



Engineering & Technology Frameworks Align to Snowmaking

Topics for Research and Discussion

Technological Systems

5.3-5-ETS3-1(MA)

Use informational text to provide examples of improvements to existing technologies (innovations) and the development of new technologies (inventions). Recognize that technology is any modification of the natural or designed world done to fulfill human needs or wants.

- **[Historical text and images of how skiing on the mountain began and evolved](#)**
- **[Advancements in snow gun technology - videos and articles](#)**
- **[RFID technology has dramatically improved communication & efficiency for skiers](#)**
- **[Ski and snowboard design improvements- video and articles](#)**

Related Topics and Research

Ski Lift Technology - [Doppelmayr USA](#)

Grooming Machines Advancements

Ski and Snowboard Designs

Snow Gun Technology - [HKD company in Natick, MA](#)

Snowmaking Pumps - Powerful water and air pump designs increase efficiency



HS Engineering Technology

ETS1. Engineering Design

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and tradeoffs that account for a range of constraints, including cost, safety, reliability, aesthetics, and maintenance, as well as social, cultural, and environmental impacts.

Example at Wachusett: Decision to create a snowmaking pond by drawing water from Wachusett Lake. *Some constraints and impact*

- Back up water supply for Fitchburg
- Piping infrastructure for pumping water out of pond
- Complex computer system to monitor level of water during pumping
- Piping infrastructure to return snow melt water to pond