

Science and Social Studies in *Reading Mastery Plus III*

READING MASTERY PLUS III.....	3
Kinds of Measurement	3
How Far Apart Things Are	3
Instruments and Tools of Science	4
The World Around Us	4
Facts About Water	4
Facts about Sound	5
Facts About Fire.....	5
Facts About the Sun	5
Facts About Air.....	5
Facts About Motion	5
Plants.....	6
Trees.....	6
Animals	6
Facts About Animals.....	6
Body Temperature of Animals.....	6
Camels.....	7
Pigs.....	7
Birds	7
Moles.....	7
Horses	7
Peacocks.....	8
Kangaroos	8
Toads and Frogs	8
Insects	8
Ants	8
Fleas	8
Flies.....	9
Spiders.....	9
Boats.....	9
Parts of a Ship	9
Ocean Liners	9
Landing a Ship	9
Airplanes.....	10
Facts about Airplanes.....	10
Airplane Crew Members.....	10
Wells.....	10
Facts About Wells.....	10

Crude Oil.....	10
Liquids Found Underground.....	10
Maps.....	10
Directions on a Map.....	10
Opposite Directions	10
Identifying Places on a Map	11
Facts About Islands.....	11
Facts about Countries.....	11
The United States	12
Geographic Facts	12
Historical Facts	12
History.....	12
Time Lines	12
Ancient Greece.....	12
Prehistoric People	13
How to Fill Out Forms.....	13
Bank Forms.....	13

Reading Mastery Plus III

Kinds of Measurement

How Far Apart Things Are

1. Centimeters
 - a. An inch is longer than a centimeter – 8, 11
 - b. 100 centimeters equals one meter—14
2. Meters
 - a. A meter is 100 centimeters long – 14
 - b. A meter is a name that tells about length—17
3. Miles
 - a. We use miles to tell how far it is between places that are far apart – 23
 - b. A mile is a little more than five thousand feet - 23
 - c. If you flew from the east side of the United States to the west side of the United States, you would go about 25 hundred miles - 24
 - d. If you flew from the north side of the US to the south side of the US, you would go about 13 hundred mile – 24
 - e. A trip from New York City to San Francisco is about 2,500 miles—39
4. A ruler is one foot long – 17
5. Grams
 - a. All grams are the same weight - 32
 - b. Grams are used to weigh very small things—32
 - c. A long pencil weighs about 5 grams—32
 - d. A short pencil weighs about 2 grams—32
 - e. A block of water that is 1 centimeter on all sides weighs one gram—32
 - f. Most insects weight much less than a gram – 33
 - g. A cherry weights about 10 grams—33
 - h. An apple weighs about 200 grams—33
 - i. It would take about thirty houseflies to weigh one gram—33
 - j. 100 ants weigh about 1 gram—40
6. Time
 - a. A week is seven days long – 13
 - b. A second is a unit of time – 95
 - c. There are 60 seconds in a minute – 116
 - d. When the fast hand on a clock goes all the way around the clock, one minute goes by – 116
7. Speed
 - a. Names that tell how fast things move have two parts – 19
 - i. Miles per hour – 19, 36
 - ii. Meters per second – 19
 - iii. Centimeters per minute – 22
 - b. A fast man can run 20 mph – 41
 - c. A fast dog can run 35 mph – 41
 - d. A racing car can go 200 mph – 41

- e. A jumbo jet flies 500 mph – 41
- 8. Temperature
 - a. Something that is very hot has a high temperature – 42
 - b. Something that is very cold has a low temperature – 42
 - c. When an object gets hotter, the temperature goes up – 42
 - d. When you go higher, the temperature gets lower – 51
 - e. Degrees
 - i. When an object gets hotter, the temperature goes higher—42
 - ii. We measure temperature in degrees – 43
 - iii. When the temperature goes up, the number of degrees gets bigger – 43
 - iv. Boiling water will thaw ice in a few moments—43
 - v. The temperature on a hot summer day may reach 100 degrees—43
 - vi. The temperature on a cold day may get down to zero degrees—43
 - f. Fevers
 - i. When you have a fever, you are sick and your temperature goes up – 62
 - ii. Most fevers don't go over 101 degrees – 62
 - iii. A very high fever of more than 104 degrees may damage a person's brain—62
 - iv. When people have high fevers, they may see things and hear things that are not real—62

Instruments and Tools of Science

- 1. When you look through binoculars, things look very, very big – 19 (*picture*)
- 2. Speedometers – 38
 - a. Miles per hour tells how fast something is moving—38
 - b. The faster something is moving, the bigger the numbers—38
- 3. All machines make it easier for you to do work—58

The World Around Us

Facts About Water

- 1. Water Has a Skin
 - a. The top of the water is not flat – 29
 - b. The skin bends up in the middle – 29
 - c. Water drops have a skin that goes all the way around them – 31
 - d. The skin is tough enough that little insects called water striders walk on top of the water—31
 - e. The skin of water can be punctured with a piece of hair—31
- 2. Facts About Dew
 - a. The drops of water that you see on the grass and cars early in the morning are called dew—29
 - b. Dew forms at night when the air gets cooler – 29
 - c. Dew disappears in the morning when the air warms up – 29
- 3. Ocean Water
 - a. Ocean water tastes salty because it has some salt in it – 53
 - b. If you drink a lot of ocean water, you'll get thirstier—53

- c. A bottle of ocean water weighs more than a bottle of fresh water because of the salt in the ocean water—53
 - d. It's easier to float in ocean water than in fresh water – 53
 - e. Ocean water must get colder than fresh water before it will freeze—53
- 4. Whirlpools
 - a. The water in a whirlpool spins around and around. It also goes down – 19
 - b. Sometimes large whirlpools form in the ocean—53
 - c. Anything caught in the whirlpool goes around faster and faster as it gets closer to the center—53
 - d. The object farthest from the center moves slowest and the object closest to the center moves fastest—53

Facts about Sound

- 1. If you get smaller, your voice gets higher—35
- 2. Vibrating rulers: the shorter the ruler, the higher the sound—35
- 3. Vibrating rulers: the shorter the ruler, the higher the sound—35

Facts About Fire

- 1. When there is a fire, all animals try to get away from the fire – 21
- 2. If you put things in a fire, those things will get hot – 84
- 3. Fire likes to move up—84
- 4. Because fire moves up, heat moves up—84

Facts About the Sun

- 1. The sun always comes up in the east at sunrise—61
- 2. The sun always goes down in the west at sunset—61
- 3. When the sun is coming up in the east, it is morning—61
- 4. When the sun is right overhead, it is noon—61
- 5. When the sun sets in the west, it is evening—61

Facts About Air

- 1. Smoke and Wind
 - a. The smoke moves in the same direction the wind moves – 21
 - b. The bigger the wind, the faster it moves a fire – 5
- 2. Air over the ocean is cool—44
- 3. How Air Moves an Object
 - a. The balloon moves the opposite direction the air moves – 22, 36
 - b. There is air all the way around the earth – 51

Facts About Motion

- 1. A Push in the Opposite Direction
 - a. If something tries to move in one direction, something else tries to move in the opposite direction – 36
 - b. Boat paddles – 37
 - c. Jet engines – 37

Plants

Trees

1. Roots
 - a. Trees have roots. The roots are under the ground – 3
 - b. The roots hold the tree up to keep it from falling over – 3
 - c. The roots carry water from the ground to all parts of the tree – 3
 - d. The more sunlight a tree gets, the faster the tree grows – 6
2. Palm Trees
 - a. Palm trees grow in places that are very warm – 56
 - b. Palm trees cannot live in places that get cold – 56
 - c. Palm trees have very small roots – 56
 - d. The branches of palm trees are called fronds – 56
 - e. Some palm trees grow dates. Some palm trees grow coconuts – 56
 - f. Coconuts
 - i. A coconut is about as big as a football – 57
 - ii. Coconuts are not easy to open – 57
 - iii. Coconuts have two shells, one inside the other – 57
 - iv. Each shell is so hard that it wouldn't break if you hit it one time with a hammer – 57
 - v. Inside the second shell is sweet, white coconut meat – 57
 - vi. Inside the coconut meat is sweet juice, called coconut milk – 57
3. Apple Trees
 - a. Apple trees are short and not straight – 4
 - b. Apple trees have large branches – 4
 - c. Apple trees have white flowers in the spring – 4
 - d. The more sunlight apple trees get, the more apples they make—10
4. Forests
 - a. A forest is a place with lots of tall trees that are close together – 5
 - b. When a forest burns, it is called a forest fire – 5

Animals

Facts About Animals

1. All living things grow, and all living things need water – 1
2. All living things make babies –1
3. If tiny animals fall from high places, they don't get hurt—29
4. The food that very small animals eat each day may weigh as much as the animal—32
5. Animals are safer when they run together in a herd – 88

Body Temperature of Animals

1. Cold-Blooded
 - a. All insects are cold-blooded – 49
 - b. If an animal is cold-blooded, the inside temperature of that animal changes when the outside temperature changes – 49

- c. The body of a cold-blooded animal slows down when it gets cold—49
- 2. Warm Blooded
 - a. If an animal is warm-blooded, the temperature inside that animal's body always stays the same – 49
 - b. Robins, rabbits, dogs, cows, humans, horses, and deer are examples of warm-blooded animals—49
 - c. Humans are warm blooded—49
 - d. The normal body temperature of humans is 98 degrees—49

Camels

- 1. A camel has a large hump on its back—6
- 2. A camel has a long tail—6
- 3. The hooves of camels are very wide and flat—6, 7
- 4. Camels live in places that are very dry and sometimes don't get rain for years—7
- 5. Camels work like trucks that carry things—7
- 6. Camels can go for ten days without drinking water—7
- 7. A camel that is one thousand pounds can drink as much as 250 pounds of water at one time—7

Pigs

- 1. Pigs have hooves—6
- 2. A pig has a short curly tail—6

Birds

- 1. Birds have feathers – 21
- 2. Myna birds are very smart—56
- 3. Myna birds are black with yellow beaks—56

Moles

- 1. Moles are animals that spend nearly all their time underground – 18
- 2. Bigger moles are about the same size as toads—18
- 3. Moles cannot see very well. Some types of moles cannot see at all. They have skin growing over their eyes – 18
- 4. Moles have legs that work like shovels – 18, 23

Horses

- 1. Draft horse
 - a. A draft horse is good at pulling heavy things – 86
- 2. Racehorse
 - a. Racehorses are fast – 86
 - b. Racehorses run faster than any other kind of horse – 86
 - c. A big racehorse is about 2 meters tall at the head – 86
- 3. Quarter Horse
 - a. They can stop, start and turn faster than racehorses because they are stronger than racehorse – 86
 - b. Quarter horses are good for chasing cows and for riding over rough ground – 86

4. Mongolian Horse
 - a. The Mongolian horse was the kind of horse that lived 30 thousand years ago – 86
5. Ponies
 - a. The pony is full grown, but it gets no bigger than a large dog – 86
 - b. It is a little over a meter tall at the shoulders – 86

Peacocks

1. A peacock is a large bird – 115
2. A full-grown peacock is two meters long from its head to the end of its tail – 115

Kangaroos

1. There are many different kinds of kangaroos – 114
2. When a kangaroo is born, it is only three centimeters long – 114
3. The baby kangaroo lives in its mother's pouch for half a year – 114
4. Kangaroos have strong back legs and strong tails – 114

Toads and Frogs

1. They are born in water, and they live in the water until they are full grown – 15
2. At first toads and frogs are tadpoles that have no legs—15
3. Toads have skin that is rough and covered with warts—16
4. No toads have teeth, but some frogs have teeth—16
5. The back legs of toads are not as big or strong as the back legs of frogs –16
6. Toads eat flies—17

Insects

1. An insect has six legs – 41
2. The body of an insect has three parts – 41
3. All insects are cold-blooded—49

Ants

1. Ants are insects—26
2. Some ants are red and some ants are black—26
3. An ant can carry an object that weighs ten times as much as the ant – 26
4. It would take about one hundred ants to weigh as much as a peanut—26
5. Ants have six legs—26, 41

Fleas

1. Fleas are insects—12
2. Fleas have six legs—12
3. Fleas bite and suck blood – 12
4. A row of about five big fleas is one centimeter long—12
5. Different kinds of fleas live on different kinds of animals—12
6. Flea Circuses
 - a. Most fleas that are used in flea circuses come from Russia—13
 - b. Fleas have been taught to juggle things—13

- c. Fleas have been taught to jump through hoops—13
- d. Some fleas have been taught to pull things that were a hundred times more than a flea—13
- e. The first trick a flea must be taught is to walk instead of hop—13

Flies

1. Flies have six legs—41
2. Flies do not grow—they are full-grown when they become flies—37
3. Flies do not grow on the outside, but they change size on the inside—37
4. When flies are born they are worms called maggots—37
5. Flies are full grown in 9 days—37
6. A fly can see in all directions at the same time—46
7. The eye of the fly is different from a human eye—47 (*picture*)
8. A fly's eye is made up of many drops that each catches a (*picture*)—47

Spiders

1. A spider is not an insect – 12, 48
2. Most spiders kill insects by biting them—47
3. Then they wrap the insect in a web—47
4. Later they eat the best parts—47
5. Spiders have eight legs – 48
6. The body of a spider has two parts – 48
7. Many spiders make webs to catch insects – 48
8. Some spiders are bigger than your fist – 48
9. Most spiders are not poisonous to people – 48

Boats

Parts of a Ship

1. The front of the ship is called the bow—53 (*picture*)
2. The back of the ship is called the stern—53 (*picture*)
3. The floors of a ship are called decks—53 (*picture*)
4. The walls are called bulkheads—53 (*picture*)

Ocean Liners

1. An ocean liner is a very large ship – 53
2. An ocean liner carries passengers – 53

Landing a Ship

1. Ships land in harbors – 63
2. Ships load and unload at docks – 63
3. Sometimes a tug boat pulls a large ship to the dock – 63

Airplanes

Facts about Airplanes

1. The jet engine pushes air toward the back of the plane—37
2. The faster the jet engines shoot air toward the back of the plane, the faster the plane moves forward—37
3. The air rushes out the back of a jet engine—42
4. The kitchen on an airplane is called a galley—43
5. Planes go the fastest when they go in the same direction the wind is blowing—45
6. The fuel tanks in a jet are in the wings—52
7. Airplanes land in airports – 63
8. Airplanes load and unload at gates – 63
9. Sometimes a little truck pulls an airplane to the gate – 63

Airplane Crew Members

1. The pilot and some other crewmembers work in the front of the plane. They fly the plane – 39
2. The flight attendants work in the back of the plane. They take care of the passengers – 39

Wells

Facts About Wells

1. A well is a deep hole in the ground – 71
2. The well has a pipe in it so the hole stays open – 71

Crude Oil

1. Crude oil is a dark liquid that can be changed to make things like gasoline, motor oil, and plastic – 71
2. A refinery changes crude oil into gasoline and other things – 71

Liquids Found Underground

1. Some wells are fresh-water wells that pump fresh water from under the ground – 71
2. Some wells are oil wells that pump crude oil from under the ground – 71

Maps

Directions on a Map

1. Maps always show north on the top, south on the bottom – 14
2. North, south, east, west – 23 (project)

Opposite Directions

1. If you move north, the opposite direction is south – 18
2. If you move up, the opposite direction is down – 18
3. If you move to the left, the opposite direction is to the right – 18

4. The direction you're facing tells the name of the wind when you face the wind so the wind blows in your face - 44

Identifying Places on a Map

1. Countries and Continents
 - a. United States
 - b. Japan—46
2. Cities and Bodies of Water
 - a. New York City—39
 - b. San Francisco—39
 - c. Chicago—43
 - d. Lake Michigan—43
 - e. Denver—43
 - f. Salt Lake City—43
 - g. Pacific Ocean—46

Facts About Islands

1. Islands are small—55
2. There is water on all sides of an island—55

Facts about Countries

1. The United States is a country – 24, 48
2. Canada
 - a. Canada is the country just north of the United States – 73
 - b. Alaska touches the west side of Canada. The rest of the U.S. touches the south side of Canada – 73
 - c. Canada is colder than the United States – 118
 - d. Far more people live in the US than live in Canada – 118
3. Australia – 113
4. Egypt
 - a. Dead kings and queens of Egypt were made into mummies and buried in pyramids – 132
 - b. Egypt has a great river, named the Nile, running through it – 132
 - c. Egypt is famous for its pyramids and palaces – 132
 - d. Pyramids are huge stone buildings that are over five thousand years old – 132
5. Japan
 - a. Japan is smaller than the state of Alaska—48
 - b. More people live in Japan than in Texas, Alaska, and Ohio combined—48
6. Italy
 - a. Italy is about the same size as Japan—51
 - b. 60 million people live in Italy—51
 - c. Italy is shaped like a boot—51, 64
7. Greece is between Italy and Turkey—64
8. Troy is part of the country Turkey—64

The United States

Geographic Facts

1. New York City is on the east side of the US—39
2. San Francisco is on the west side of the US—39
3. There are fifty states in the US—48
4. Alaska is the biggest state—48
5. Texas is the second biggest state—48
6. California is the third biggest state—48
7. Ohio is a smaller state—48
8. The United States is much bigger than the country of Japan—48
9. Alaska is bigger than Japan—48 (*picture*)

Historical Facts

1. The US once was part of another country called England – 144
2. In 1776, the US announced that it was a new country – 144
3. England went to war with the United States – 144
4. The leader of the US Army was George Washington – 144
5. The US won the war with England – 144
6. George Washington became the first president of the United States – 144

History

Time Lines

1. The numbers get smaller as you go back in time – 64
2. Things that happen right now are at the top of the time line – 64
3. Things that happened a long time ago are near the bottom of the time line – 64
4. The numbers for the years get smaller as you go back in the past – 128

Ancient Greece

1. The Trojan War
 - a. Three thousand years ago there was a war between Troy and Greece—65
 - b. There were no cars or buses in Troy—65
 - c. There were no telephones, televisions, electric lights or refrigerators in Troy—65
 - d. They had battles and wars using bows, arrows, and spears—65
 - e. The city of Troy had a great wall around it—65
 - f. When the gate in the wall was closed, you could not get into the city of Troy—65
 - g. The army of Greece used four plans to get inside Troy: climbing over the wall, digging under the wall, breaking down the gate, starving the people of Troy—65
 - h. The war lasted 10 years—67
 - i. The army of Greece tricked the people of Troy with a large wooden horse—67
 - j. Greece won the war—67
2. Transportation
 - a. Horses were used to pull carts on land—81

- b. Chariots, vehicles with two wheels that were pulled by horses, were used in battle—81

Prehistoric People

- 1. Cave People
 - a. They lived in caves—84
 - b. Cave people learned to use fire—84
 - c. Cave pictures show how people lived—84
- 2. Vikings
 - a. Vikings were great fighters – 142
 - b. Vikings sailed across the ocean to America before Columbus did – 142
 - c. Viking lived far north of Italy and Spain – 142
 - d. The Vikings lived where the winters are very long and cold – 142

How to Fill Out Forms

Bank Forms

- 1. Filling out a bank form – 89
- 2. Checks
 - a. A check tells the bank how much money to pay somebody – 91