EDGE Teachers Workshop: June 2006

Daily Journal by Tom McKee

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Chris, from Mat-Su, prepares to introduce Debbie (below), from Yakutat.

We began the institute today with partner introductions and proceeded quickly into the first lectures, which involved key definitions--and plenty of student-instructor exchange. From there, it was a conceptual overview of GPS, then a GPS-guided treasure hunt, followed by use of ARC-GIS software to make a map of the trek. A photo gallery of today's images is available via



<u>Day 1:</u>

Day 2:

After a morning of studying data analysis, data formats and the geophysical foundations of our planet, we set off to mark and observe points along the boundaries of the Mendenhall Watershed. We finished the day at the watershed's confluence with Fritz Cove, a mixing zone of many kinds!

A photo gallery of today's images is available via <u>this link</u>. (http://pec.jun.alaska.edu:16080/edge/day2gall/day2gall.html)



Day 3:

After Anupma's lecture on remote sensing, the group put noses to raster-stones and created hyperlinked photos on their watershed images, then set to work on creating buffers. GIS Resource bookmarks and system diagrams ahead for the evening.

A photo gallery of today's images is available via <u>this</u> <u>link</u>.

(http://pec.jun.alaska.edu:16080/edge/day3gall/day3gall.html)

Kind thanks to Ben, Nathan and Rosemary for tellling us (via the video camera) what your hopes are for your learning and for your students with this institute.





After Professor Sonia Nagorski's introduction to hydrology and primer on calculating streamflows, we set out for Montana Creek where stream teams calculated stream flow velocity across transects of lower Montana Creek, just above the confluence with the Mendenhall River. A photo gallery of today's images is available via <u>this link</u>. (<u>http://pec.jun.alaska.edu:16080/edge/day4gall/day4gall.html</u>)

Day 4:







Cathy takes a waypoint before we set off to become fluvial matter.

"ARC GIS is like life, huh? Everything is difficult." -Anupma, setting the stage for discussing map projections and how to control them in ARC Map.

After a primer on projections (including Anupma's idea of using an orange peel with students to demonstrate the challenges of representing a sphere on a flat surface), and some spreadsheet creek-flow calculations led by Sonia, we set off to float the Mendenhall River. A photogallery of the day's adventure may be accessed here.

(http://pec.jun.alaska.edu/edge/day5gall/day5gall.html)

Day 6:

Day 6 was an informal work session, although, as you can see below, things got a bit squirrelly, especially for those of us wearing sandals in the Juneau heat! Anupma quantified the mapping "musts" for the group, reviewed ARC Map techniques, and toured some fantastic educator sites. At the end of the morning, Anupma's husband, Rudy gave a presentation on his work with radar imagery. A small gallery of the day's images is available <u>here</u>. (http://pec.jun.alaska.edu/edge/day6/day6.html)

photo: Anupma's list of essentials? (arcmap_essentials.jpg) (http://pec.jun.alaska.edu:16080/edge/day6/arcmap_essentials.jpg)

<u>Day 8:</u> Photo here: EDGE participants on the Mendenhall (http://pec.jun.alaska.edu/edge/day8/westwall.jpg)

At the beginning of week 2, we completed one leg of our journey: exploring the Mendenhall watershed from tidewater, up-valley, to the glacier and its source. Our helicopter flightpath up the Lemon Glacier, in view of the Juneau icefield was an auspicious start to a fascinating day on Mendenhall Glacier. Teachers peppered the Northstar trekking guides with questions about glacial budgets, moulins, tarns, organic sediment presence, etc., etc. UAS professor Eran Hood gave an overview of his work in glacial research, including the use of magnetic tracking devices in the glacial ice, adn the effects of glacial melt on surronding marine ecosystems. A gallery of still images is <u>here</u>.

(http://pec.jun.alaska.edu/edge/day8/day8.html)

<u>Days 9 and 10:</u> Photo: Cathy teaching coastal geology (http://pec.jun.alaska.edu/edge/Days_9-10/cathy_teaches.jpg)

The poet Ted Hughes' phrase, "back to the sea's big rethink" is good shorthand for how Cathy brilliantly told and re-told the geologic story since the cretacious period through found rocks and formations along the shoreline of Douglas Island. Wednesday, Day 9, featured Cathy's presentation of Roman Matoyka's presentation on glaciology in Southeast Alaska, then an afternoon workshop session using the text Mapping our World. Thursday, Day 10 began with a tour (de force) of the Outer Point trail. Cathy brought us from old growth forest (relatively unscathed in the past 20, 000 years) through two types of wetlands sitting atop glacial till, out to the coastal area where she explained and interpreted regional coastal processes through found rocks presented by participants. On Wendesday afternoon, the group donned headsets--and simulated some class management challenges via whiteboard graffiti--while Susie Feero visited us to teach Elluminate, the tool to be used for the distance class delivery. Rosemary reviewed some discussion board techniques with an eye for keeping the group connected during the school year, and Tom showed the <u>newsfeed features of the EDGE website</u>, asking for recommendations for new feeds to include. A photo galler from these two days is available here.

Photo: Pam and Rebecca driving Elluminate http://pec.jun.alaska.edu/edge/Days_9-10/pam_rebecca.jpg