



Student Lab Procedure Page

Part I - Group Data Collection and Time Measurement Working in groups, you will collect data and measure the time it takes to carry out various card sorting tasks.

Determine who will be the card sorter, the timer, and the data recorder. When it is time to start a card sorting task, the timer will say "Go!" and start the stop watch. Be sure to shuffle the cards between each task.

Sort Task 1: Take every card in a 52-card deck and one by one discard them into one pile.
Record the time taken to complete the task.

Sort Task 2: Sort the 52-card deck into two piles equal in number, discarding each card one at a time -- what is on the card does not matter. Record the time.

Sort Task 3: Sort the deck into two piles based on color. Record the time.

Sort Task 4: Sort the deck into four piles based on suit. Record the time.

Sort Task 5: Sort the deck into 13 piles based on number or face card type. Record the time.

Time permitting, switch roles and get timed data from everyone in the group. (Trial 1 = Student 1, Trial 2 = Student 2, etc.)

Part II - Sorting by External Feedback Again, you'll work in groups, collect data, and record time. Determine who will take on the new role of feedback person; your teacher will give special instructions to the feedback person before Part II begins.

1. The card sorter will be sorting based on statements made by the feedback person. Time elapsed is recorded after the entire deck is sorted.
2. The sorter begins by placing two cards face up (one at a time), together in one pile or in separate piles, based on the sorting rule s/he thinks is in effect.
The feedback person who knows the rule will say "Yes" if the sorter is on the right track or "No" if the sorter is not on the right track and in need of a different rule for sorting. If "No" is the feedback, the sorter must take back the most recent card played and try sorting it in different ways until a "Yes" is given.
3. The sorter continues to lay down cards face up, receiving feedback for each card, until all the cards in the deck have been sorted. Record the final time on the data sheet.

Part III - Data Representation and Follow-up Questions

1. Develop a graphic representation of the data collected on your data table. Be sure to include appropriate labeling of axes and title.
2. What relationship seems to exist between the complexity of the task and the time required for task completion?
3. Based on your data, which task seems to be the most complex or require the highest degree of cognitive functioning to carry out?
4. How could this understanding (of the relationship in question #2) apply to a real-life situation? Describe one or two instances in the life of a typical teen.

Card Sort Data Table

Task Number	Trial 1	Trial 2	Trial 3	Mean
1 one pile	seconds	seconds	seconds	seconds
2 two equal piles	seconds	seconds	seconds	seconds
3 sort by color	seconds	seconds	seconds	seconds
4 sort by suit	seconds	seconds	seconds	seconds
5 13 piles	seconds	seconds	seconds	seconds
6 feedback sort	seconds	seconds	seconds	seconds

Task Number	Trial 4	Trial 5	Trial 6	Mean
1 one pile	seconds	seconds	seconds	seconds
2 two equal piles	seconds	seconds	seconds	seconds
3 sort by color	seconds	seconds	seconds	seconds
4 sort by suit	seconds	seconds	seconds	seconds
5 13 piles	seconds	seconds	seconds	seconds
6 feedback sort	seconds	seconds	seconds	seconds

Task Number	Trial 7	Trial 8	Trial 9	Mean
1 one pile	seconds	seconds	seconds	seconds
2 two equal piles	seconds	seconds	seconds	seconds
3 sort by color	seconds	seconds	seconds	seconds
4 sort by suit	seconds	seconds	seconds	seconds
5 13 piles	seconds	seconds	seconds	seconds
6 feedback sort	seconds	seconds	seconds	seconds