

Name(s): \_\_\_\_\_

# Sorting Cards

## Directions:

1. Gather your set of food cards and color cards and split them into a “food” pile and a “color” pile. Pick a person to be the chef and pick another to be the artist.
2. The artist should look through all the color cards and rank them from most to least favorite. Then, the chef should look through all the food cards and rank them from most to least favorite. Write down your rankings on the ranking sheets provided, and describe how you came up with the ranking. **Do not let your partner see your rankings!** Keep it secret.
3. You’ll learn about three sorting algorithms today: selection sort, bubble sort, insertion sort. Listen to the instructor *carefully* and follow along with the demonstrations.
4. When you practice each sorting algorithm, shuffle your cards, turn them face down, and spread them on your desk in a row. They will be unsorted. Then, your partner can carry out the sorting algorithm. Keep in mind that:
  - Only two cards can be face-up at the same time.
  - Your partner can only ask you if you like one card more than the other; you can only answer with a yes or no. Based on your answer, they will decide what to do with the cards.
  - When they are done comparing or moving cards, they must turn them face-down again.
  - You must follow the algorithm!
5. For each algorithm, tally the number of comparisons (questions) needed to sort the list in the table below:

	Food Cards	Color Cards
Selection Sort		
Bubble Sort		
Insertion Sort		
Merge Sort		

Name(s): \_\_\_\_\_

## Artist, Rank Your Color Cards!

**Most favorite**

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

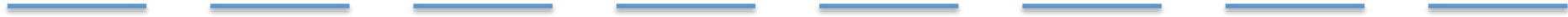
**Least Favorite**

How did you come up with your rankings? Describe your process below:

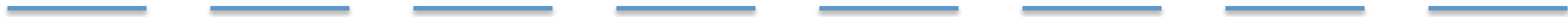
Name(s): \_\_\_\_\_

# Chef, Rank Your Food Cards!

**Most favorite**



1                      2                      3                      4                      5                      6                      7                      8



9                      10                      11                      12                      13                      14                      15                      16

**Least Favorite**

How did you come up with your rankings? Describe your process below: