



Climb On!

An Occupational Therapy Curriculum to Facilitate Rock Climbing Participation for Neurodiverse Youth

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BACKGROUND

Why Rock Climbing?

Full-body sensory motor activities such as climbing have been shown to support children's participation in daily life activities by enhancing executive functioning, mindfulness, self-efficacy, strength, proprioceptive development, and bilateral integration skills.

Gap in Accessible Programing

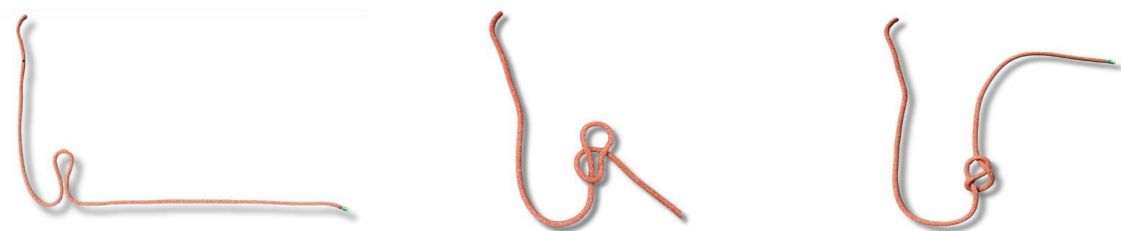
Despite documented positive outcomes, there remains limited access to these activities for neurodiverse (ND) populations, largely due to existing programs lacking sensory-informed design, graded entry points, and individualized supports needed for ND children to succeed.

Impact

This restricted access is associated with increased anxiety, social isolation, and diminished self-esteem.

Role of Occupational Therapy (OT)

OT is uniquely suited to holistically increase accessibility to better support meaningful participation in outdoor leisure occupations.



GOAL, OBJECTIVES & ACTIVITIES

Goal

Develop a rock climbing curriculum at P&B that includes sensory-informed environmental design and graded exposure strategies to address participation barriers.

Purpose

Increase ND youth's access to climbing participation to support autonomy, decision making, confidence, and body awareness.

Objectives & Activities

1. Complete program curriculum materials for rock climbing program.
2. Complete environmental modifications to program location.
3. Utilize environmental modifications to trial run the curriculum to assess feasibility.
4. Incorporate feedback from stakeholders to finalize all program curriculum materials.

CONCEPTUAL MODEL

Climb On! is developed using the **Ecology of Human Performance (EHP) Model**, which recognizes optimized participation and performance outcomes through aligned environment, person, and task-related factors (Dunn et al., 1994).

PROGRAM DESCRIPTION



Capstone Partner Site: Peaks & Bounds Inc. (P&B)

A nature-based Occupational Therapy (OT) practice in Fort Collins, CO.
Mission: to support individuals in accessing and participating in meaningful outdoor activities by empowering disability, neurotype and/or identity.

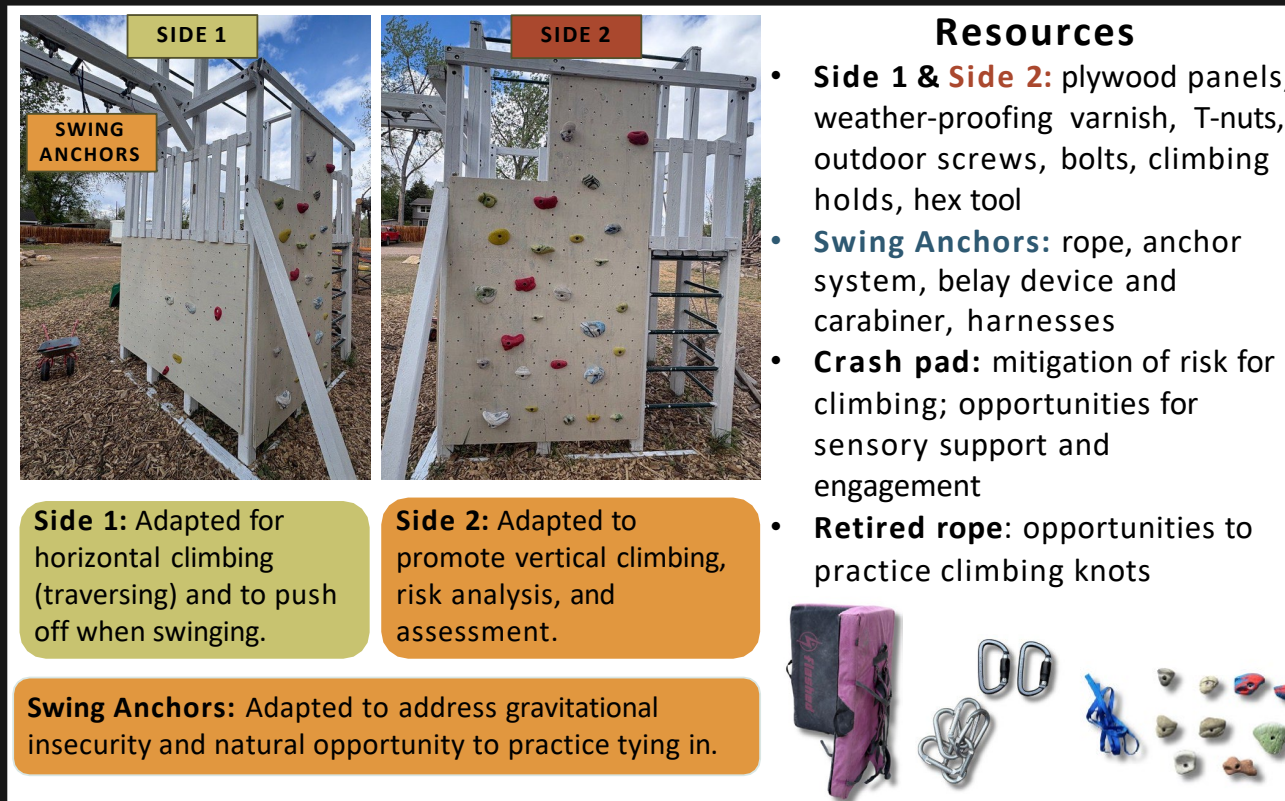
Program Location: Seedlings Kindertribe

Environment Modification Process:

Before / Existing Site Resources



After



Resources

- **Side 1 & Side 2:** plywood panels, weather-proofing varnish, T-nuts, outdoor screws, bolts, climbing holds, hex tool
- **Swing Anchors:** rope, anchor system, belay device and carabiner, harnesses
- **Crash pad:** mitigation of risk for climbing; opportunities for sensory support and engagement
- **Retired rope:** opportunities to practice climbing knots

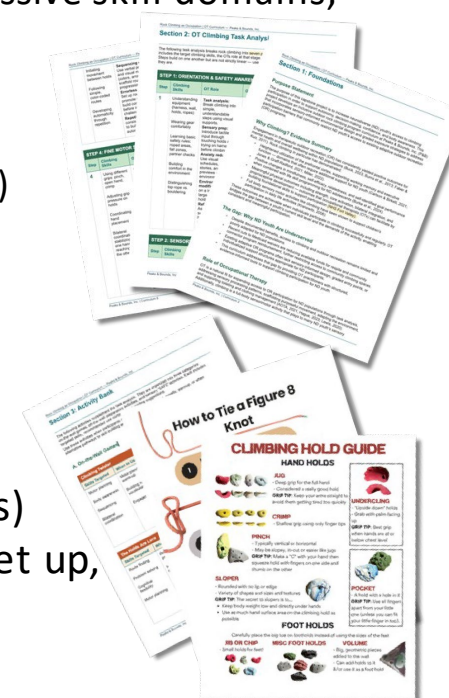
Curriculum Overview

Climb On! is an evidence-based rock climbing curriculum that breaks foundational climbing skills into seven progressive skill domains, listed below:

1. Orientation & Safety Awareness
2. Sensory Regulation & Body Awareness
3. Basic Movement Patterns (Motor Planning)
4. Fine Motor Skills & Grip Development
5. Strength, Endurance, & Postural Control
6. Problem Solving & Route Planning
7. Emotional Regulation & Independence

Supplemental curriculum material

- Activity bank (climbing games, warmups)
- Implementation guide (environmental set up, staffing guidance)



FINDINGS

Outcome Evaluation Methods

Feasibility Testing

Deliverables were tested by P&B and Seedlings clients throughout the building process. Clients were able to build on fine and gross motor, problem-solving, and communication skills as they tested the materials and gave feedback for final modifications.



Stakeholder Feedback

Stakeholder feedback was implemented throughout the project development process. Additional resources such as a crash pad for added safety, extra climbing holds, webbing, locking and nonlocking carabiners, a belay device, and an anchor system were added secondary to feedback sessions with site mentors.

DISCUSSION

Final Curriculum Structure

Structured as a task analysis, each curriculum step serves as a guide to include targeted climbing skills, OT role at that stage, grading strategies, and activity ideas. Although steps may be implemented sequentially, this guide is not strictly linear!

OT Impact

OT is uniquely qualified to promote independence, positive self-concept, social connection, and resilience through the expansion of accessible rock climbing opportunities. The Climb On! curriculum outlines foundational climbing skills development through an OT lens and is intended to be modified based on individualized participant needs, clinical reasoning, and available resources.

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REFERENCES

