Grade Level/Course:	
Kindergarten and First Grade	

Lesson/Unit Plan Name:
Classify and Organize

Rationale/Lesson Abstract:
- Students in kindergarten begin to classify objects into teacher specified categories as well as categories named by students. Each category can then be classified into different groups again based off of new characteristics or attributes. Kindergarten students should count the number of objects in each category to quantify the specific category.   Students should then make statements about which category has greater/ fewer numbers of objects, the total number, etc. Therefore, students get categorical data from sorting objects.
- Students in first grade begin to organize and represent data. Students in first grade can discuss how effective their representation of data is. First graders can also answer addition and subtraction questions about data.
- Classification and representation of data lends itself to other contexts (i.e. science, social studies, letter formation, art, etc.)

Objectives:
SWBAT…
1. Sort objects and classify them into a given category.
2. Identify the number of objects in each category.
3. Identify which category has the most and the least number of objects.
4. Make other statements about their categorical data.

Timeframe:
- Each activity will take approximately 45-60 minutes
- Activities can be taught in any order

Common Core Standard(s):
K.MD.3

Classify objects into given categories, count the number of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10.

K.CC.4
Understand the relationship between numbers and quantities; connect counting to cardinality.

- K.CC.4.A
  When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

- K.CC.4.B
  Understand that the last number name said tells the number of objects counted. The number of

objects is the same regardless of their arrangement or the order in which they were counted.

- K.CC.4.C
Understand that each successive number name refers to a quantity that is one larger.

K.CC.5

Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

K.CC.6

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.[1]

1.MD.4

Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

1.OA.1

Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Instructional Resources/Materials:
Activity 1: category recording worksheet, 1 bag of colored block letters per every pair of students or every group

Activity 2: category recording worksheet, *Fur and Feathers* by Janet Halfmann, worksheet with animal pictures, glue, scissors

Activity 3: paper plates, glue, scissors, worksheets with food pictures

Activity/Lesson Kindergarten:

*** Teachers can choose any objects to be classified as long as there are more than two categories that the items can be placed into***

Activity 1: Classifying the Alphabet
In this activity, students will be classifying the letters of the alphabet in a variety of categories.

1. Describe the Data Set
Show students colored block letters of the alphabet.

(TPS Opportunity) Have students to turn and talk to their partner and discuss what they notice about the objects that have been put in front of them.

Have students share out their thinking and record their responses. (Prompt students to think about color, type of lines used to create the letter, vowels and consonants, etc.)

Explain to students that it is hard to look at the jumbled pile of letters and know how many of the letters are red, or how many of the letters are vowels, or how many of the letters are made with only straight lines.

By putting like items into groups, or categories, we can make many statements about the letters.

2. Brainstorm Categories
(TPS Opportunity) *"Today, I want to sort my letters into categories, or groups. Turn and talk to your partner about all of the ways we could sort these letters?"*

Record Possible Student Responses: Color, Upper Case/Lower Case, straight lines/curved lines/both, vowel/consonant.

3. Identify Categories
"I'm going organize my letters first by color."
Model for students how to label the category recording sheet with the four different colors of letters.

4. Sort and Classify
Ask students to help classify the letters as red, blue, yellow, or green.   Place the letters on the appropriate column on the work mat.


5. Count to find the Total Number
Have students count the number of letters that are in each color category.

6. Make Statements about the Data

Ask students *How Many* questions about the data. Students should be able to make statements about which category has the most, least, etc.

- There are more _____ letters than _____ letters.
- There are the most _____ letters.
- There are an equal number of _____ letters.
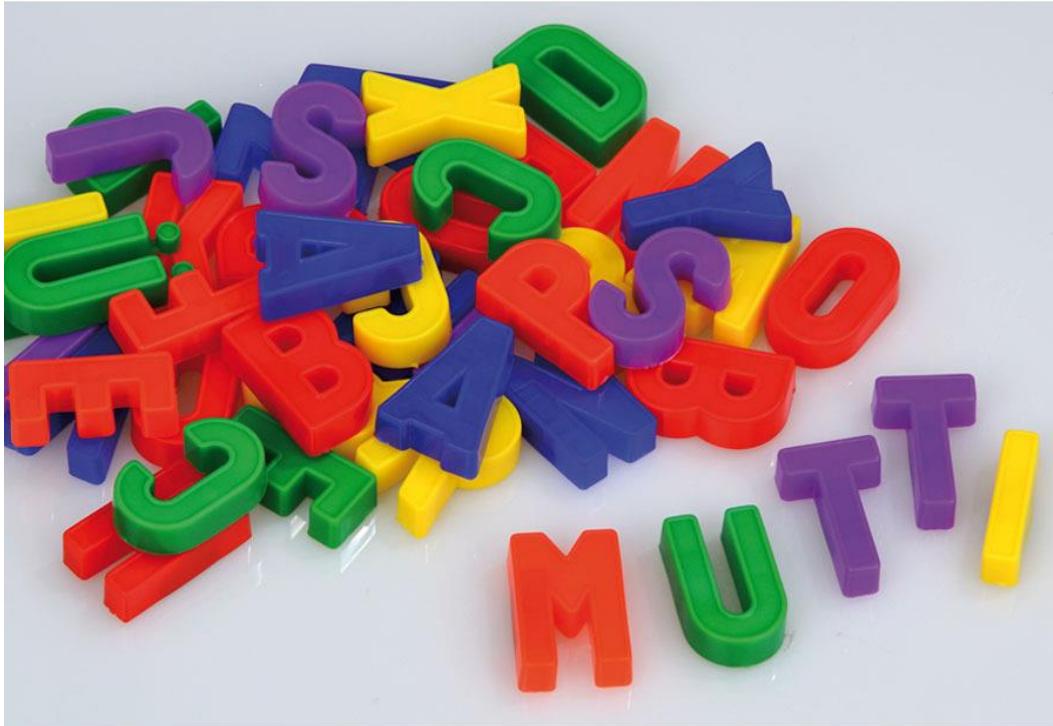
Extension:
1. Describe the Data Set
Explain to students that they could take one of the groups and create new categories to tell more about the letters.

2. Brainstorm Categories
Model for students choosing one of the groups. "*I'm going to pick the red group of letters. I want to know more about this group of letters. I could find out how many of the red letters are vowels and how many of the red letters are consonants. Or, I could find out which red letters are made with curved lines and which red letters are made with straight lines.   How could I do this?*"
Student Response: put them into groups

3. Identify Categories

Model writing down the two categories: Vowels and Consonants

4. Sort and Classify
Go through all the red letters and classify them as being a vowel or a consonant.

5. Count to find the total number

6. Make Statements about the Data
Have students make statements about the letters:
- There are _____ red vowels than red consonants.
- There are ___red vowels.
- There are ___ red consonants.
- There are _____ red letters total.

Have students use their bag of letters to create categories and classify the letters into the appropriate groups.

Activity 2: Animals, Animals Everywhere!
In this activity, students will be classifying animals in a variety of ways.

Hook / Connection to Literature: Read *Fur and Feathers* By: Janet Halfmann

1. Describe the Data Set
Show students pictures of different types of animals.

(TPS Opportunity) Have students to turn and talk to their partner and discuss what they notice about the animals that have been put in front of them.

Have students share out their thinking and record their responses. (Prompt students to think about animal coat, number of feet, ability to fly, etc.)

2. Brainstorm Categories
Have students brainstorm ways to compare and contrast animals, "*How could we classify animals?*"
Write down response on the category worksheet to model for students how to label the category
- Fur / Feathers/ Others
- 2 feet/ 4 feet/ no feet
- Fly / cannot fly
- Cold weather / warm weather
- Household pets / Wild Animals

3. Identify categories
Have students cut out the animals and label their category recording worksheet with the title of each group.

4. Sort and Classify
 Have students sort their animals into groups prior to gluing them onto the worksheet in the appropriate category.

5. Count to Find the Total Number
Have students label their paper with the number of animals that is in each of their categories.

6. Make Statements about the Data
Have students share out to the class how they classified the animals and what their data tells them.
There are _____ animals total.
_____ number of animals are _____.
There are more _____ than _____.

Extension:
Have students pick 1 category that they would like to classify further.
Example: Household pets vs. Wild Animals
Pick household pets and create new categories: four legs, 2 legs, no legs

Have students color the animals in the same category one color and the animals in the other category another color.

Have students share out again what their data is representing.
There are more _____ animals than _____.
There are fewer _____ animals than _____.
There are _____ animals total.

Activity 3: What's on my Plate?
In this activity, students will be classifying foods in a variety of ways.

1. Describe the Data Set
Show students pictures of different types of food

(TPS Opportunity) Have students to turn and talk to their partner and discuss what they notice about the foods that have been put in front of them.

Have students share out their thinking and record their responses. (Prompt students to think about

fruits vs. vegetables, colors, size etc.)

2. Brainstorm Categories

Have students brainstorm ways to compare and contrast foods, "*How could we classify foods?*" Write down response on paper plates (one category per paper plate) to model for students how to label the category
- Fruits / vegetables
- Refrigerated vs. non-refrigerated
- Colors
- Long / short
- Enjoy eating / don't like to eat

3. Identify categories

Have students cut out the foods and label their paper plates with the category title for each group.

4. Sort and Classify

Have students sort their foods into groups prior to gluing them onto the appropriate category plate

5. Count to Find the Total Number

Have students label their plates with the number of foods that is in each of their categories.

6. Make Statements about the Data

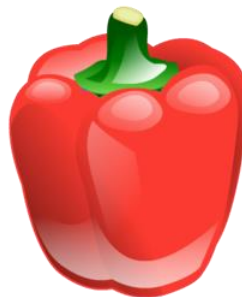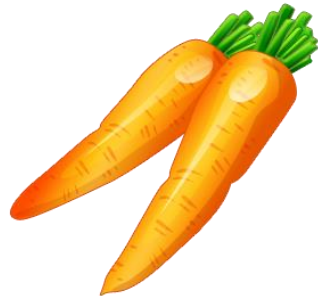Have students share out to the class how they classified the food and what their data tells them.

There are _____ foods total.

_____ number of foods are _____.

There are more _____ than _____.

Extension:

Have students pick 1 category that they would like to classify further.

Example: Fruits vs. Vegetables

Pick Fruits and create new categories: colors

Have students circle the foods in the same category.

Have students share out again what their data is representing.

There are more _____ foods than _____.

There are fewer _____ foods than _____.
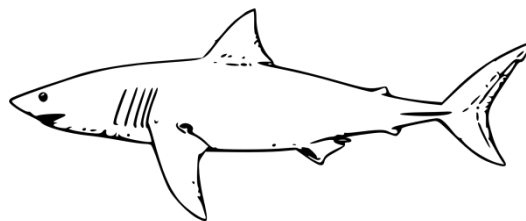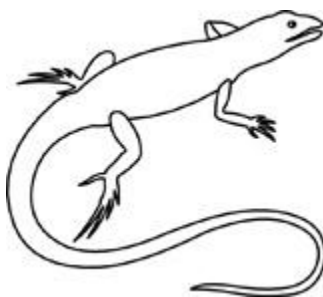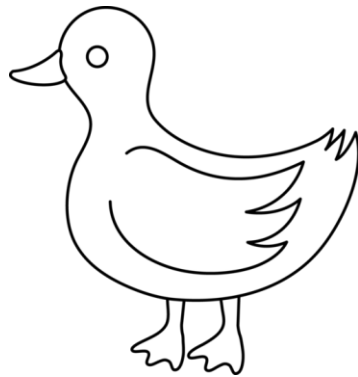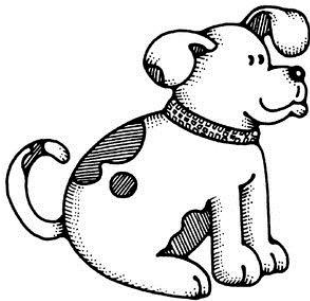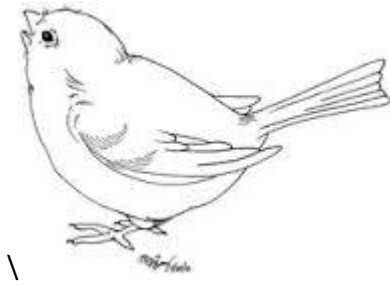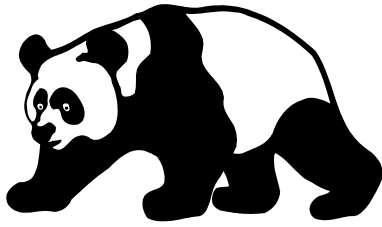
There are _____ foods total.

Assessment:

Student work and observational notes can be used as formative assessment for these activities.

Assessment: (To be given one-on-one)
- Give students a bag full of objects chosen by the teacher.
- Ask student to sort the objects into groups and explain how they sorted the objects.
- Ask the following questions:
- 1. Which group has the most?
- 2. Which group has the least?
- 3.   Are there any groups that are equal

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Category 1:

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Category 2:

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Category 1:

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Category 2:

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Category 3:

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Category 1:

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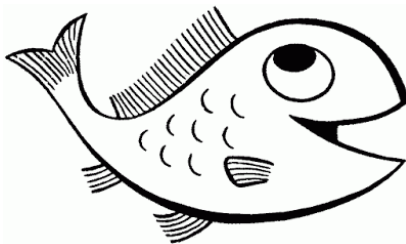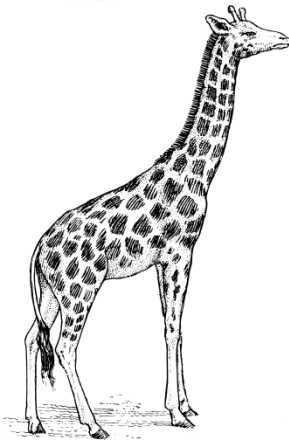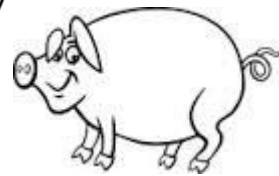
Category 2:

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Category 3:

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Category 4:

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