

Sheridan's Ecosystem Services

Ecosystem Services by Sam Cotter and Fraser McCallum is Sheridan's Temporary Contemporary greenhouse-like sculpture with plants designed to elicit plant movement. Several departments across Sheridan College have collaborated on the art project and the completion of the work involved students, faculty, and technologists. Employing archival material to reimagine its role in knowledge production; designers Sam Cotter and Fraser McCallum's interdisciplinary artwork are rooted in historical research and serve to deepen conversations on Canadian settler colonialism.

While the greenhouse symbolizes environmental management, the piece engages questions inherent to artificial ecosystems. How can we maintain ethical stewardship to plants in a mediated environment? How to respect the agency of plants, when cultivation is often conditioned on instrumentalizing them? It imperfectly responds by acknowledging that aspirations for environmental control are always incomplete.

This exhibit was primarily constructed by Sheridan students. *Ecosystem Services* consists of a metal armature evoking a greenhouse structure. This armature is installed onto a base, which contains plants, and an internal irrigation system. LED grow lights are installed at various points on the metal frame, in different colours to support the different light frequencies demanded by plant species. Climbing plants are installed at the base of the greenhouse frame supports, to grow gradually onto the frame.

The metal greenhouse armature was built with welded carbon steel tubing by our Welding students; Angel Pacheco, Axel Collins, Fahad Javed and Shwetalkumar Turakhiya. The students were under the advisement of faculty members Carly Myers and Paolo Gobbi. It will be secured to the plywood base, built by students and technicians at the Furniture Studio with lighting and electrical routed inside the armature installed by faculty member Justin Marteleira. Basic coding produced by Interaction Design students is used to switch the grow lights on and off at slow intervals, this creates the conditions for phototropism; plants' locomotive capacities to turn or lean toward sources of light. As daylight moves over the piece seasonally, and grow lights turn on and off at intervals, plants are compelled to follow the changing lights. On November 22nd, the completion of the fabrication portion was revealed at Sheridan's Skilled Trades Centre.

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