Categorizing Collections

1st Grade

Concepts
- Objects can be categorized differently depending on which attribute is used to sort them.

Objectives
- Students will understand that objects can be classified different depending on which attribute is being used to sort.
- Students will practice making observations and record data.
- Students will use data to categorize specimens in the Gem & Mineral Hall.

Outline
1. In the classroom before you visit, review categorizing object by attribute with your students. Then, go on a nature walk and collect items and group them back in the classroom, recording the results.
2. During a trip to the Museum, allow students to free explore the Gem & Mineral Hall, then use the included worksheet to collect data and practice categorizing.
3. Back in the classroom, have students share their findings with the class then review and reflect on the experience.

Duration
Pre-Visit: 20-30 min
Visit: 30 min
Post-Visit: 15-20 min

Location
Gem & Mineral Hall

Supplies
- Worksheet
- Pencil
- Clipboard (optional)

Standards
S+E Practices
3, 4
CCSS
L.6
CA State
Science 1.4.b
ELA K-2
Vocab and Concept Development 1.17
Writing Strategies 1.2
Listening & Speaking Strategies 1.5

Vocabulary
Categorize · Sort · Attribute · Specimen

Student Work

SECTION CLOSED
**Pre-Visit**

In the classroom, review how items can be categorized into specific groups according to similar attributes.

Then, go on a nature walk and collect different rock samples and have students categorize them into different groups, for example: size, color, texture, etc. If a nature walk is not feasible, have the students categorize different objects in the classroom; but make sure that they collect a variety of items.

Record the categories and share them with the class.

**Visit**

Allow students to walk around the Gem and Mineral Hall and free explore. Then, handout the worksheet and ask students record at least 5 gems and/or minerals that fall into similar categories according to their size, color or texture.

To avoid feeling overwhelmed, it may be helpful for the teachers and chaperones to guide the students to a specific area of the hall and let them choose from there, or split each category into teams of students and share information to complete the worksheet back in the classroom.

**Post-Visit**

Have students share their findings with the class and record findings on a large chart. Once all the data is up for everyone to see, point out similarities and differences in the categories and specimens, and discuss the different ways the minerals were categorized. Were there any specimens that fit into multiple categories? What would they do differently next time?

Next ask the students to decide if they are satisfied with the categories selected or if they would like to edit their categories. Allow them time to re-arrange their data if necessary.

**Variations & Extensions**

- In conjunction with the worksheet, have students take photos of the minerals so that they can be visually re-sorted together back at the classroom.

- Have the students come up with other ways besides size, shape and texture they could have used to sort the minerals and have them sort the photos or specimens into those categories.
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<th>shape</th>
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<tr>
<td>Find 5 specimens that are the same shape</td>
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<td>Find 5 specimens that are the same size</td>
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<td>Find 5 specimens that are the same texture</td>
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