

The Physics of Living

For thousands of years First Peoples of Canada developed many sophisticated technologies to sustain and enhance their lives. Here are some of the technologies that you can investigate.

Transportation Technologies

Canoes

- Consider various styles of canoe. Investigate advantages and disadvantages of each canoe design in light of the intended material and cultural purposes. For example, consider buoyancy and maneuverability (torques) needs in different conditions, such as location (e.g. ocean vs river vs lake) or use (e.g. transportation vs fishing vs food harvesting)

Paddles

- Analyze as a lever
- What are the advantages and purposes of different shapes of paddle?
- Investigate paddles in relation to force, work, energy, power

Poling (rather than paddling) canoes

- Analyze in terms of torques

Technologies for Food Sustainability

- These include technologies for hunting, fishing, and agriculture. They can be analyzed as simple machines such as wedges, and levers. Also analyze the forces of torque.
- Digging stick
- Fish hooks
- Fishing and hunting spears
- Fish club
- Bow and arrow

Technologies for the Household and Community

Analyze these tools and techniques as simple machines:

- Tools for woodworking
 - Hammer: hand and hafted maul – analyze as levers (mechanical advantage)
 - Wedge
 - Adzes and chisels
- Techniques for felling trees
- Techniques for splitting planks
- Technique for starting fires: Fire drill (torque and energy transformations)
- Spindle whorl for spinning fibres