

Colonel NTI Packet

2024 – 2025

3rd Grade

Day 11

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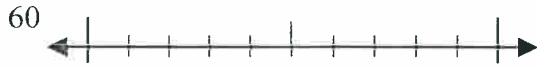
Subject	Assignment
Math	Rounding to Ten (with Number Lines)
Language Arts	Puppy Traits
Science	Week 7, Day 1 (Life Science)
Social Studies	Week 9, Day 1 (History)



Use the numberlines to round each number to the nearest 10.

Answers

Ex)



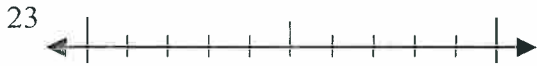
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1)



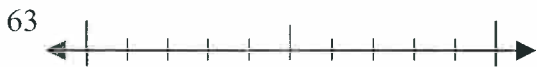
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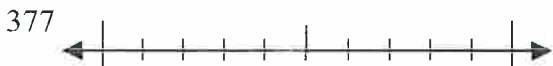
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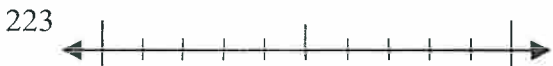
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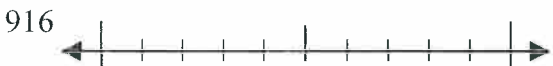
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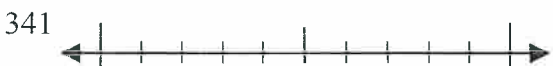
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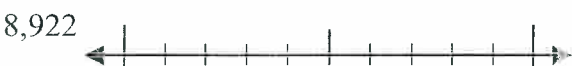
7. _____

8)



8. _____

9)



9. _____

Puppy Traits

by Caitlyn Meagher



a litter of puppies

JACLOU-DL

Take a look at this photo of a litter of puppies. Do you notice anything interesting? Some of these puppies have gray fur and black spots. Others have black fur and white spots. All of these puppies have the same parents. So why do some of these puppies look so different from each other?

The answer has to do with the puppies' genes. Genes carry information that gives living things certain traits. A trait can be a physical characteristic, like eye color or fur color. Genes are passed on from parents to offspring during reproduction. So each living thing has a mix of genes from its parents. Half of its genes are from one parent, and half are from the other parent.

Sometimes, the genes passed on from each parent have the same information about traits. For example, take another look at the puppies in the photo. They actually have a lot in common! They are all puppies. They have eyes, ears, and noses. They have four paws. They have small tails. They have all of these traits in common because they share the same genes from their parents.

But the genes from each parent can also have different information about traits. For instance,

a mother dog might have short fur. The father dog might have long fur. Each of their puppies might receive a different combination of genes about fur length from its parents. But only one of those traits - long or short fur - will show up in each puppy's actual fur. In this way, one puppy from the same parents may have short fur, while its brother or sister may have long fur!

The length of a dog's fur is a trait that could be determined by just one gene. But dogs (and humans!) have about 20,000 genes. Think of all the different combinations of traits that could mean! No wonder the puppies in a litter can look so different from each other.

Now, take a look at your friends and family. They all have different gene combinations and different traits. What are some of your physical traits? What traits do you share with your family members?

Vocabulary

combination

noun

definition: When you mix or put things together, what you get is called a combination.

The soup had a combination of chicken and vegetables.

Spanish: combinación, mezcla

determine

verb

definition: When something determines something else, it decides what will happen with it. How much money you have in your pocket, for example, will determine what you can buy.

Good training will determine who wins the championship.

Spanish: determinar, definir, fijar

forms: determined, determines, determining

litter

noun

definition: A litter is a group of young animals, such as puppies, born to one mother at one time.

The cat we adopted came from a litter of seven kittens.

Lila was the smallest puppy in her litter when she was born.

Spanish: camada

reproduction

noun

definition: When animals give birth to new animals like themselves, it is called reproduction. Reproduction is also when plants make new plants like themselves.

Spanish: reproducción

1. Before you start reading...

Here are the vocabulary words that will be in this reading. Let's see how well you already know them.

Check the box that shows how well you know each word. It's ok if you don't know them yet (this is not graded)!

	Don't know it	Have heard of it but not sure of its meaning	Know something about its meaning	Know it well
combination				
determine				
litter				

2. Word Matcher

Every word has other words that have similar meanings or even the exact same meaning (these are called synonyms!). Draw a line from each similar word or synonym to the vocabulary word that it matches!

blend

mixture

assortment

produce

cause

combination

determine

litter

prescribe

young

offspring

issue

3. After reading and exploring the words through some activities...

Do you know these words better? Check the box that shows how well you know each word. It's ok if you don't know them yet (this is not graded)!

	Don't know it	Have heard of it but not sure of its meaning	Know something about its meaning	Know it well
combination				
determine				
litter				

Name: _____ Date: _____

1. What do genes do?

- A. cover your legs with a sturdy material called denim
- B. carry information that gives living things certain traits
- C. give parents information about what to name their puppy
- D. make sure all puppies are born with the same color fur

2. According to the passage, the puppies in the photo have some of the same information in their genes. How does this affect the way they look?

- A. They all have the same short gray fur and black spots.
- B. They all like to play with the same toy, a soft purple ball.
- C. They all move in the same ways at the same exact times.
- D. They all have eyes, ears, noses, four paws, and small tails.

3. Read the following sentences from the text.

"But the genes from each parent can also have different information about traits. For instance, a mother dog might have short fur. The father dog might have long fur. Each of their puppies might receive a different combination of genes about fur length from its parents. But only one of those traits - long or short fur - will show up in each puppy's actual fur. In this way, one puppy from the same parents may have short fur, while its brother or sister may have long fur!"

What conclusion can you draw from this evidence?

- A. Only parents with the same exact genes can have puppies.
- B. You can have the gene for something and not show it.
- C. Puppies with the same parents look the exact same.
- D. Only adult dogs can have long hair because it needs to grow.

4. Why do puppies from the same parents look different?

- A. The parents get to pick only one parent that the puppy can look like so they take turns.
- B. Each puppy chooses which parent they want to look more like when they are born.
- C. The puppy's genes depend on the year that they were born more than their parents' genes.
- D. Each puppy gets a different combination of genes which makes them look unique.

5. What is the main idea of this text?

- A. Puppies, like humans, are born with different gene combinations from their parents that help them look both alike and different from other puppies.
- B. Dogs and humans have about 20,000 genes and the length of a dog's fur can be determined by just one of those genes.
- C. Some physical characteristics of puppies are their eye color, fur color, tail length, how tall they are, the shape of their ears, and the size of their teeth.
- D. When a puppy's mother has short fur and its father has long fur, the puppy will be born with short fur in some parts of its body and long fur in others.

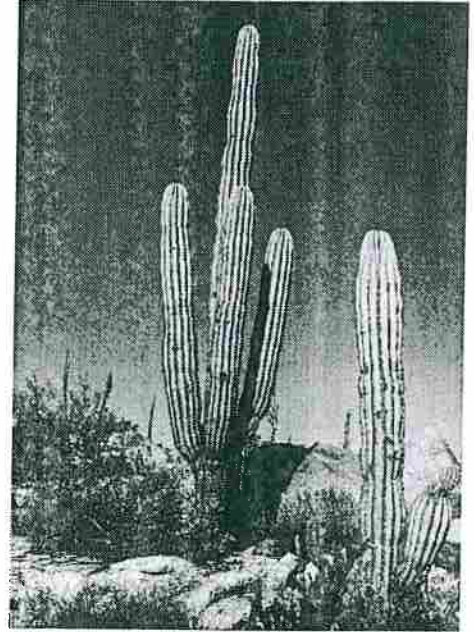
Name: _____ Date: _____

Directions: Read the text, and answer the questions.

Super Survivors

The desert is a very dry place. There is not a lot of rain. It can also be very hot during the day and cooler at night.

A cactus is a desert plant. It is thick and waxy, which helps it store as much water as possible. Desert animals are quiet during the day and more active at night. Each of these things helps plants and animals survive in the desert.



1. What is special about the desert?
 - a. There is a lot of shade.
 - b. There is lots of rain.
 - c. There are high temperatures.
 - d. There are always tall mountains.
2. How do cactus plants survive?
 - a. They store water.
 - b. They eat animals.
 - c. They live in rain forests.
 - d. They hunt at night.
3. What is something that all animals in the desert need?



Name: _____ Date: _____

Directions: Read the text, and study the image. Answer the questions.

A long time ago, explorers came to North America from Europe. They came from countries such as England, France, Spain, and Italy. Kings and queens sent the explorers. This time was called the Age of Discovery.



Why did the kings and queens send them?

- They wanted them to discover new lands. They wanted more land for their countries.
- They wanted to find treasure or things that would make them richer. They wanted furs, sugar, gold, and silver.
- They wanted to find a shorter trade route. They bought silk and spices from India and China. The route they used was long and dangerous. It took many months or even years to travel back and forth.

1. Where did the explorers come from during the Age of Discovery?
 - a. from Canada and the United States
 - b. from England, France, Spain, and Italy
 - c. from China, India, and Australia
 - d. from South America, China, and Africa
2. Why did they want to find a shorter trade route?
 - a. The route they used was short and easy.
 - b. The route they used was going to the wrong place.
 - c. The route they used was long and dangerous.
 - d. The route they used was starting to wear out.



Colonel NTI Packet

2024 – 2025

3rd Grade

Day 12

Table of Contents

Subject	Assignment
Math	Rewriting Multiplication Problems
Language Arts	Fighting Invasive Plants
Science	Week 7, Day 2 (Life Science)
Social Studies	Week 9, Day 2 (History)



Express each set as a multiplication problem.

Answers

Ex)

Ex. $7 \times 9 = 63$

1)

1. _____

2)

2. _____

3)

3. _____

4)

4. _____

5)

5. _____

6)

6. _____

7)

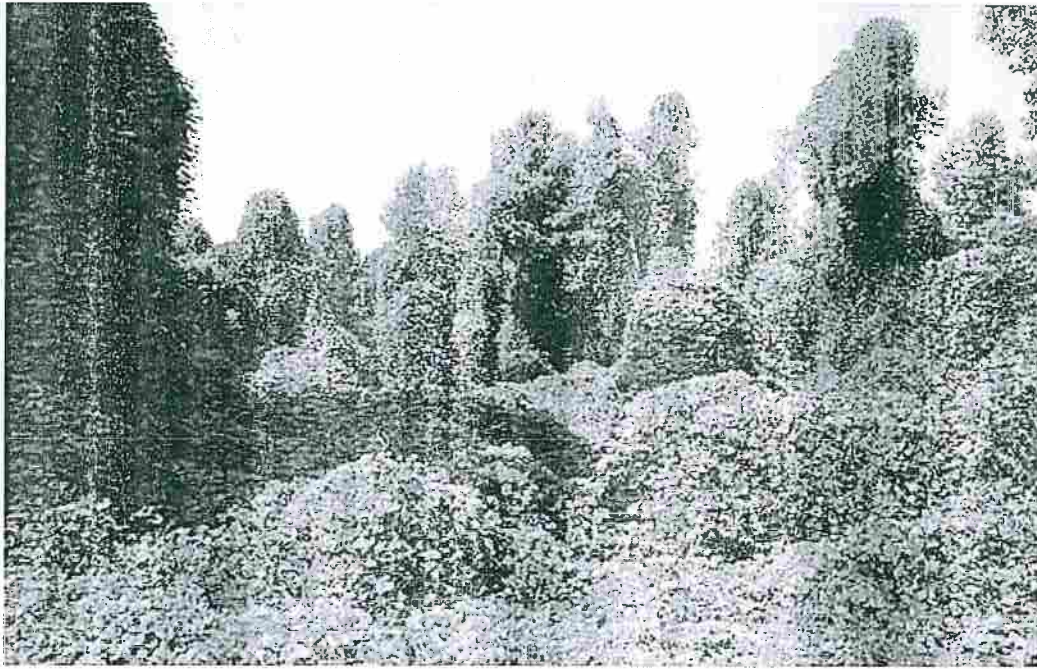
7. _____

8)

8. _____

Fighting Invasive Plants

Text and image provided courtesy of the National Fish and Wildlife Foundation.



kudzu taking over a forest

Did you know there's a big fight going on in the plant world? Plants are fighting to keep their homes!

Plants that have always grown in a certain area are called native plants. That means they have lived in that area for hundreds or even thousands of years. Native plants are important. They are homes and food for the insects and animals that live in the area. They also help animals, birds, and insects that travel, or migrate, through that area. The animals and plants depend on each other.

But in some areas, new plants are trying to take over. They are called invasive plants because they are new to the area and spread quickly. Some of these plants were planted by gardeners who thought they were pretty. Some were planted to keep soil in place.

Kudzu is one example of an invasive plant in the United States. The kudzu is a vine that is native to Asia. It was planted in response to a time of hardship for people in the Southern Plains in the United States. About 100 years ago, people in the Southern Plains suffered through a period of serious drought. The natural grasslands had been replaced with crops, but the crops died in the drought. The dry weather and poor planting methods caused huge

dust storms. Flying, swirling clouds of dirt killed people, animals, and crops. This time period was called the Dust Bowl.

After the Dust Bowl, people wanted to prevent dust storms. So, in the southern part of the United States, they planted kudzu. People thought these plants would help hold the soil in place. It was planted for a good reason, but now it grows out of control in some areas. During the spring, kudzu can grow up to one foot per day! It can grow over trees and bushes and kill them. Now, people in the south are working to get rid of kudzu in some areas.

Other plants are causing problems near the Great Lakes. In Indiana, groups of volunteers work to take care of the sand dunes near Lake Michigan. In between the lake and the dunes is a wetland. Wetlands are areas of land that stay wet most of the time. They are important! Wetlands help clean the water that flows from the land to the lake. They help prevent floods, too. And they are home to many plants and animals that live nowhere else on Earth.

More than 100 different invasive plants are causing problems in Indiana. These invasive plants include reed canary grass, spotted knapweed, Japanese brome, and others. They killed off native plants and drove away some of the animals. Volunteers and scientists have been working to get rid of those invasive plants. And it's working! Frogs and toads are coming back to the wetlands. With people's help, native plants and the animals they support can win the fight for their homes.

These conservation efforts are supported by the National Fish and Wildlife Foundation (NFWF), which specializes in bringing together individuals, government agencies, nonprofit organizations, and corporations to restore our nation's fish, wildlife, plants, and habitats for current and future generations.

Vocabulary

depend

verb

definition: When people depend on another person or thing, they strongly need this person or thing for help or for other necessary things. This other person or thing provides the things that are needed.

My grandmother depended on my mom a lot when she was sick.

Children depend on their parents for food and everything else when they are little.

Farmers depend on the spring rains in order to have enough water for their crops.

Spanish: depender

forms: depended, depending, depends

drought

noun

definition: A drought is a long period with little or no rain. Droughts cause serious problems for people, animals, and plants.

The crops died because of the drought.

During a drought, people have to be very careful about how much water they use.

Spanish: sequía

prevent

verb

definition: When you prevent a thing, you do something that stops that thing from happening. People try to prevent things like fires, accidents, and other bad things that might happen.

My teacher said we could prevent getting each other sick by washing our hands.

The dog was so strong that it was hard to prevent him from getting loose.

Jamal's dad drove slowly in the snow to prevent the car from sliding.

Spanish: impedir, prevenir

forms: prevented, preventing, prevents

suffer

verb

definition: When something suffers, it means that it is harmed or hurt in some way.

The plants suffered during the extremely cold winter.

Her skating performance suffered for many months after her injury.

The old restaurant suffered when customers started to go to the new restaurant.

Spanish: afectar, lastimar

forms: suffered, suffering, suffers

1. Before you start reading...

Here are the vocabulary words that will be in this reading. Let's see how well you already know them.

Check the box that shows how well you know each word. It's ok if you don't know them yet (this is not graded)!

	Don't know it	Have heard of it but not sure of its meaning	Know something about its meaning	Know it well
depend				
prevent				
suffer				

2. Word Changer

Words have different forms when we use them in different ways. Write the correct vocabulary word, in its correct form, in each blank.

My grandmother _____ on my mom a lot when she was sick.

A big gate _____ cars from entering the parking lot.

The plants _____ during the extremely cold winter.

3. After reading and exploring the words through some activities...

Do you know these words better? Check the box that shows how well you know each word. It's ok if you don't know them yet (this is not graded)!

	Don't know it	Have heard of it but not sure of its meaning	Know something about its meaning	Know it well
depend				
prevent				
suffer				

Name: _____ Date: _____

1. What are native plants?

- A. plants that only need one special kind of food
- B. plants that have always grown in a certain area
- C. plants that need extra water to survive
- D. plants that are very tasty to eat

2. How does the author describe the relationship between native and invasive plants?

- A. Invasive plants work together with native plants to survive.
- B. Invasive plants are weaker than native plants so they need extra help.
- C. Invasive plants and native plants grow peacefully in the same areas.
- D. Invasive plants are trying to take over the areas where native plants grow.

3. Read the following sentences from the text.

"Kudzu is one example of an invasive plant in the United States. The kudzu is a vine that is native to Asia..."

So, in the southern part of the United States, they planted kudzu. People thought these plants would help hold the soil in place. It was planted for a good reason, but now it grows out of control in some areas. During the spring, kudzu can grow up to one foot per day! It can grow over trees and bushes and kill them. Now, people in the south are working to get rid of kudzu in some areas."

What can you conclude based on this information?

- A. Plants that are native to one part of the world are usually helpful in other parts of the world.
- B. People in the southern United States have learned how to work with kudzu to make it part of their diet and environment.
- C. Kudzu is an important plant in the southern United States and should be protected so it can grow more.
- D. Plants that are native to one part of the world can cause big problems in other parts of the world.

4. How do invasive plants impact animals in an area?

- A. They can drive animals away.
- B. They make animals happy.
- C. They can make animals healthier.
- D. They kill off all the animals.

5. What is the main idea of this text?

- A. Invasive plants, like kudzu in the southern United States, can cause problems for native plants and animals in an area.
- B. Invasive plants and native plants can learn to grow together so that they support animals in an area.
- C. Frogs and toads are coming back to Indiana as volunteers and scientists work to get rid of invasive plants.
- D. After the Dust Bowl, people in the southern United States planted kudzu, a vine from Asia, to try to prevent more dust storms.

Name: _____ Date: _____

Directions: Animals have traits, or special features, that help them survive. Study the chart, and answer the questions.

Animal	Trait	Purpose
fennec fox	large ears	help the fox stay cool
fish	gills	help the fish breathe underwater
penguin	thick layer of fat	helps the penguin stay warm
mountain goat	oval, rubber-like hooves	help the goat grip rocks to climb

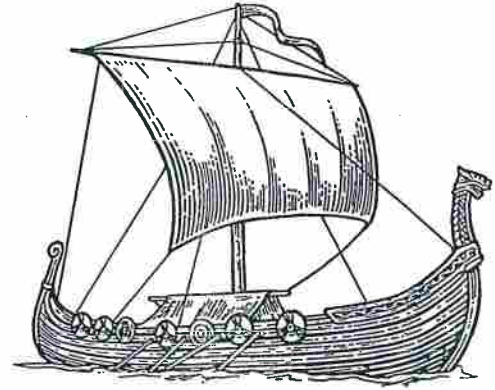
- Why are these traits helpful?
 - They make an animal look nice.
 - They help animals survive where they live.
 - They make animals easier to catch.
 - They help an animal find a new home.
- Where would the fennec fox's large ears be helpful?
 - the Arctic
 - the forest
 - the ocean
 - the desert
- What would happen if the penguin did not have the thick layer of fat?
 - The penguin couldn't swim.
 - The penguin would freeze.
 - The penguin couldn't eat.
 - The penguin couldn't walk.



Name: _____ Date: _____

Directions: Read the text, and study the image. Answer the questions.

The Vikings came from countries in northern Europe. Long ago, they traveled in their long ships to other countries. They raided the lands and took what they wanted.



The Vikings also explored new lands. They went to Iceland. They went to Greenland, too. They built villages and lived there.

About 1,100 years ago, Leif Eriksson and his Viking men came to North America. They stayed for one winter. They called the place *Vinland* because there were many wild grapes.

1. Where did the Vikings come from?
 - a. They came from northern China.
 - b. They came from northern Europe.
 - c. They came from northern Africa.
 - d. They came from northern Russia.
2. Who were the first people from Europe to come to North America?
 - a. the French
 - b. the English
 - c. the Spanish
 - d. the Vikings
3. Where did Leif Eriksson and his men stay in North America?
 - a. Erikland
 - b. Vikingland
 - c. Vinland
 - d. Limeland