



# Snowflake Counter

Occupational Career Profile

Environmental Science · Atmospheric & Cryospheric Studies · NOC 2114

## ROLE OVERVIEW

The Snowflake Counter is a highly specialized environmental professional responsible for the precise enumeration, classification, and documentation of individual precipitation crystals in field and laboratory settings. Operating at the intersection of atmospheric science, data collection, and extreme patience, this role supports cryospheric research, climate monitoring, and the ongoing scientific confirmation that no two snowflakes are alike — a fact that has yet to be disproven, despite one very close call in Winnipeg in 2019.

## KEY RESPONSIBILITIES

**Field enumeration.** Conduct real-time, manual counting of individual snow crystals during active precipitation events, regardless of intensity, visibility, or personal comfort.

**Crystal classification.** Identify and record snowflake type using the Nakaya-Ukichiro classification system (41 types), distinguishing between stellar dendrites, hollow columns, bullet rosettes, and the always-controversial irregular forms.

**Data integrity.** Maintain accurate tallies across multi-hour observation windows. No rounding. No estimating. No "close enough."

**Duplication detection.** Visually inspect each crystal for morphological uniqueness using calibrated magnification equipment. Flag any suspected duplicates for peer review and existential reflection.

**Environmental monitoring.** Record ambient temperature, humidity, wind speed, and precipitation rate at 15-minute intervals to contextualize counting conditions.

**Reporting.** Compile daily and seasonal count reports in accordance with federal atmospheric data standards. Submit findings to the National Snowflake Registry (NSR).

**Equipment maintenance.** Clean, calibrate, and store optical instruments, cold-stage microscopes, and mitten inventory after each field session.

## TECHNICAL SKILLS

Crystal morphology identification	Cold-stage microscopy	Nakaya classification system	Precipitation data recording
Meteorological instrumentation	Field data management	Scientific report writing	Optical equipment calibration

## ESSENTIAL SOFT SKILLS

**Extreme patience.** Capable of maintaining focused attention through multi-hour counting sessions without losing place. Must not be distracted by cold, wind, existential dread, or colleagues asking "are you still counting?"

**Attention to detail.** Able to distinguish between a Fernlike Stellar Dendrite and a Stellar Dendrite with Spatial Plates at 40x magnification, in a headlamp, at -25°C.

**Resilience.** Demonstrates composure when a gust of wind destroys three hours of work. Starts again without complaint. Does not cry. (Light weeping is permitted during blizzards only.)

**Integrity.** Committed to accurate counts even when no one is watching and "274,000" and "274,001" feel functionally equivalent. They are not.

**Collaboration.** Works effectively with meteorologists, climate scientists, and the one skeptical colleague who insists two of them looked "basically the same."

**Adaptability.** Adjusts counting methodology to account for varying precipitation rates, from gentle flurry (manageable) to full whiteout (character-building).

## WORKING CONDITIONS

<b>Environment</b>	Primarily outdoor, in active snowfall. Occasionally a cold-room laboratory when funding allows.
<b>Temperature range</b>	-40°C to +1°C. Above +1°C, the job becomes significantly harder and shorter.
<b>Physical demands</b>	Extended standing, fine motor precision, sustained visual focus, repeated mitten removal and replacement.
<b>Schedule</b>	Irregular hours dictated entirely by weather. Weekends, holidays, and 3 a.m. snowfalls are not excused absences — they are prime counting opportunities.
<b>Travel</b>	Seasonal relocation to high-precipitation zones may be required. Tropical postings are not available in this field.

## EDUCATION & CERTIFICATION

**Required:** Diploma or degree in Atmospheric Science, Environmental Science, Geography, or a related field. A minor in Counting is not offered anywhere but would be considered an asset.

**Preferred:** Graduate-level coursework in cryospheric science, glaciology, or precipitation physics. Thesis topics involving large numbers are viewed favourably.

**Certifications:** Standard First Aid (mandatory — frostbite happens). Workplace Hazardous Materials Information System (WHMIS). Cold Weather Field Safety. Optical Microscopy Fundamentals.

**Asset:** Certification from the International Snowflake Classification Board (ISCB). Attendance at the Annual Cryosphere Counting Symposium. Any documented experience surviving a full Canadian winter outdoors by choice.

## RELATED REAL-WORLD OCCUPATIONS

This role draws on skills from several legitimate environmental career paths. Professionals in the following fields share transferable competencies:

Atmospheric Scientist / Meteorologist	Cryosphere Researcher	Environmental Field Technician
Climate Data Analyst	Glaciologist	Hydrology Technician

\* Created for April Fools' Day · Actual environmental careers are just as fascinating · Explore them at [eco.ca](http://eco.ca) \*