Name:_____

WINTON WOODS ELEMENTARY SCHOOL

GRADE 4

SOCIAL STUDIES / SCIENCE

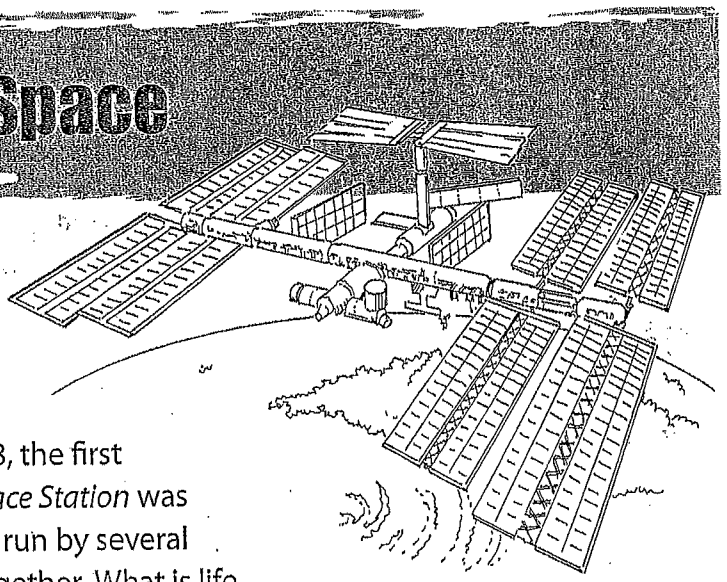
BLIZZARD BAG

#1

All assignments in this packet must be completed for full credit. This assignment will be a part of your quarter grade.

Due: _____

At Home in Space



Space stations have been in space since 1973. That was the year that the United States launched *Skylab*. In 1998, the first section of the *International Space Station* was launched. Today, the station is run by several different countries working together. What is life like aboard this fascinating machine?

The *International Space Station* is a big lab in the sky. All of the astronauts aboard have jobs to do. Sometimes, crews are sent to add to the space station. Or, they might fix something on the outside of the space station. Other times, the astronauts do experiments. They are busy in space.

When astronauts have to work outside the space station, they can't just walk out the door! The astronauts have to put on very heavy space suits. They each weigh 250 pounds. If you wore such a heavy suit on Earth, you would find it hard to move! But, in space, things are weightless. The suit does not feel heavy in space. It helps an astronaut breathe and provides safety from the cold or heat outside the space station. The suit is linked to the station with a *tether*, or safety rope. If the rope weren't there, the astronaut would float into space.

Inside the space station, astronauts work in the labs. They also exercise. It is very important for the astronauts to stay fit. They work out for two hours every day that they are in space. The space station has a stationary bike and a treadmill. These help keep the astronauts healthy. It helps them get ready for the hard jobs that they do in the space station.

Living in a weightless home can be hard. On Earth, when you put something down, it stays there. That's not true in a space station! This changes how astronauts do everyday things. They have to learn how to be careful while they are working, resting, and even sleeping.

Conversion

250 pounds = 113.4 kilograms

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Name_____ Date_____

At Home in Space

Answer the following questions based on what you read on page 55. Then, finish reading the story on the next page.

1. The first part of the story is MOSTLY about—
   a. working aboard a space station.
   b. the space program in the United States.
   c. the history of space stations.
   d. none of the above

2. How much does a space suit weigh on Earth?
   a. nothing
   b. 150 pounds
   c. 200 pounds
   d. 250 pounds

3. What was *Skylab*?
   a. the first space station
   b. a space station launched in 1973
   c. a space station made by Russian scientists
   d. a. and b.

4. What is the MAIN reason that an astronaut has to wear a space suit outside a space station?
   a. to carry tools
   b. to float into space
   c. to stay in shape
   d. to breathe

Conversions

150 pounds = 68.04 kilograms
200 pounds = 90.72 kilograms
250 pounds = 113.4 kilograms

5. According to the story, what are two things that an astronaut might do during a day in a space station?
   a. exercise and talk on the telephone
   b. work outside and travel to another planet
   c. work in a lab and exercise
   d. take a day off and snack

6. Read the following sentence from the story and answer the question.

   They work out for two hours every day that they are in space.

   According to the story, why is this true?
   a. Astronauts like to use the treadmill.
   b. Astronauts need to stay healthy.
   c. Astronauts have to be ready to do hard work.
   d. b. and c.

7. What do you think the author will write about next? Write your answer in a complete sentence.

_____

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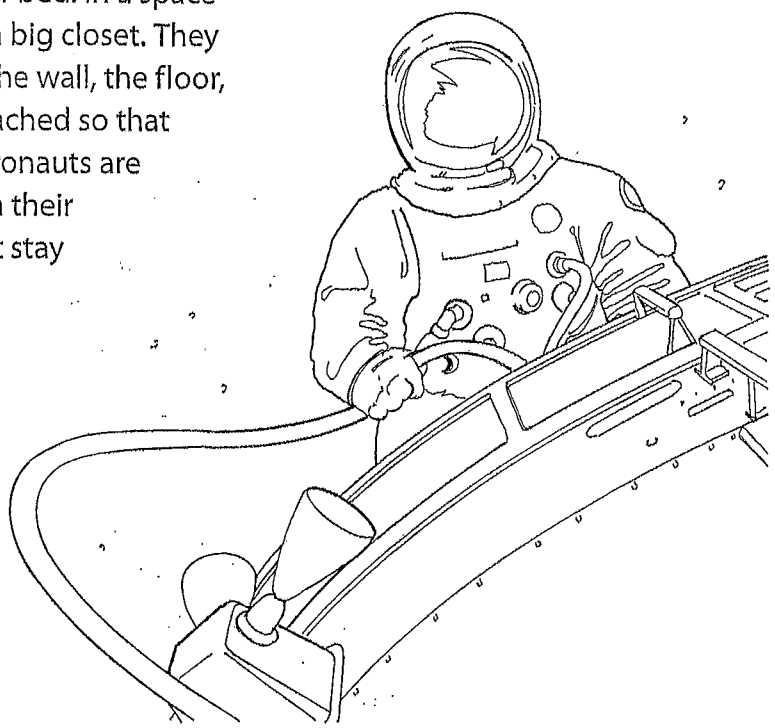
Finish reading "At Home in Space" below. Then, answer the questions on page 58.

Life without gravity inside a space station changes everything. The astronauts cannot take showers. Water would just float into the air! They have to take baths with sponges to wash themselves. They use dry shampoo to clean their hair.

Another job that is hard is cleaning. On Earth, dust falls down. It lands on floors and the tops of things. In space, dust goes everywhere. Astronauts spend time wiping dust off the walls and ceilings of their rooms. They also clean the fans so that dust doesn't stop the air system from working.

Cooking is not very hard in space. That is because all of the cooking is done before the astronauts leave Earth. The *International Space Station* has an oven to heat the cooked food. When the first astronauts went into space, they ate food that was turned into powder or dried. Today, astronauts can take fresh food into space. They have juice, vegetables, and fruit. They eat pasta and seafood. Eating can be tricky, though. Food is held inside special dishes with tops so that it doesn't fly off the plates! Juice and water are held in bottles or bags. Astronauts never have to wash the dishes. They just throw the dishes in the trash can when they are done. This saves water.

One of the strangest parts of life in a space station is sleeping. On Earth, gravity keeps you in your bed. In a space station, each astronaut has a bedroom like a big closet. They have sleeping bags. These bags snap onto the wall, the floor, or even the ceiling. The bags have to be attached so that astronauts don't float away at bedtime. Astronauts are zipped into the bags. Then, they strap down their heads! In space, a person's head doesn't just stay on the pillow. There are also straps shaped like loops for the astronauts' hands to keep their arms close to their bodies. Astronauts need lots of rest so that they are ready for the next day. They have to run a huge machine as it orbits Earth!



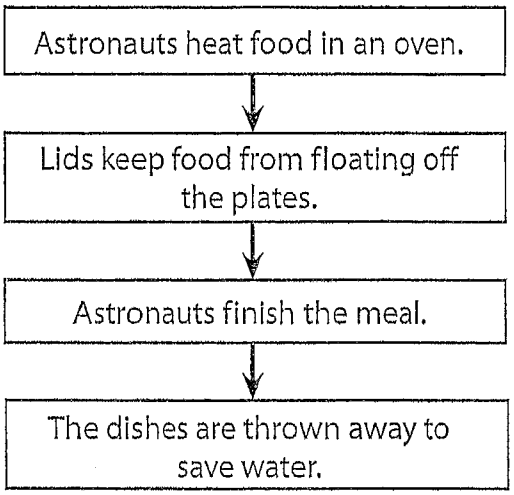
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Name_____ Date_____

At Home in Space

Answer the questions below.

8. The author writes about the food that astronauts eat. Look at the chain of events below and answer the question.



Which step is missing?

a. Food is cooked on Earth before it is sent into space.
b. Astronauts throw the dishes out the door of the space station.
c. Astronauts cook meals from fresh food.
d. Astronauts only eat one meal each day.

9. Which of the following problems is NOT mentioned in the story?

a. eating food off a plate
b. taking a shower
c. staying in touch with family on Earth
d. floating out of bed

10. Read the following sentence from the story and answer the question.

They have to run a huge machine as it orbits Earth!

What is a synonym for *orbits*?

a. races
b. plunges
c. travels
d. circles

11. Why do astronauts have to strap down their heads when they sleep?

a. Gravity does not keep their heads on the pillows like it does on Earth.
b. The head straps keep their heads safe if there is a crash.
c. The pillows on a space station are hard and small.
d. In space, their heads weigh so much that it is dangerous.

12. What makes cleaning hard inside a space station?

a. Dust only gets on the floors.
b. Dust can go in any direction.
c. Dust can make the astronauts sneeze when they are in their space suits.
d. There is more dust in space.



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WINTON WOODS ELEMENTARY SCHOOL

GRADE 4

SOCIAL STUDIES / SCIENCE

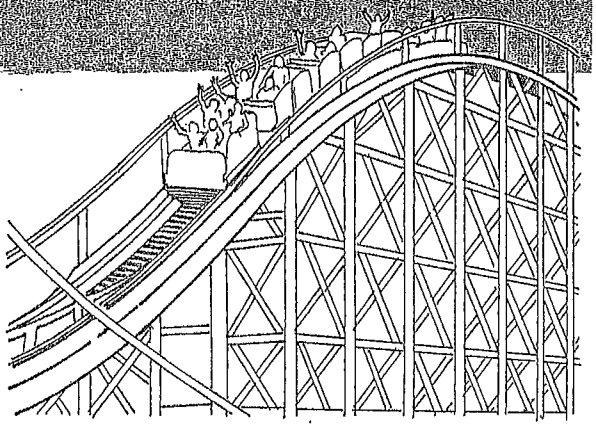
BLIZZARD BAG

#2

All assignments in this packet must be completed for full credit. This assignment will be a part of your quarter grade.

Due: _____

A Wild Ride



A ride on a **roller coaster** is exciting! A roller coaster plunges down hills. It races around corners. The feeling can make your stomach jump and your head spin. Have you ever wondered how it all works?

A roller coaster is an amazing machine. It seems like it would need a lot of help to go around all of those twists and turns. But, roller coasters are mostly run by nature!

How is this possible? A machine pulls the roller coaster cars up the first hill. On simple roller coasters, the machine is like a towrope. Chains help pull the cars up this hill, called the *lift hill*. Then, the chains are released. The roller coaster is pulled down the hill by gravity. When it heads up the next hill, gravity slows the tail end of the roller coaster. That is why it seems to slow down and speed up throughout the ride.

Many roller coasters are built with hills that get smaller and smaller. The biggest hill is almost always the lift hill. This makes sure there is plenty of energy for the rest of the ride! And, as the roller coaster goes over the smaller hills, it starts to slow. Finally, it coasts to a stop.

There are two basic kinds of roller coasters. The older kind is made of wood. It has tracks that look like railroad tracks. Part of the fun of wooden roller coasters is the way the tracks rattle. The cars sway from side to side. But, wood is hard to bend. That means it is hard to make a wooden roller coaster with lots of twists and turns. Most of the excitement comes from lots of hills.

Make a prediction.

What do you think the author will write about next?

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Name_____ Date_____

Answer the following questions based on what you read on page 52. Then, finish reading the story at the bottom of the page.

1. Why does the story say that roller coasters are run by nature?
   a. Roller coasters are natural objects.
   b. Roller coasters depend on gravity.
   c. Roller coasters are exciting.
   d. Roller coasters are built using natural objects.

2. The tracks on a wooden roller coaster are built like—
   a. highway exits.
   b. lift hills.
   c. train tracks.
   d. racetracks.

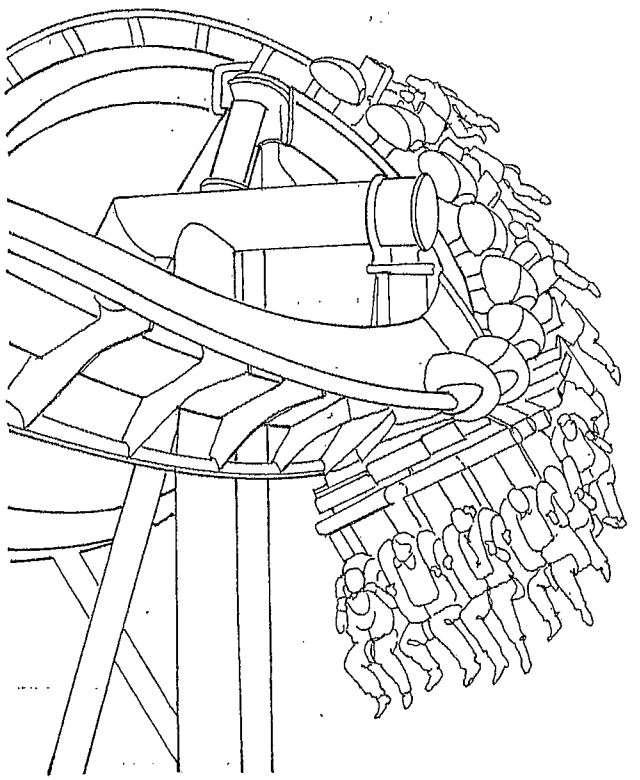
3. Read the following sentences from the story and answer the question.

   And, as the roller coaster goes over the smaller hills, it starts to slow. Finally, it coasts to a stop.

   What does *coasts* mean as it is used in the second sentence?
   a. places where the land meets the sea
   b. slowly stopping without brakes
   c. to travel past the side of something
   d. to race past something

The second kind of roller coaster is made of steel. Some of these roller coasters run on tracks, like a train. Others run on rails, like a subway. Steel tracks are easier to bend. So, steel roller coasters have more turns. Sometimes, the cars even go upside down! The tracks are made in huge pieces. They look like pieces of a skyscraper. The tracks are put together using few joints in the steel. This makes the ride smooth and fast. Two sets of wheels keep the cars from going off the tracks.

You can find roller coasters at *amusement parks*, or places with many rides and other fun things to do. At many parks, roller coasters are the most popular rides. With thrilling twists, turns, and plunges, it is no wonder that people love roller coasters!



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Name _____ Date _____

A Wild Ride

Answer the questions below.

4. Why does the lift hill have to be the biggest hill on the ride?
   a. Going down the big hill makes the energy for the rest of the ride.
   b. Wood is hard to bend to make the tracks.
   c. Roller coasters need to be pulled and pushed by a lift machine.
   d. Roller coasters are made of steel.

5. Read the following sentence from the story and answer the question.

   A roller coaster plunges down hills.

   What does *plunges* mean as it is used in this sentence?
   a. skates
   b. dives
   c. jumps
   d. crawls

6. What are the two main kinds of roller coasters? Write your answer in a complete sentence.

   _____

   _____

   _____

   _____

   _____

7. What is ONE main feature of a steel roller coaster?
   a. It has more hills.
   b. It has higher hills.
   c. It has no brakes.
   d. It has more twists and turns.

8. Read the following sentence from the story and answer the question.

   The tracks are put together using few joints in the steel.

   What is another word for *joints*?
   a. seams
   b. tracks
   c. corners
   d. twists

9. Which type of roller coaster do you think you would like better? Why? Write your answer in complete sentences.

   _____

   _____

   _____

   _____

   _____



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Name:_____

WINTON WOODS ELEMENTARY SCHOOL

GRADE 4

SOCIAL STUDIES / SCIENCE

BLIZZARD BAG

#3

All assignments in this packet must be completed for full credit. This assignment will be a part of your quarter grade.

Due: _____

Fun Facts

Read and answer question

The Seven Continents

Asia is the largest continent in the world both in land size and number of people. It is made up of 48 countries, covers one third of the Earth's land, and holds two-thirds of the Earth's people. Mount Everest and the Dead Sea, the highest and the lowest points on the Earth (outside of Antarctica), are both located on this continent.

Africa is the second largest of the seven continents. The largest of the 53 countries in Africa is Sudan. Africa is famous for Mount Kilimanjaro in Tanzania, which is the tallest mountain in Africa, and the Nile River, which is the longest river (4,241 miles/6,825 kilometers). Africa is also the home of the Sahara desert, which is the largest hot desert in the world.

North America is the third largest continent in the world. It is made up of three large countries—Canada, the United States, and Mexico—as well as the countries of Central America and the Caribbean Islands. The climate is very different throughout the continent. The northernmost point touches the Arctic Circle and the southernmost point is found in the tropical rainforests of Central America.

South America is the fourth largest of the continents. It is connected to North America and is made up of 13 countries. This continent is home of the snow-capped and volcanic Andes Mountains. South America is famous for the Amazon Rainforest, which is the most diverse ecological region in the world.

Antarctica is the fifth largest continent in the world. This icy continent is surrounded by water, but is also home to the world's largest desert. Antarctica is the coldest, windiest, and driest place on Earth. The coldest temperature ever recorded (-128.6°F/ -88.0°C) was at the South Pole. Antarctica is the only continent without any permanent residents. Many scientists visit the continent, but nobody lives there permanently.

Europe, the sixth largest continent, borders Asia; the two are sometimes referred to as Eurasia. The 46 countries that make up Europe each have unique people, places, history, and geography. Many people like to visit this continent, so they can learn about the different countries. Europe is the most popular vacation region in the world.

Australia is the smallest continent in the world; it is also considered to be a country. Its nickname is the "Land Down Under." Australia is famous for its 1,000-mile-long Great Barrier Reef. It is the largest coral reef on Earth and is home to many animals, including sharks, starfish, giant clams, and fish. The continent is made up of both rainforest and desert.

Name _____

Use with Life Science.

Read the passage and then answer the questions.

A History of Classification Systems

1 Think of the many plants and animals there are. How can scientists keep track of them all? How do they name them all? They look at how plants and animals are alike and different. Then they classify them. They put them into groups. It took many years for people to think of a good system of classification.

2 A Greek man named Aristotle lived over 2,000 years ago. Aristotle looked at the characteristics of things that were alive. Then he thought of some ways to group them. For example, he put animals with red blood in one group. He put animals without red blood in another group. Then he put the animals in each group into smaller groups.

3 People used Aristotle's system for many years. There were some problems with it, though. Over time, people learned more about plants and animals. They saw that some of his groups put the wrong things together. Also, many plants and animals had very long names.

4 About 250 years ago, a scientist named Carl Linnaeus came up with a new system. People were discovering many new plants. They needed a better way to name them. Linnaeus had a great idea. He would give each plant and animal a name with two parts. One part told the genus. The other told the species.

5 Linnaeus thought about what people had learned about plants and animals. He made new groups. Many scientists still use his system of classification today.

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Name _____

Use with Life Science.

Fill in the circle of the correct answer.

1. What is another word that is similar in meaning to classify?

Ⓐ idea
Ⓑ group
Ⓒ compare
Ⓓ contrast

2. Which sentence BEST tells what this passage is mostly about?

Ⓐ Aristotle was a Greek.
Ⓑ Some animals have red blood.
Ⓒ People have used several different systems of classification.
Ⓓ Linnaeus invented a new classification system.

3. How did Aristotle classify animals and plants?

Ⓐ He used their common names.
Ⓑ He compared them to nonliving things.
Ⓒ He read the work of Linnaeus.
Ⓓ He looked at their characteristics.

4. Which two words are antonyms?

Ⓐ alike, different
Ⓑ plants, animals
Ⓒ genus, species
Ⓓ alive, blood

5. What is one reason that Linnaeus's new naming system was good?

Ⓐ It used shorter names.
Ⓑ It named both plants and animals.
Ⓒ It was new.
Ⓓ It helped people discover new plants.

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