Paint Chip Sorting


text

I. Overview
In the Paint Chip Sorting activity, students separate colored chips into different color categories. Each student in the group takes a turn, and students record how many colored chips they grouped in each category. After observing different individuals group the colors in different ways, students learn that individual differences may account for differences in color perception.

II. Learning Objectives
- Color perception is influenced by individual factors such as culture, gender, age, and experience.

III. Adaptations/Accommodations
The time allowed for the activity is intended to promote fast decisions without time for contemplation. However, if students need more time it can be extended as long as it looks like students are working at a pace that is as fast as they can go.

Safety
There are no additional safety concerns associated with this activity.

IV. Timeframe for activity
Paint Chip Sorting: 20 minutes

V. Advance prep and materials
Activity: Paint Chip Sorting

Materials:
- Student sheet (1 per student, p. 12 in the booklet)
- Stopwatch (1 per group)
- Paint chips (1 set per group)
- Laminated color categories sheet (1 per group)

Preparation:
- Create sets of paint chips in advance
• Set up materials at each station

VI. Resources and references

Facilitator resources
• Color Sorting Activity Online. http://neuron.illinois.edu/games/color-sorting-paint-chip-activity
• Project NEURON. http://neuron.illinois.edu/
• What do you see? Lesson 1. http://neuron.illinois.edu/lesson/lesson-1-what-do-you-see

VII. Activity Implementation

Activity: Paint Chip Sorting
In advance, prepare the paint chip sets by cutting small rectangular pieces from paint chip samples that can be obtained at most hardware stores. Each set should have approximately 50 paint chips of various colors.

Tell students that they will do an activity that will help them think about how humans perceive colors.

1. To start, ask students to pair up and brainstorm the names of as many colors they can think of. Call on groups to share their lists. Consider writing a group list on a dry-erase board, poster, etc.
2. Ask students how some of the colors can be grouped into categories (e.g. navy and azure can be grouped into a “blue” category). Come to a group consensus about 6-8 color categories that you will use for the activity. To save time, you may already decide categories such as green, red, blue, yellow, purple, orange, and brown.
3. Students should write the names of the color categories on a paper that will be used to sort the paint chips, or a paper can be provided if color categories are determined ahead of time. See below for an image of the laminated sheet that will be used in this activity.
4. Each student in the group will have 1.5 minutes to sort the paint chips into piles on the paper. One member of the group should time while another completes the activity. Students should do this as quickly as possible. Once a chip is placed down, students cannot change its category. When time is up, students should tally up totals for each category and record the numbers in the data tables in their booklets.

5. After each student has had an opportunity to take a turn and has recorded data, students should discuss and answer the questions on page 12 of the booklet. The questions are also listed below:
   - Did every group member get the same results?
   - What reasons can you give for your results?
   - Which colors did everyone sort into the same category? On which colors did people disagree?

6. Conclude the activity with a discussion about differences in color perception. Ask students, “What factors can result in differences in color perception?” This is a question with many possible answers, which include culture, gender, age, etc.

**Additional Activities**
If there is extra time after this activity, have students read the article “How do we perceive color?” on page 18-21 of their booklets. If time allows, you can discuss the article.