

FOSTERING ACADEMIC TENACITY: LEARNING OUTDOORS

For post-secondary students, a positive correlation has been found between time students spend in green spaces and their quality of life (McFarland et al., 2008). Further, educational research on learning in nature has revealed positive benefits: stress reduction, decreased anxiety, improved social connections, stronger connections to nature (Bell & Dymont, 2008; Kaplan, 1995; Kuo et al.; 2019; Rugel, 2015; Ulrich, 1979, 1981), enhanced learning outcomes and engagement in subsequent indoor classes (Kuo et al., 2018).



PLAN

Incorporating the natural environment into your teaching practice can be done in a variety of ways.

- How can you bring nature into your course?
- Are there certain activities within your course or a full lesson that might make sense to occur outside?

IMPLEMENT

Being in the natural environment lends itself to active learning.

- What kinds of active learning strategies can be both meaningful for your students and make sense within the context of your learning environment?



REFLECT

As you try this strategy, make time to reflect on your practice.

- How has the strategy been working for you?
- How has it been working for your students?
- What might you try next?



Scan here to view this toolkit online.



PLAN

As you consider how you would like to take learning outdoors, explore different ways you could engage with this strategy.

WHAT

You can take your class outdoors whether class content connects with nature or not.

Consider the following questions:

- Does your class content have explicit or innate connections to nature?
 - If yes, how can you draw these connections out to make sense within the context of your outdoor learning environment?
 - If no, how can you clearly communicate to students the benefits of learning in nature so they appreciate learning outdoors?

WHERE

If you are leading the activity, you can explore to following UBC resources:

- [Map of outdoor learning spaces](#)
- [Walking meeting map](#)

If you are interested in partnering with educators on campus, you can explore [UBC Farm](#), [Botanical Gardens](#), or [Nitobe Memorial Garden](#).

Space Considerations:

- Is the space accessible (i.e., mobility, vision, hearing)?
- Do you need permission to use the space?
- Do students need their cards for access?
- Are there class size limitations for this space?
- How far is the space from the regular classroom?

HOW

Consider how you would like your class to engage with nature:

- Small group discussions can occur while walking outdoor.
- Students can engage with learning activities outdoors.
- The whole class can be taught in nature.

Note that these options are ordered from lowest to highest level of planning.

Depending on on the extent of time in nature, the setting, the size of the group, and the learning activities, you may you might want to consider:

- A portable microphone.
- Laminated hand-outs and/or blank pages for note taking.
- White board markers.

IMPLEMENT

Implementing a new approach for the first time is an experiment. As you consider how you will develop course activities that involve taking the class outside, drawing on the prompts below may help you determine ways to bring nature into your teaching and learning environment.

	CLASS DESIGN
Before	<ul style="list-style-type: none"> • Set-up expectations for class in advance. • Assign pre-work when appropriate. • Create groups beforehand. • Be flexible with class time. <ul style="list-style-type: none"> ◦ Plan for additional activities ◦ Have a back-up plan for inclement weather • Provide clear learning objectives. • Plan for small group, student driven activities. • Conduct a site visit.
During	<ul style="list-style-type: none"> • Include a grounding activity to start class. • Be flexible with activities. • Include a land acknowledgement. • Clearly connect your content to nature or share with students the many benefits of learning in nature.
After	<ul style="list-style-type: none"> • Debrief the experience. • Ask for students' feedback.

Helpful reminders for students could include:

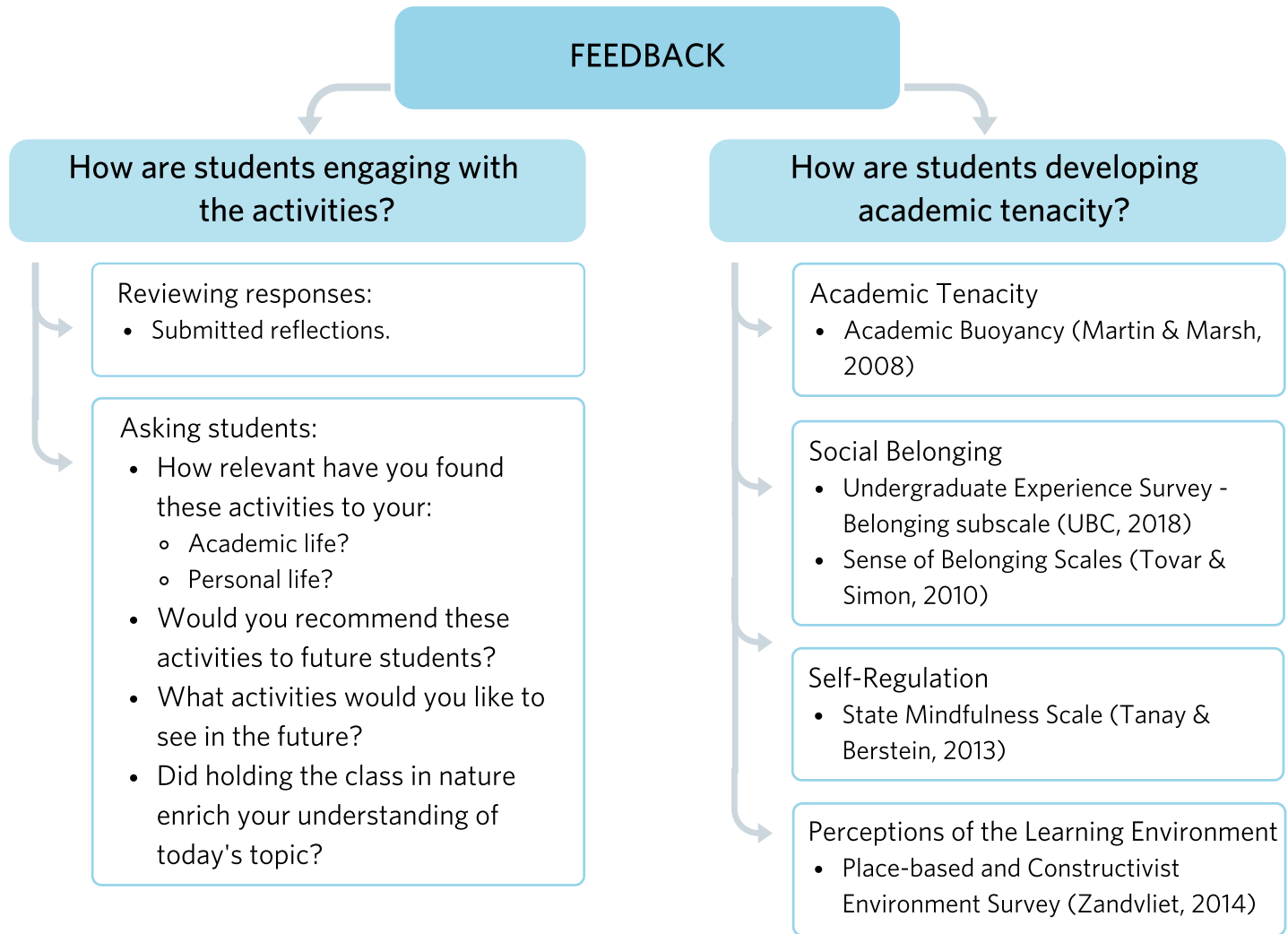
- Where and at what time the class is meeting.
- Check the weather and dress accordingly.
- The back-up plan.
- Whether they will have access to their electronic devices.

When changing the learning environments, it could be helpful for students to have a clear understanding of what they are expected to do, and why.

For example, you could ask students to pay attention to the sounds around them, to the sensation of air on their face or coolness under their feet. You could direct their attention to tastes or smells, or length of their inhaled and exhaled.

REFLECT

As you consider how this strategy is working for you and your students, consider gathering feedback to inform what you might try next.



REFERENCES

- Bell, A. C., & Dymont, J. E. (2008). Grounds for health: the intersection of green school grounds and health-promoting schools. *Environmental Education Research*, 14(1), 77-90.
- Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. *Journal of Environmental Psychology*, 15(3), 169-182.
- Kuo, M., Browning, M. H., & Penner, M. L. (2018). Do lessons in nature boost subsequent classroom engagement? Refueling students in flight. *Frontiers in Psychology*, 8, 2253.
- Kuo, M., Barnes, M., & Jordan, C. (2019). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *Frontiers in Psychology*, 10, 305.
- Martin, A. J., & Marsh, H. W. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. *Journal of School Psychology*, 46(1), 53-83.
- McFarland, A. L., Waliczek, T. M., & Zajicek, J. M. (2008). The relationship between student use of campus green spaces and perceptions of quality of life. *HortTechnology*, 18(2), 232-238.
- Rugel, E. (2015). Green space and mental health: Pathways, impacts, and gaps. national collaborating centre for environmental health.
- Tanay, G., & Bernstein, A. (2013). State mindfulness scale (SMS): Development and initial validation. *Psychological Assessment*, 25(4), 1286.
- Tovar, E., & Simon, M. A. (2010). Factorial structure and invariance analysis of the sense of belonging scales. *Measurement and Evaluation in Counseling and Development*, 43(3), 199-217.
- Ulrich, R. S. (1979). Visual landscapes and psychological well-being. *Landscape Research*, 4(1), 17-23.
- Ulrich, R. S. (1981). Natural versus urban scenes: Some psychophysiological effects. *Environment and Behavior*, 13(5), 523-556.
- The University of British Columbia. (2018). The undergraduate experience survey 2018.
- Zandvliet, D. B. (2014). PLACES and SPACES: Case studies in the evaluation of post-secondary, place-based learning environments. *Studies in Educational Evaluation*, 41, 18-28.