



MID-YEAR STUDY GUIDE

5TH GRADE

****Let's see how much we've learned!!!****

Keep the brain sharpened over the break! Use the attached pages and materials to practice Reading, Math, and Science.

What to do:

Work on a page or two a day. Do not try to complete everything in just a few days. Spread it out to a few pages a day. Bring it back on Monday, January 6, 2020 so we can review and answer any questions you may have.

See you next year! Happy 2020!

****¡Veamos cuanto hemos aprendido!****

¡Mantengan el cerebro activo durante las vacaciones! Usen las páginas y materiales adjuntos para practicar Lectura, Matemáticas y Ciencias.

¿Qué hacer?

Completen una o dos páginas por día. No intenten hacer todo en solo unos días. Entreguen la tarea el lunes, 6 de enero de 2020 para que podamos revisarlo y responder cualquier pregunta que puedan tener.

¡Nos vemos el próximo año!

¡Feliz 2020!

NAME: _____

TEACHER: _____

*ELA: Progress pgs. 39-52 *MATH: See attached *SCIENCE: See attached

MAFS Bell Ringers by Topic
MAFS.4.NBT.1.2
Prerequisite
Number and Operation in Base Ten

Day 1

Select all answers that show 54,625 written in expanded form.

- ☐ 5 ten-thousands, 46 hundreds, 25 ones
- ☐ 5 ten-thousands, 4 thousands, 62 hundreds, 5 ones
- ☐ 50 thousands, 46 hundreds, 20 tens, 5 ones
- ☐ 50 thousands, 40 hundreds, 60 tens, 25 ones
- ☐ 54 thousands, 6 hundreds, 2 tens, 5 ones

Day 2

Which statements correctly compare two numbers? Select all that apply.

- ☐ $3,259 > 3,295$
- ☐ $3,295 < 3,259$
- ☐ $3,259 < 3,295$
- ☐ $3,295 > 3,259$
- ☐ $3,259 = 3,295$

Day 3

Write $6 \times 10,000 + 5 \times 1,000 + 2 \times 100 + 3 \times 1$ in standard form.

Answer: _____

MAFS Bell Ringers by Topic
MAFS.4.NBT.1.2
Prerequisite
Number and Operation in Base Ten

Day 4

Which phrase represents 253?

- A. Two hundred three
- B. Two hundred fifty-three
- C. Twenty-five three
- D. Two thousand fifty-three

Day 5

Match the name of each number with its standard form.

	600,005	600,050	605,000	650,000
<i>Six hundred five thousand</i>				
<i>Six hundred thousand fifty</i>				

MAFS Bell Ringers by Topic
MAFS.4.NBT.2.5
Prerequisite
Number and Operations in Base Ten

Day 1

Select all the expressions that have a product of 420.

- ☐ 35×12
- ☐ $(3 \times 5) \times (10 \times 2)$
- ☐ $(40 \times 10) \times (2 \times 4)$
- ☐ 40×20
- ☐ 14×30

Day 2

Write an equation and solve to show the product of 2,830 and 3?

Day 3

The Science Club is selling donuts after school to raise money for science lab materials. The club sells 3,006 donuts each month. How many donuts will they sell in 7 months?

MAFS Bell Ringers by Topic
MAFS.4.NBT.2.5
Prerequisite
Number and Operations in Base Ten

Day 4

Multiply 83×25 using an area model.

Day 5

Which of the following are equal to 360×4 ? Select all that apply.

☐ $(4 \times 300) + (4 \times 60)$

☐ $360 + 360 + 360 + 360$

☐ $(4 \times 300) + (4 \times 6)$

☐ 1,440

☐ $(4 \times 300) + (40 \times 6)$

MAFS Bell Ringers by Topic
MAFS.4.OA.1.2
Prerequisite
Operations and Algebraic Thinking

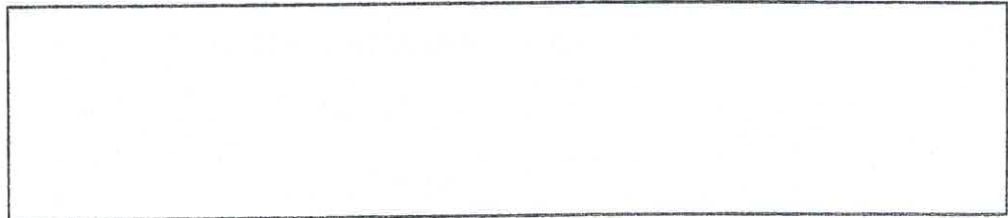
Day 1

The number of Blue Jays on a tree is 5 times the number of Red Robins. Combined there are a total of 48 birds on the tree. How many Blue Jays are on the tree?

- A. 43
- B. 53
- C. 40
- D. 8

Day 2

Thomas bought 7 dozen roses for the wedding. The roses were divided equally into 6 equal vases. How many roses are in each vase?



Day 3

Dwight delivers newspapers. In the first week, he delivers 8 papers. In the second week, he delivers 10 times as many papers. How many papers does Dwight deliver in both weeks?

- A. 80
- B. 18
- C. 88
- D. 10

MAFS Bell Ringers by Topic
MAFS.4.OA.1.2
Prerequisite
Operations and Algebraic Thinking

Day 4

Two students were trying to see how far they could throw a football. Sadie threw the football 48 yards and William threw the football 6 yards. How many times farther did Sadie throw the football than William? Write an equation and solve. Use a symbol for the unknown number.

Day 5

Use the information in the table to answer the questions.

Number of Basketball Free Throws Made

	Martha	Lori
Week 1	5	3 times Martha
Week 2	4 times Lori	4

How many free throws did Lori make in week 1?

Who made more total free throws?

MAFS Bell Ringers by Topic
MAFS.4.OA.2.4
Prerequisite
Operations and Algebraic Thinking

Day 1

What are all of the factors of 12?

- A. 1, 12
- B. 2, 3, 4
- C. 1, 6, 4, 12
- D. 1, 2, 3, 4, 6, 12

Day 2

Which factors do 32 and 48 have in common? Select all that apply?

- | | |
|----------------------------|-----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 6 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 8 |
| <input type="checkbox"/> 3 | <input type="checkbox"/> 16 |
| <input type="checkbox"/> 4 | <input type="checkbox"/> 32 |

Day 3:

Juwan is arranging tables for a dinner party. He wants to put 16 tables into a rectangular array. Complete the table below to show three ways Juwan can arrange the tables.

	Number of Rows	Number of Tables in Each Row
Arrangement 1		
Arrangement 2		
Arrangement 3		

MAFS Bell Ringers by Topic
MAFS.4.OA.2.4
Prerequisite
Operations and Algebraic Thinking

Day 4

Select all the numbers between 80 and 100 that have exactly 4 factors, one of which is 5.

- ☐ 80
- ☐ 85
- ☐ 90
- ☐ 95
- ☐ 100

Day 5

Determine whether each number is prime or composite.

	Prime	Composite
16		
13		
12		
9		
7		

MAFS Bell Ringers by Topic
Grade 5 Chapter 1
Fluency with Whole Numbers and Decimals

Day 1:
Fluency:

$$\begin{array}{r} 564 \\ - 127 \\ \hline \end{array}$$

$$\begin{array}{r} 626 \\ - 232 \\ \hline \end{array}$$

$$\begin{array}{r} 848 \\ - 394 \\ \hline \end{array}$$

MAFS.5.NBT.1.1

Which statements about the values below are true?

- ☐ 4000 is 1000 times as much as 4
- ☐ 4000 is 100 times as much as 4
- ☐ 4000 is 10 times as much as 400
- ☐ 40 is $\frac{1}{10}$ of 400
- ☐ 4 is $\frac{1}{10}$ of 400

Day 2:
Fluency:

$$\begin{array}{r} 218 \\ - 195 \\ \hline \end{array}$$

$$\begin{array}{r} 468 \\ - 282 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ - 382 \\ \hline \end{array}$$

MAFS.5.NBT.1.1

How many times greater is the value of 0.56 than the value of 0.0056?

MAFS Bell Ringers by Topic
Grade 5 Chapter 1
Fluency with Whole Numbers and Decimals

Day 3:
Fluency:

$$\begin{array}{r} 423 \\ - 292 \\ \hline \end{array}$$

$$\begin{array}{r} 473 \\ - 129 \\ \hline \end{array}$$

$$\begin{array}{r} 956 \\ - 117 \\ \hline \end{array}$$

MAFS.5.NBT.2.6

Which expression could be used to find the quotient of $1,575 \div 21$?

- A. $(1,000 \div 21) + (500 \div 21) + (70 \div 21) + (5 \div 21)$
- B. $(1,500 \div 20) + (75 \div 1)$
- C. $(1,575 \div 21) + (575 \div 21) + (75 \div 21) + (5 \div 21)$
- D. $(1,575 \div 21) + (1,575 \div 1)$

Day 4:
Fluency:

$$\begin{array}{r} 663 \\ - 154 \\ \hline \end{array}$$

$$\begin{array}{r} 848 \\ - 675 \\ \hline \end{array}$$

$$\begin{array}{r} 392 \\ - 269 \\ \hline \end{array}$$

MAFS.5.NBT.1.2

What is the value of 10^3 ?

- A. 30
- B. 300
- C. 1000
- D. 3000

Day 5:
Fluency:

$$\begin{array}{r} 264 \\ - 159 \\ \hline \end{array}$$

$$\begin{array}{r} 622 \\ - 116 \\ \hline \end{array}$$

$$\begin{array}{r} 653 \\ - 525 \\ \hline \end{array}$$

MAFS.5.NBT.1.2

What is the value of the missing exponent in the expression $412 \div 10^{\square} = 41.2$?

MAFS Bell Ringers by Topic
Grade 5 Chapter 1
Fluency with Whole Numbers and Decimals

Day 1:

Fluency:

$$\begin{array}{r} 874 \\ - 547 \\ \hline \end{array}$$

$$\begin{array}{r} 324 \\ - 118 \\ \hline \end{array}$$

$$\begin{array}{r} 744 \\ - 632 \\ \hline \end{array}$$

MAFS.5.NBT.2.5

Multiply: $\begin{array}{r} 342 \\ \times 87 \\ \hline \end{array}$

Day 2:

Fluency:

$$\begin{array}{r} 727 \\ - 538 \\ \hline \end{array}$$

$$\begin{array}{r} 622 \\ - 247 \\ \hline \end{array}$$

$$\begin{array}{r} 752 \\ - 201 \\ \hline \end{array}$$

MAFS.5.NBT.2.5

Multiply $2,465 \times 12$

MAFS Bell Ringers by Topic
Grade 5 Chapter 1
Fluency with Whole Numbers and Decimals

Day 3:
Fluency:

$$\begin{array}{r} 623 \\ - 487 \\ \hline \end{array}$$

$$\begin{array}{r} 552 \\ - 476 \\ \hline \end{array}$$

$$\begin{array}{r} 555 \\ - 124 \\ \hline \end{array}$$

MAFS.5.OA.1.2

Which choices below represent the numerical expression $90 \times 5 + 16$? Select all that apply.

- A. Sixteen more than the product of 90 and 5
- B. Ninety greater than 5 and 16
- C. The product of 90 and 5, increased by sixteen
- D. Sixteen added to the result of 90 times 5
- E. The product of 90, 5 and 16
- F. Sixteen added to 90 and 5

Day 4:
Fluency:

$$\begin{array}{r} 843 \\ - 728 \\ \hline \end{array}$$

$$\begin{array}{r} 824 \\ - 632 \\ \hline \end{array}$$

$$\begin{array}{r} 515 \\ - 363 \\ \hline \end{array}$$

MAFS.5.NBT.2.5

The product of the following expression is 14,720?

$$\begin{array}{r} 320 \\ \times \square 6 \\ \hline \end{array}$$

What is the missing digit?

- A. 0
- B. 1
- C. 4
- D. 5

MAFS Bell Ringers by Topic
Grade 5 Chapter 3
Add and Subtract Decimals

Day 1:

Fluency:

$15 \div 5 =$

$60 \div 10 =$

$63 \div 9 =$

$21 \div 7 =$

$77 \div 11 =$

MAFS.5.NBT.1.1

Use place value patterns to complete the table.

Decimal	10 times as much as	$\frac{1}{10}$ of
0.03		
0.5		
0.9		

Day 2:

Fluency:

$48 \div 6 =$

$144 \div 12 =$

$18 \div 6 =$

$49 \div 7 =$

$81 \div 9 =$

MAFS.5.NBT.1.3a

A number in expanded form is shown.

What is the number in decimal form?

$$5 \times 100 + 6 \times 10 + 3 \times 1 + 7 \times \left(\frac{1}{10}\right) + 8 \times \left(\frac{1}{100}\right)$$

Day 3:

Fluency:

$64 \div 8 =$

$56 \div 7 =$

$12 \div 3 =$

$27 \div 3 =$

$88 \div 8 =$

MAFS.5.NBT.1.3

What is "four hundred fifty-six thousandths" in decimal form?

- A. 456.006
- B. 456.0
- C. 0.456
- D. 4.56

MAFS Bell Ringers by Topic
Grade 5 Chapter 3
Add and Subtract Decimals

Day 4:

Fluency:

$50 \div 10 =$

$28 \div 7 =$

$35 \div 5 =$

$32 \div 4 =$

$84 \div 12 =$

MAFS.5.NBT.1.3

Select the decimal form for each number name.

	0.350	0.305	0.035	3.035
<i>Thirty-five thousandths</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Three hundred five thousandths</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Day 5:

Fluency:

$18 \div 2 =$

$63 \div 7 =$

$100 \div 10 =$

$42 \div 6 =$

$110 \div 11 =$

MAFS.5.NBT1.4

Select all the numbers that round to 3.4 when rounded to the nearest tenth.

☐ 3.352

☐ 3.219

☐ 3.36

☐ 3.35

☐ 3.31

☐ 3.24

Working Like a Scientist

1. Which method would work best to determine today's outdoor temperature?
(SC.5.N.2.1)
 - A. Use of a radio
 - B. Use of a thermometer
 - C. Use of an Internet report
 - D. Use of a weather forecast
2. A student heated water in a beaker to see how quickly water heats up. She recorded the following data from her first trial. (SC.5.N.1.5)

TEMPERATURE OF WATER OVER TIME

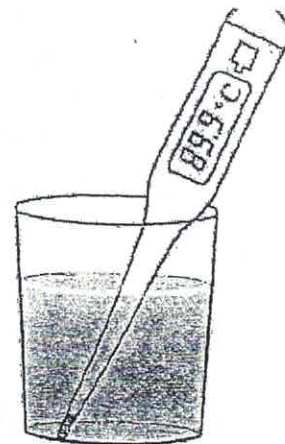
Time (min)	1	2	3	4	5	6	7
Temperature (°C)	12	14	20	16	18	21	23

What should the student do about the temperature reading after the first trial?

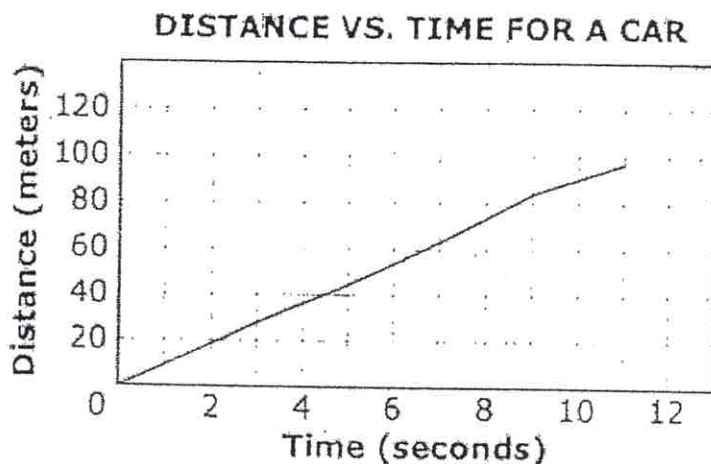
- A. Ignore it and use the data.
 - B. Rewrite the results to match what the student expects.
 - C. Repeat the investigation and see if the results stay the same.
 - D. Replace the reading at three minutes with the average of the seven readings.
3. The drawing below shows Jason's investigation:

Jason practices distinguishing observations from opinion. Which of the following statements is an observation that Jason can make about his investigation?
(SC.5.N.1.6)

- A. The temperature of the cup of coffee feels like 89.9° C.
- B. The temperature of the water is 89.9° C.
- C. The room temperature is probably too high.
- D. The thermometer reading is probably incorrect.



4. Mario and Danica measured the distance a remote-controlled car traveled over a period. Their results are shown in the graph below.



About how far did the car travel in 7 seconds? (SC.5.N.1.1)

- A. 40 meters
 - B. 58 meters
 - C. 64 meters
 - D. 72 meters
5. What is the first step for a scientific investigation? (SC.5.N.1.1)
- A. collect data
 - B. interpret data
 - C. define a problem
 - D. make observations
9. Ahmed wanted to determine which liquid would make a penny shiny. He gathered the following materials: (SC.5.N.1.1)
- three pennies
 - three plastic cups
 - vinegar
 - lemon juice
 - dish soap

He placed the same amount of the different liquids and a penny in each plastic cup. What variable is Ahmed testing?

- A. The types of liquid that will change the appearance of the pennies.
- B. The amount of liquid placed inside each plastic cup.
- C. The appearance of the pennies.
- D. The size of the cups used.

10. Caleb performed an experiment last year. Sarah studied the hypothesis and steps from Caleb's experiment and repeated the experiment, but she chose to skip a few steps that she did not think were necessary. Sarah made notes during the experiment on a sheet of paper and then compared the results with Caleb's results. Their results differed. Which statement describes a possible error that Sarah may have made in her experiment? (SC.5.N.2.2)

- A. Sarah should have compared her results to experiments performed this year, rather than last year.
- B. Sarah should have designed her own steps, rather than repeat Caleb's experiment.
- C. Sarah should have made notes at the end of the experiment, rather than during the experiment.
- D. Sarah should have followed all the steps from Caleb's experiment, rather than skipping some steps.

11. Jenn and Sam complete a lab experiment. The rest of the class completes the same lab experiment. The class compares the results. Jenn and Sam find that their results are different from everyone else's results. The teacher asks Jenn and Sam to repeat the experiment. (SC.5.N.2.2; SC.5.N.1.3)

Why does the teacher suggest that Jenn and Sam repeat their experiment?

- A. to see if the original results were caused by an error
- B. to change their hypothesis to match their results
- C. to see if they can get results that prove their hypothesis
- D. to change their steps to get the same results as the other class

Earth in Space and Time

1. Which of the following best describes what makes up a galaxy? (SC.5.E.5.1)

- A. gas, dust, and many stars
- B. a star and planets orbiting the star
- C. one planet and a moon orbiting the planet
- D. a group of several stars that make a shape in the sky

2. Marcus has learned that the Sun is a star, but not the largest star in our galaxy. Which answer best explains why Earth receives more energy from the Sun than from any other star? (SC.5.E.5.1)

- A. The Sun is the closest star.
- B. The Sun is a very young star.
- C. The Sun is the hottest star in the galaxy.
- D. The Sun gives off more energy than any other star.

6. Liam investigates the fizzing of antacid in different liquids and records the following procedure in his laboratory notebook:

Procedure

1. Collect all materials.
 - 3 antacid tablets
 - room-temperature water
 - ice water
 - boiling water
 - three 250 milliliter beakers
 - a stopwatch that can measure seconds
2. Make a data table.
3. Place 1 tablet in room-temperature water. Record how long the tablet fizzes (makes bubbles).
4. Place 1 tablet in ice water. Record how long the tablet fizzes.
5. Place 1 tablet in boiling water. Record how long the tablet fizzes.

What piece of information did Liam NOT include in his procedure to ensure that someone else could repeat his investigation? (SC.5.N.1.1)

- A. The location of the experiment.
- B. The type of watch used in the experiment.
- C. The amount of each liquid used in the experiment.
- D. The volume of the beakers used in the experiment.

7. A student wants to know if the number of butterflies in the playground changes from spring to summer.

Which would be the best way to investigate her question scientifically? (SC.5.N.1.1)

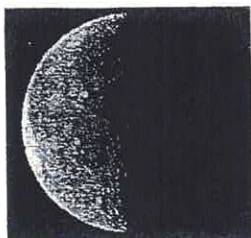
- A. Observe and record the number of butterflies in the playground, once each week, from February to August.
- B. Ask other students to count the number of butterflies they see in the playground on different days and compare the data.
- C. Look for information on the internet about the number of butterflies observed in nearby areas during spring and summer months.
- D. Find out which plants in the playground attract the most butterflies and count the number of butterflies near those plants once each month.

8. Connor thinks that building a model of an erupting volcano using baking soda and vinegar is an example of an experimental investigation. Alissa says it is not an experimental investigation. Which student is correct and why? (SC.5.N.1.2)

- A. Alissa, because variables are not identified or controlled
- B. Connor, because he plans to repeat the investigation more than once
- C. Alissa, because models cannot be used in experimental investigations
- D. Connor, because other scientists have done this investigation in the past

3. Comets and asteroids both have a small size compared to the planets. In what other way are comets and asteroids similar? (SC.5.E.5.3)
- A. They both have a smooth, round shape.
 - B. They are both found in orbit around the Sun.
 - C. They both develop glowing tails near the Sun.
 - D. They are both made mostly of ice.
4. Jackson has been using his telescope every night to observe the star patterns (constellations). He kept a journal of his observations all year. Which of the following is a correct observation? (SC.4.E.5.1)
- A. Star patterns change as they appear to move across the sky.
 - B. The star patterns are brighter at different times of the night.
 - C. The star patterns remain in the same position every night.
 - D. Different star patterns can be seen in different seasons.
5. A person living on Earth sees daytime and nighttime every 24 hrs. Which of these is responsible for changes from daytime to nighttime on Earth? (SC.4.E.5.4)
- A. Earth's tilt
 - B. Earth orbiting the sun
 - C. Moon orbiting Earth
 - D. Earth rotating on its axis
6. Venus can be seen from Earth in the night sky. However, it is difficult to see the surface of Venus through a telescope. Which of these features of Venus best explains why its surface is difficult to see? (SC.5.E.5.2)
- A. It is surrounded by thick clouds.
 - B. It is covered completely by water.
 - C. It is too far from Earth to be seen.
 - D. It does not produce light of its own.
7. Earth orbits the sun. Yet the sun appears to move through the sky. For example, the sun always appears to rise in the east and set in the west. What is responsible for this apparent motion of the sun? (SC.4.E.5.4)
- A. Earth's size
 - B. Earth's orbit
 - C. Earth's rotation
 - D. Earth's revolution

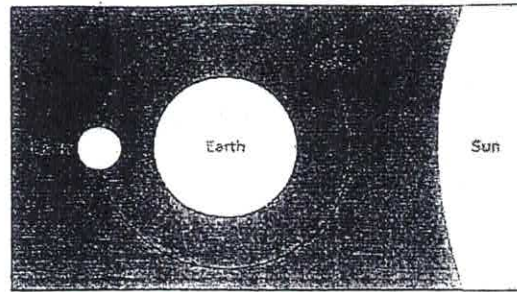
8. The picture below shows a phase of the moon.



What will the next phase be? (SC.4.E.5.2)

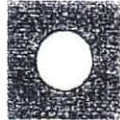
- A. new moon
- B. first quarter
- C. last quarter
- D. full moon

9. The diagram shows the Moon in one position during its revolution around Earth. (SC.4.E.5.2)



Which shape would someone on Earth most likely see when the Moon is in the position shown?

A.



Full Moon

B.



First Quarter Moon

C.



Third Quarter Moon

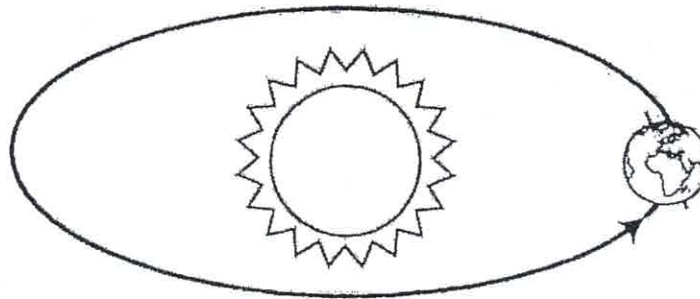
D.



New Moon

10. The diagram below shows Earth's position relative to the Sun on December 21, 2010, at 1 p.m. Eastern Standard Time (EST). (SC.4.E.5.3)

EARTH REVOLVING AROUND THE SUN



When was the next time Earth returned to that position?

- A. December 21, 2009, at 1 p.m. EST
- B. December 22, 2010, at 1 p.m. EST
- C. December 21, 2011, at 1 p.m. EST
- D. January 21, 2011, at 1 p.m. EST

11. Sandy observes that he can see some star patterns during the winter, but not during the summer. Which motion causes his observations? (SC.4.E.5.1)

- A. Earth rotating on its axis
- B. Earth moving around the Sun
- C. The stars moving around the Earth
- D. The stars moving around the Sun

12. This table includes the characteristics of some of the objects found in our solar system.

Objects in Our Solar System		
Object	How does it move?	What is it made of?
A	orbits the sun	solid or gas and liquid
B	orbits a planet	rock
C	orbits the sun	ice and rock
D	orbits the sun	rock

Based on the information in the table, which object would be classified as a moon?
(SC.5.E.5.3)

- A. Object A C. Object C
B. Object B D. Object D

13. The table shows the length of time it takes the planets in our solar system to orbit the sun.

Length of Time for Planets to Orbit the Sun	
Planet	Number of Earth days
Mercury	88
Venus	225
Earth	365
Mars	687
Jupiter	4,331
Saturn	10,747
Uranus	30,589
Neptune	59,800

All the planets in the solar system orbit the sun. What is the main difference between the orbits of the inner and outer planets? (SC.5.E.5.2)

- A. The inner planets travel a greater distance than the outer planets do.
B. The inner planets have almost round orbits, and the outer planets do not.
C. The outer planets rotate as they orbit the sun, and the inner planets do not.
D. The outer planets' orbits are longer than the inner planets' orbits.

14. Pallas is a small, rocky object in the Solar System that orbits the sun along with many other similar objects in a band between the orbits of Mars and Jupiter. Pallas is most likely considered _____. (SC.5.E.5.3)

- A. a comet C. a planetary satellite
B. an asteroid D. a planet

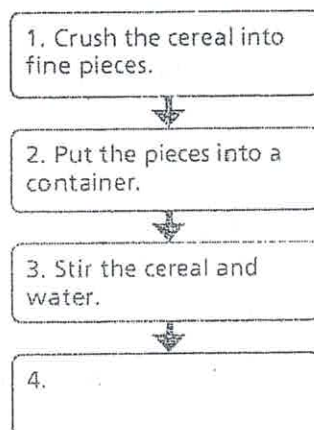
15. Scientists are exploring an object in our solar system. The object is massive, gaseous, cold, has rings, and revolves around the Sun. In which category does the object best fit?
(SC.5.E.5.2)

- A. a comet B. an asteroid C. an inner planet D. an outer planet

Miami Dade County Public Schools
Division of Academics-Department of Science

Name _____ Date _____

1. A beaker has a mixture of sawdust, sand, and salt. Which one of these procedures will separate the mixture? (SC.5.P.8.3)
 - A. placing a magnet in the beaker
 - B. adding warm water to the beaker
 - C. heating the beaker on a hot plate
 - D. pouring the contents of the beaker through a screen
2. Some cereal makers add iron filings to their products to increase the iron content. The flow chart describes a method to separate the iron from the cereal. (SC.5.P.8.3)



Which statement best describes the missing step in the chart?

- A. Add dye to stick to the iron filings.
- B. Wait for an hour to let the iron filings sink.
- C. Boil the water to separate the iron filings out.
- D. Put a magnet into the water to attract the iron filings.



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3. A student wants to remove the salt from a mixture of sand and salt in order to get only pure sand. He adds water to the mixture. Why is this step helpful? (SC.5.P.8.3)
- A. Salt dissolves in water.
 - B. Sand dissolves in water.
 - C. The water freezes to the salt.
 - D. The salt floats on top of the water.
4. Which mixture would be **most** easily separated with a strainer? (SC.5.P.8.3)
- A. salt and sugar
 - B. gravel and sand
 - C. dimes and pennies
 - D. iron filings and soil

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5. In an experiment, two students timed how long salt took to dissolve in water under the four conditions shown below. (SC.5.P.8.2)

1. No stirring and no heat
2. Stirring and no heat
3. No stirring with heat
4. Stirring and heat

They carefully recorded the time it took for the salt to dissolve under each set of conditions. However, they forgot to label which condition went with each set of times. The table shows the data from the three trials.

TIME FOR SALT TO DISSOLVE (MINUTES)

	Beaker 1	Beaker 2	Beaker 3	Beaker 4
Trial 1	2.5	0.3	1.0	6.0
Trial 2	2.2	0.5	1.2	6.3
Trial 3	2.0	0.4	1.0	6.1

Which set of data **most** likely shows the beaker with both stirring and heat?

- A. Beaker 1
- B. Beaker 2
- C. Beaker 3
- D. Beaker 4



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6. David is making lemonade. He adds sugar to some lemon juice in water. The sugar starts to dissolve. What can David do to speed up the dissolving process? (SC.5.P.8.2)
- A. add ice cubes to the lemonade
 - B. pour the lemonade in a pitcher
 - C. stir the lemonade with a spoon
 - D. put the lemonade in the refrigerator
7. Ken needs to design an experiment that shows how the surface area of sugar affects the rate at which it will dissolve in water. Which statement describes the **best** way to show the relationship between surface area and rate of dissolving? (SC.5.P.8.2)
- A. Time how fast loose sugar dissolves in water at room temperature and how fast loose sugar dissolves in hot water.
 - B. Time how fast a cube of sugar dissolves in water at room temperature and how fast loose sugar dissolves in hot water.
 - C. Time how fast a cube of sugar dissolves in water at room temperature and how fast a cube of sugar dissolves in hot water.
 - D. Time how fast a cube of sugar dissolves in water at room temperature and how fast loose sugar dissolves in water at room temperature.