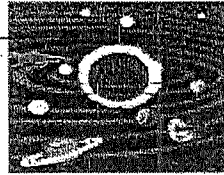


The Inner Planets

Cross-Curricular Focus: Earth Science



Earth is just one of the planets in our solar system. Planets are large bodies that rotate around the sun. They reflect its light and warmth. The planets that are located closest to the sun are made out of rocky material. They are relatively small and heavy. In contrast, the planets that are farther away from the sun are much larger. They are formed of light gases. All planets follow a certain path around the sun. They are held a specific distance from the sun by the sun's strong gravitational force.

The inner planets, or those closest to the sun, are Mercury, Venus, Earth and Mars. Even though these planets are all small and rocky, they have more differences than they have things in common.

Because Mercury is the closest to the sun, the side that faces the sun gets as hot as 427° Celsius. At the same time, the side that faces away from the sun is a freezing -173° Celsius. Mercury also has a slower rate of rotation than Earth. Days and nights on Mercury are much longer than ours. The extreme temperatures alone make it a very unlikely place for life. With an atmosphere too thin for human breathing, it's obvious that people won't be living on Mercury any time soon.

The next planet from the sun is Venus. Below clouds of sulfuric gas lies its 96% carbon dioxide atmosphere. That might be nice for a plant, since a plant "breathes" carbon dioxide, but not for a person. If you managed to survive the atmosphere, the surface of the planet is hot enough to melt solid metal. In addition, the pressure of the air would be strong enough to crush you.

You are probably most familiar with Earth because it is your home planet. It has the perfect conditions for life. Earth's atmosphere and oceans help control the trickiest part of making a planet life-friendly: temperature. Earth is the only planet known to have liquid water.

Mars is the fourth farthest from the sun. Mars has been studied and photographed more than any other planet besides Earth. Some people think it may be possible for life to exist there. Although scientists have not been able to find actual water on Mars, there seems to be evidence of water erosion on its surface. Its canyons and mountains are very similar to those found on Earth. The main difference is that there is no plant life. Some scientists believe that Mars may have been very much like Earth until something happened that made the water supply evaporate.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What keeps planets rotating a specific distance from the sun? _____

2) Earth is the only know planet to have what important feature? _____

3) Why is the atmosphere of Venus more friendly to plants than humans? _____

4) Why is there such a the huge difference in temperature between the two sides of the planet Mercury? _____

5) Do you think that people will ever be able to colonize other planets in the future? Why or why not? _____

Represent Division of 2-Digit Divisors

Name _____

Review

It can help to start with divisors that are multiples of 10 when making your area models to find a quotient.

$$792 \div 36$$

36	
$36 \times 10 = 360$	10
$36 \times 10 = 360$	10
$36 \times 2 = 72$	+ 2
	<u>22</u>

$$792 \div 36 = 22$$

$$\begin{array}{r} 792 \\ - 360 \\ \hline 432 \\ - 360 \\ \hline 72 \\ - 72 \\ \hline 0 \end{array}$$

Find each quotient. Use an area model to solve.

1. $840 \div 24 =$ _____

3. $858 \div 26 =$ _____

2. $6,532 \div 71 =$ _____

4. $22,464 \div 54 =$ _____

What is the quotient? Use an area model and partial quotients to solve.

3. $1,760 \div 32 =$ _____

4. $748 \div 22 =$ _____

5. $2,961 \div 63 =$ _____

6. $4,482 \div 54 =$ _____

7. The area of a rectangular wall is 882 square feet. The wall is 18 feet tall. How long is the wall?

_____ feet

8. The playground at a school is in the shape of a rectangle. The playground covers an area of 6,364 square feet. The playground is 86 feet long. What is the width of the playground?

_____ feet



With your child, make a set of number cards using the digits 1 through 9. Have your child select two of the cards to form a 2-digit number. Then you select two more cards and form another 2-digit number. Away from your child, multiply the two 2-digit numbers. Tell your child the product. Then have him or her find the 2-digit number formed from the cards you selected. Have your child explain how they found the answer. Return the cards to the set and repeat the activity.

Use Partial Quotients to Divide

Name _____

Review

You can use partial quotients to divide.

$$3,648 \div 64$$

$$\begin{array}{r} 64 \overline{) 3,648} \\ - 2,560 \\ \hline 1,088 \\ - 640 \\ \hline 448 \\ - 448 \\ \hline 0 \end{array}$$

40

10

It can help to work with multiples of 10.

$$3,648 \div 64 = 57$$

Find each quotient. Use the partial quotients algorithm to solve.

1. $882 \div 18 =$ _____

3. $2,405 \div 65 =$ _____

2. $946 \div 43 =$ _____

4. $1,988 \div 28 =$ _____

What is the quotient? Use partial quotients to solve.

3. $518 \div 14 =$ _____

4. $756 \div 36 =$ _____

5. $3,285 \div 45 =$ _____

6. $15,392 \div 74 =$ _____

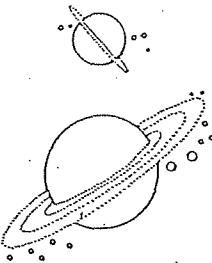
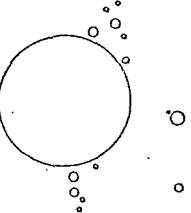
7. Madeleine rides her bicycle around a track. She rides 14 laps and counts the number of times she pushes on each pedal. If the total count is 1,372, how many times does Madeleine push on each pedal for one lap?

_____ times



With your child, make a set of number cards using the digits 1 through 9. Have your child select two of the cards to form a 2-digit number. Then you select two more cards and form another 2-digit number. Away from your child, multiply the two 2-digit numbers. Tell your child the product. Then have him or her use partial quotients to find the 2-digit number formed from the cards you selected. Have your child explain how they found the answer. Return the cards to the set and repeat the activity.

Lost in Space

A P E G A S U S M E T E O R O I D U A S
C L L S A T E L L I T E O X Y G E N U A
Y U M A S T R O N O M E R B C D E I R T
G T G O N E B U L A C A L N O V A V O U
N O F G O E A R T H I R R E N J W E R R
U O R I O N T O U T E R A S S K A R A N
S O B S E R V A T O R Y O T T C Y S B L
M V E N U S M O R B I T I N E A O E O U
I N M E R C U R Y I L I F E L R R P R R
L O P P P R O B E Q U R G A L A X Y E S
K S S T J U P I T E R M Q U A S A R A A
Y P U U F L Y T H E L I U M T V W X L M
W A Y N U R A N U S Z A P R I N G S I A
A C D E L I G H T Y E A R C O M E T S J
Y E S O L A R S Y S T E M Y N D R A C O
A S T E R O I D B L A C K H O L E F G R
Z G R A V I T Y A L P H A C E N T U R I
C A S S I O P E I A A T M O S P H E R E

ALPHA CENTURI
ASTEROID
ASTRONOMER
ATMOSPHERE
AURORA BOREALIS
BLACK HOLE
CASSIOPEIA
COMET
CONSTELLATION
CRATER
CYGNUS
DRACO
EARTH
GALAXY
GRAVITY
HELIUM

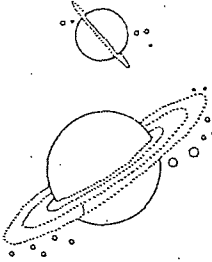
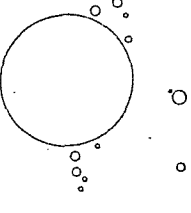
LIGHT YEAR
JUPITER
MARS
MERCURY
METEOROID
MILKY WAY
MOON
NEBULA
NEPTUNE
NOVA
OBSERVATORY
ORBIT
ORION
OXYGEN
PEGASUS
PLANETARIUM

PLUTO
PROBE
QUASAR
RINGS
SATELLITE
SATURN
SPACE
SOLAR SYSTEM
SUN
STAR
TELESCOPE
UNIVERSE
URANUS
URSA MAJOR
VENUS

Bonus:

Circle each constellation in the word list.
Make a box around each planet in the word list
Underline another name for the "Northern Lights."

Lost in Space

A P E G A S U S M E T E O R O I D U A S
C L L S A T E L L I T E O X Y G E N U A
Y U M A S T R O N O M E R B C D E I R T
G T G O N E B U L A C A L N O V A V O U
N O F G O E A R T H I R R E N J W E R R
U O R I O N T O U T E R A S S K A R A N
S O B S E R V A T O R Y O T T C Y S B L
M V E N U S M O R B I T I N E A O E O U
I N M E R C U R Y I L I F E L R R P R R
L O P P P R O B E Q U R G A L A X Y E S
K S S T J U P I T E R M Q U A S A R A A
Y P U U F L Y T H E L I U M T V W X L M
W A Y N U R A N U S Z A P R I N G S I A
A C D E L I G H T Y E A R C O M E T S J
Y E S O L A R S Y S T E M Y N D R A C O
A S T E R O I D B L A C K H O L E F G R
Z G R A V I T Y A L P H A C E N T U R I
C A S S I O P E I A A T M O S P H E R E

ALPHA CENTURI
ASTEROID
ASTRONOMER
ATMOSPHERE
AURORA BOREALIS
BLACK HOLE
CASSIOPEIA
COMET
CONSTELLATION
CRATER
CYGNUS
DRACO
EARTH
GALAXY
GRAVITY
HELIUM

LIGHT YEAR
JUPITER
MARS
MERCURY
METEOROID
MILKY WAY
MOON
NEBULA
NEPTUNE
NOVA
OBSERVATORY
ORBIT
ORION
OXYGEN
PEGASUS
PLANETARIUM

PLUTO
PROBE
QUASAR
RINGS
SATELLITE
SATURN
SPACE
SOLAR SYSTEM
SUN
STAR
TELESCOPE
UNIVERSE
URANUS
URSA MAJOR
VENUS

Bonus:

Circle each constellation in the word list.
Make a box around each planet in the word list
Underline another name for the "Northern Lights."

Relate Partial Quotients to an Algorithm

Name _____

Review

Find the quotient of $7 \overline{)305}$.

When dividing, you can use partial-quotients or an algorithm.

Partial Quotients	Algorithm
$ \begin{array}{r} 7 \overline{)305} \\ \underline{-280} \quad 40 \\ 25 \\ \underline{-21} \quad 3 \\ 4 \quad 43 \frac{4}{7} \end{array} $	$ \begin{array}{r} 43 \frac{4}{7} \\ 7 \overline{)305} \\ \underline{-28} \\ 25 \\ \underline{-21} \\ 4 \end{array} $

The quotient is $43 \frac{4}{7}$.

What is the quotient? Use partial quotients to divide.

1. $6 \overline{)402}$

2. $9 \overline{)928}$

What is the quotient? Use an algorithm to divide.

3. $4 \overline{)356}$

4. $8 \overline{)419}$

What is the quotient? Use an algorithm to divide.

5. $3 \overline{)174}$

6. $5 \overline{)545}$

7. $9 \overline{)546}$

8. $6 \overline{)845}$

-
9. Three bears weigh 525 pounds. If each bear weighs the same, how much would each bear weigh?

10. Jorah has 134 books he wants to place on 6 shelves. How many books might be on each shelf? Explain your reasoning.



Have your child write a 3-digit number. Then have your child roll a number cube. If the number cube lands on 1, have your child choose 7, 8, or 9. Have your child divide the 3-digit number by the number he or she rolled on the number cube. Repeat as time permits.

Lesson 7-6 • Reinforce Understanding

Use an Algorithm to Divide

Name _____

Review

You can use an algorithm to divide. Sometimes the quotient has a remainder.

$$175 \div 15$$

$$\begin{array}{r} 11 \\ 15 \overline{) 175} \\ \underline{-15} \\ 25 \\ \underline{-15} \\ 10 \end{array}$$

$$175 \div 15 = 11 \frac{10}{15}$$

Use an algorithm to solve. Two of the answers will have remainders.

1. $756 \div 12 =$ _____

3. $2,366 \div 26 =$ _____

2. $825 \div 58 =$ _____

4. $3,535 \div 82 =$ _____

What is the quotient? Use an algorithm to divide.

3. $23 \overline{)834}$

4. $49 \overline{)512}$

5. $82 \overline{)2,267}$

6. $65 \overline{)4,441}$

-
7. One day 2,788 apples were picked at an apple orchard. The apples were placed into bags with 32 apples in each bag. How many bags were filled? How many apples were left over?
8. Lily is using 135 stickers to decorate the pages in her scrapbook. She wants to use the same number of stickers to decorate each page with no stickers left over. Should she use 15 or 20 stickers to decorate each page? Explain.



With your child, make a set of number cards using the digits 0 through 9. Have your child select two of the cards to form a 2-digit number and then four more cards to form a 4-digit number. Have your child use an algorithm to find the quotient and remainder when the 4-digit number is divided by the 2-digit number. Tell your child to replace the cards and choose new numbers to repeat the activity.