Krista Katalenich’s dance instructions seem a bit esoteric at first. “Now imagine you’re a glacier melting,” she tells the middle-schoolers spread out in a cavernous Fairbanks, Alaska gym. “Imagine you’re a chunk of ice floating in the ocean … now you’re going to be a stream,” she continues, and the students slink low to the floor and crouch, then slither over the wood. “Now come together as another forming glacier.” The 7th, 8th and 9th graders right themselves and await further instructions.

The group of students at Fairbanks’ Effie Kokrine Middle School, a charter school aimed at Alaska Natives, is part of a novel experiment: a semester-long class which fuses climate change study with creative expression through dance and writing. The class, funded through a $20,000 Alaska EPSCoR Alaska Native Engagement Mini-Grant, is the brainchild of Katalenich, who is using it as her thesis project for her Master’s in Northern Studies at the University of Alaska Fairbanks.

“I was originally interested in doing a project involving Alaska Native dance, which often deals with the environment,” Katalenich said. “The project evolved as a way for Alaska Native students to further their exploration of environmental themes through movement.”

The class, called ‘Climate Change and Creative Expression,’ met during the spring 2009 semester and drew 17 boys and girls. The science education portion of the course was provided largely through an impressive succession of guest speakers and field trips. One week Kenji Yoshikawa of the International Arctic Research Center spoke about permafrost; another class saw Dave Runfola of the UAF School of Fisheries drop goldfish into dishes of warm and cool water, graphically demonstrating how higher temperatures can increase their stress. The students learned about how musk oxen cope with higher temperatures at the UAF Large Animal Research Station and heard stories of climate change firsthand from Native elder Wally Carlo.

“They’ve been exposed to real scientific research from real scientific researchers, which I think is inherently more engaging typically than a middle school science class where you’re reading from a textbook,” noted UAF Assistant Professor of Microbiology Mary Beth Leigh, principal investigator for the mini-grant.

The science classes were gradually supplanted by lessons in dance form and movement, which mostly refer back to scientific concepts learned earlier in the semester. Katalenich said the dancing seems to help students to absorb the science lessons by referring to them in a different context. “I think it helps with the movement to have images from nature,” she said. “It’s kind of reviewing in a new way.”

As the semester unfolded, students were encouraged to record their thoughts and impressions in writing, and the class concluded with a student-run public performance featuring both dance and spoken-word elements. “We’re really trying to emphasize that the creative output comes from the kids themselves,” noted Leigh.