**Bio-Blitz in the UBC Herbarium at the Beaty Biodiversity Museum**

**FACILITATOR LESSON PLAN**

**SESSION 2**

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| **COURSE:** Science One [SCIE 001] | **DATE:** September 26, 28, 29, 2017 |
| **BRIDGE:** Reminder of overall goals, previous visit, ask how Bamfield trip was.  |
| **OBJECTIVES (Students):*** Introduce undergraduates to how biological collections are organized. This will not only give them a strong introduction to biological nomenclature but also world geography.
* Get undergraduates thinking early in their careers about how collections can be used in their own projects and to aid their research.
* Get students thinking about why collection data can vary as much as organismal morphology. By inventorying a section of the collections, they will gain insight to the history and variation of collection data throughout time.
* Understanding how data comes about. You have to collect data to get data. You have to standardize data to make it powerful. Understanding how collecting errors come about.

**OBJECTIVES (Museum):*** Generate partial inventory of research collection.
* Demonstrate potential for research projects that collaborate with early and large-enrollment Biology Program courses.
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| **PREASSESSMENT:** Informal group Q at start: what did you learn about Western Red Cedar and kelp (can be *Nereocystis*) in Bamfield?  | **MATERIALS:** none |
| **PARTICIPATORY LEARNING** |
| TIME | ACTIVITY | RESOURCES |
| **10 mins** **15 mins****45 mins** (15 mins counting / area + 15 mins to set-up or move around)**20-25 mins** | **Arrival**– Takes ~10 mins to arrive from Library. Move whole group to Discovery Lab. Backpacks in cloakroom. Absolutely no liquids in lab. I**ntroduction** (Linda)– **PROJECT RATIONALE:** Why are we doing this Collection BioBlitz project: “Though this collection has been tracked for 100 years, it has been by many different methods, and we find ourselves 100 years later not knowing exactly what we have.”– Specific Qs to answer: Algae: Are there duplicate or missing accession numbers in algae? (we believe there are) Conifers: we don’t know what’s in conifers. ~15% is databased. – **HANDLING SPECIMENS:** Instruct on proper handling of specimens (including: no touching with pencils/ pens)– Instruct that accuracy is key, not a competition for speed. **Counting** **STATION SET-UP:**– Station 1 - Linda/Erin @ conifer cabinets; – Station 2 -Bridgette/Barbara/Pam @ DiscoLab)* split class: 12 students, 6 pairs w/ Conifers, 6 pairs w/ Saccharina. Groups will switch after 15 minutes to alternate station.
* Second group uses same counting sheets & laptop as first group

Station One - ConifersCount # sheets within each folder, record on Conifer Count Sheet. One student counts, other records. Switch roles halfway @ 7.5mins. * Erin &Linda - will help with questions about activity, make sure the collection is being properly handled, and help with step stool safety.
* IMPORTANT: use drop tags to mark location where first groups finished counting in Conifer cabinets.
* IMPORTANT: student names recorded on counting sheet.

Station Two - *Saccharina*Search and check off accession #s, record folder # on laptop in *Saccharina* spreadsheet. One student handles the specimen and the partner records the accession number on the spreadsheet. Switch roles @ 7.5mins.* BC,Barbara, &Pam - will help with student questions about activity, make sure collection is being handled properly and move folders to the students. Four tables will be provided to place folders that are done, and folders waiting to be inventoried.
* IMPORTANT: Make clear where first group stopped counting: open folder with next-to-be counted specimen on right side for Saccharina.
* IMPORTANT: Student names (4 total) added to spreadsheet. Save spreadsheet before switching & at end.

**Wrap-up / Reflection** (Bridgette)– whole group returns to Discovery Lab. – Brief poll: Questions? how was the experience of the inventory? – Individual reflection sheet.  | – nothing– Linda might bring a prop or twoConifers – Clipboard and pencil x 6– Conifer count sheet x 6 – Extra pencils– Step ladder(s) x 2– Drop tags *Saccharina*– Laptop loaded with spreadsheet, checked for updates, power, etc. x 6– Post-it notes for temporary tracking of counted Saccharina folders.– Table x 4 for folders– reflection sheet x 25– pencils/pens x 25 |
| **POST-ASSESSMENT:**– Individual reflection sheet.  |
| **SUMMARY/CLOSURE:** – Thank students for help with inventory. Mention that will BC will visit SCIE 001 class within a couple of weeks to review and summarize the data.  |