the influence of emotions, environment, and movement on cognitive processes.
- Apply brain-friendly strategies for attention, memory, and motivation.
- Integrate outdoor learning experiences to enhance retention and engagement.
- Promote inclusive and adaptive teaching practices.

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Day 1

Day 1 – Introduction to the Brain & Learning (Active Citizenship approach)

- Welcome & course presentation
- Group dynamics and icebreakers to activate the social brain
- Participants' school presentations & sharing teaching challenges
- Introduction to basic brain anatomy and how learning happens
- Outdoor activity: walk around Ponta Delgada to identify environments that stimulate curiosity and observation
- Reflection: How can outdoor settings support attention and memory?

Day 2

Day 2 – Memory, Attention & Neuroplasticity (Environmental Sustainability approach)

- Morning session: neuroscience of memory formation and retrieval
- Guided tour to Caldeira das Furnas and visit to an interpretation center
- Pair activity: nature observation and linking sensory input to memory formation
- Reflection: How can we use nature to improve retention and learning?

Day 3

Day 3 – The Emotional Brain & Motivation (Wildlife and Conservation approach)

- Morning session: understanding the role of emotions in learning and the “social brain”
- Whale and dolphin watching: learning from observation and real-life experiences
- Group discussion: connecting wildlife encounters to emotional engagement in students
- Reflection: How to design lessons that trigger curiosity and empathy?

Day 4

Day 4 – Leadership & Collaborative Learning (School Leadership approach)

- Morning session: leading brain-friendly group activities and peer learning
- Program in Vila Franca do Campo with practical team challenges
- Organizing and leading an outdoor problem-solving activity
- Reflection: How can collaborative, real-world activities stimulate higher-order thinking skills?

Day 5

Day 5 – Cultural Learning & Cognitive Stimulation (Positive School Culture approach)

- Visit to Gorreana Tea Factory – sensory exploration and cultural learning
- Workshop: designing activities that combine curriculum content with cultural and sensory elements
- Reflection: How can cultural experiences enhance brain engagement and memory consolidation?

Day 6

Day 6 – Integration & Action Plan (Outdoor Education approach)

- Outdoor activity in Ponta Delgada city integrating STEAM, history, narrative, and civic competences
- Summary of key neuroscience-informed strategies explored during the week
- Group presentations of action plans for applying course concepts in their schools
- Final evaluation, feedback, and certificate ceremony