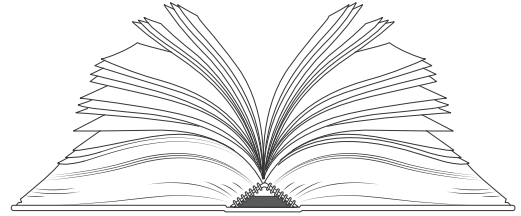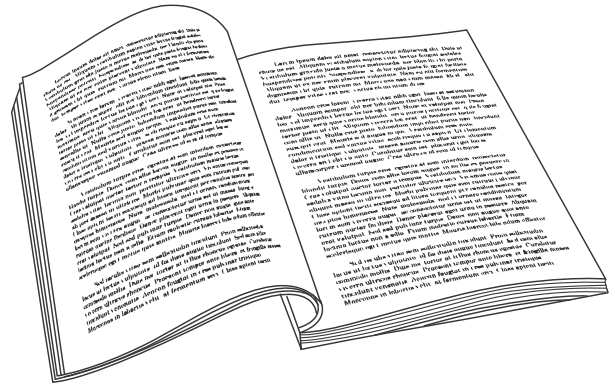Name _____

How Do They Make a Book?

A printing press is a machine that is used to print books. Johannes Gutenberg invented the printing press in 1440.

The machine puts pressure on an inked surface that rests upon paper. This paper is what will be the book page. Another machine folds the printed pages. Hundreds or thousands of books can be printed this way. The printing press is one of the most influential inventions in history.

Your Project Collect Data and Create Picture Graphs

Pick up a newspaper or a magazine. Turn to a page with a lot of words. Create a frequency table to record the number of letters in the first 20 words on that page. Your frequency table should record words with different numbers of letters. Start with 1. Will you find words that have more than 10 letters?

Number of Letters	Tally	Number		Number of Letters	Tally	Number

When you are done, pick up one of your textbooks. Repeat the same steps. Compare the two frequency tables. What do you notice? Create a picture graph for each frequency table.

The Population

There are many large cities in the United States. Cities such as San Diego, San Antonio, and Phoenix have more than a million people living in them. Jacksonville is one of the largest cities in Florida. More than 800,000 people live there.

There are many small towns in the United States. In 2017, there were only 16 people who lived in Walpack, New Jersey. You might have more people in your math class!

Your Project Make a Bar Graph About Cities and Towns

Do research about the towns and cities in your state. Make a list of the the ten largest cities or towns. Then perform a survey of your class and a fourth-grade class. This is the question you will ask:

How many of the ten largest cities or towns in our state have you visited?

Make sure you record the data correctly and clearly. You can use a tally chart.

Use the data you collected to make a bar graph. Make sure to give the bar graph a title and include all labels. Finally, prepare to give a report on your findings. Describe any trends you see in the data you display.
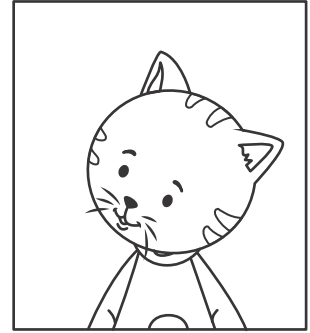
Name _____

Pet Personality

Are you a "dog person" or a "cat person"? Or do you like both dogs and cats? Experts believe that about 78 million dogs and 85.8 million cats are pets in U.S. homes.

Some scientists believe that dogs first became pets between 18,000 and 32,000 years ago. For cats, some believe they first became pets about 10,000 years ago. So, it might be true that a dog is a human's best friend!

Your Project Develop a Picture Graph About Animals

Develop a picture graph showing the number of cats, dogs, and hamsters your classmates have as pets. You can also choose one other pet.

Collect the data. Then, take these steps to make a picture graph:

- Name your picture graph.

- Make a key using a symbol.

- Draw symbols on the picture graph to represent data.

- Label each category of data.

Use your picture graph to explain your data.

_____	
Cats	
Dogs	
Hamsters	
_____	
Each _____ = _____ .	