MATH

FOR LANGUAGE DEVELOPMENT
BASED ON ALASKA MATH STANDARDS
GRADE 6 • BOOK 1

Sealaska Heritage Institute

Integrating culturally responsive place-based content with language skills development for curriculum enrichment

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Contents

Introduction to the Developmental Language Process in Math

OVER THE YEARS, much has been written about the successes and failures of students in schools. There is no end to the solutions offered, particularly for those students who are struggling with academics. For example, there have been efforts to bring local cultures into the classroom, thus providing the students with familiar points of departure for learning.

While the inclusion of Native concepts, values,and traditions into a curriculum provide a valuable foundation for self-identity and cultural pride, they may not, on their own, fully address improved academic achievement.

Through math lessons, students are exposed to new information and to the key vocabulary that represents that information. While the students may acquire, through various processes, the scientific information, the vocabulary is often left at an exposure level and not internalized by the students. Over time, this leads to language delay that impacts negatively on a student's ongoing achievement.

Due to weak language bases, many Native Alaskan high school students struggle with texts that are beyond their comprehension levels and writing assignments that call for language they do not have.

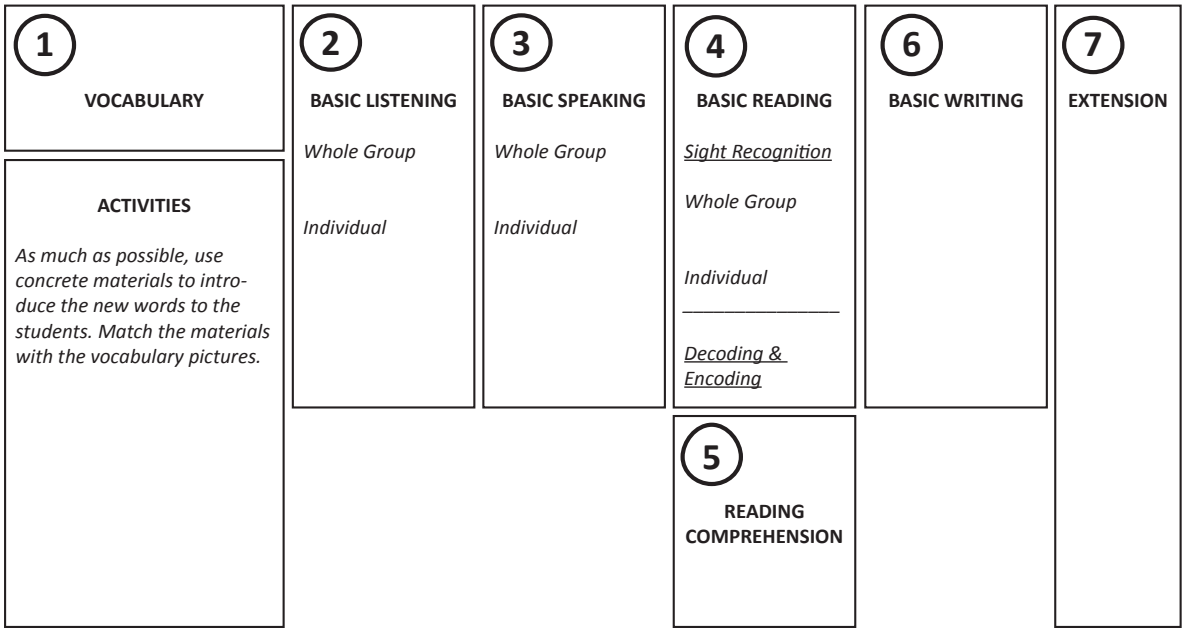
This program is designed to meet the academic realities faced by high school students every day, using a developmental process that integrates culture with skills development.

To this end, each key vocabulary word, in math, is viewed as a concept. The words are introduced concretely, using place-based information and contexts. Whenever possible, the concept is viewed through the Native heritage cultural perspectives. Using this approach, the students have the opportunity to acquire new information in manageable chunks, the sum total of which represent the body of information to be learned in the math program.

When the key vocabulary/concepts have been introduced, the students are then taken through a sequence of listening, speaking, reading, and writing activities designed to instill the vocabulary into their long-term memories.

This is the schema for the Developmental Language Process:

The Developmental Language Process—Math



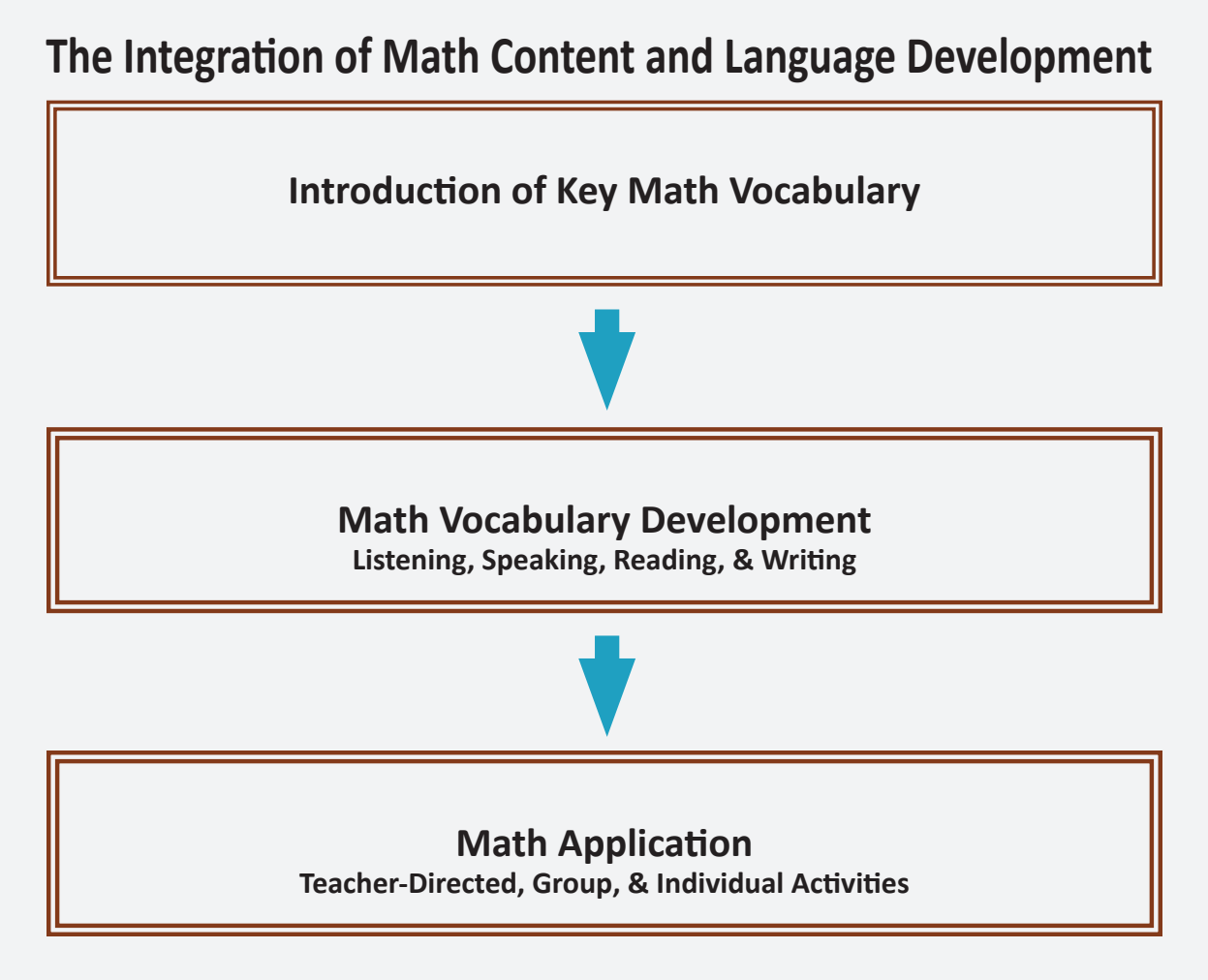
Introduction to the Developmental Language Process in Math

Finally, at the end of each unit, the students will participate in enrichment activities based on recognized and research-based best practices. By this time, the science information and vocabulary will be familiar, adding to the students' feelings of confidence and success. These activities will include place-based and heritage culture perspectives of the information learned.

This approach is radically different from current practices in most science classes. Historically, little or no formal vocabulary development takes place. It is assumed that the vocabulary is being internalized during the learning process, which is most often an erroneous assumption.

Increasing the language bases of the students will lead to improved comprehension in listening and reading, and higher levels of production in creative speaking and writing.

This, coupled with the place-based and culturally-responsive content, will provide the students with the foundations necessary for ongoing confidence and achievement.



Alaska Standards for Math Readiness, Grade 6

M1.1.1 Read, write, order, count, and model one-to-one correspondence with whole numbers to 100.

M1.1.2 Use, model, and identify place value positions of 1s, 10s, and 100s.

M1.1.3 Model and explain the processes of addition and subtraction, describing the relationship between the operations.

M1.1.4 Select and use various representations of ordinal and cardinal numbers.

M1.1.5 Identify, model, and label simple fractions, describing and defining them as equal parts of a whole, a region, or a set.

M1.2.1 Read, write, model, order, and count with positive whole numbers to 1,000,000 and negative whole numbers.

M1.2.2 Use, model, and identify place value positions from 0.001 to 1,000,000.

M1.2.3 Model and explain the processes of multiplication and division. Describe the relationships among the four basic operations.

M1.2.4 Identify and describe different uses for the same numerical representation.

M1.2.5 Model and explain the process of adding and subtracting fractions with common denominators and decimals that represent money.

[3] N-3 using appropriate representations of ordinal or cardinal numbers (M1.1.4)

[4] N-4 identifying, describing with explanations, or illustrating equal parts of a whole, a region, or a set (using models) (M1.2.4)

[4] N-5 identifying, describing with explanations, or illustrating equivalent fractions or mixed numbers

UNIT 1

Note: In this program, Units 1 to 5 contain readiness language content. The key words were selected from previous math levels and lead the students into the grade 6 program. All key terms are based on the Math Standards for Alaska and reflect terms vital to academic achievement in math.

KEY VOCABULARY

Key Vocabulary

IDENTIFY	*To recognize something. This can involve one or all of the five senses. This includes identifying simple fractions.*
DESCRIBE	*To tell something about an item, situation, etc. This includes describing patterns in the number system.*
EXPLAIN	*To tell why, who, where, how, etc. This includes explaining math operations.*

Key Vocabulary

ORDER	*To put something in a sequence. This also relates to the order of operations in math.*
MODEL	*To show or represent something. For example, modeling one-to-one correspondence with whole numbers.*

LESSONS

Language and Skills Development

LISTENING

Same or Different?

Provide each student with two blank flashcards. Each student should then make a happy face on one of his/her cards and a sad face on the other card. When the students' cards are ready, say two sentences, using the math terms from this unit. If the two sentences are exactly the same, the students should hold up their happy face cards. However, if there is any difference between the two sentences, the students should hold up their sad face cards. Repeat, using a number of different pairs of sentences.

Flashlight Find

Mount the math vocabulary pictures on the walls, board and windows. Have a student stand in the center of the classroom with a flashlight. Say one of the vocabulary words and the student must find the picture for the vocabulary word you said using the light of the flashlight. This activity may also be conducted in teams. In this case, have two flashlights available. Have a player from each team stand in the center of the classroom. When you say the vocabulary word, each player must attempt to find the correct picture with the light of his/her flashlight. The first player to correctly identify the picture for the vocabulary word you said wins the round. Repeat until all players have played.

SPEAKING

Right or Wrong?

Mount the vocabulary pictures on the board. Point to one of the pictures and say its vocabulary word. The students should repeat the vocabulary word for that picture. However, when you point to a picture and say an incorrect vocabulary word for it, the students should remain silent. Repeat this process until the students have responded a number of times to the different vocabulary pictures.

Visual Memory

Mount the math vocabulary pictures on the board. The students should look carefully at the pictures. Then, have the students close their eyes. Remove one of the pictures from the board and place it to the side. The students should then open their eyes and identify the "missing picture." Continue in this way until all of the pictures have been removed. Another way to conduct this activity is to do the reverse. In this case, prepare two or three extra sets of vocabulary pictures. Mount a number of pictures on the board. The students should look carefully at the pictures. Then, have the students close their eyes. Add another picture to the board. The students should open their eyes and identify the "new picture." This activity (and the previous form of the activity) may be done in team form. In this case, the first player to identify the new or missing picture wins the round.

Language and Skills Development

READING

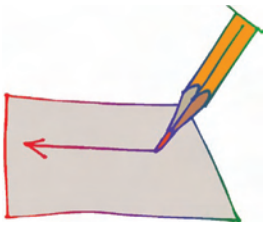
Face

Mount the sight words around the classroom on the walls, board, and windows. Group the students into two teams. Give the first player in each team a flashlight. Darken the classroom, if possible. Say one of the sight words. When you say "Go," the students should turn their flashlights on and attempt to locate the sight word you said. The first player to do this correctly wins the round. Repeat until all players in each team have participated.

Circle of Words

Before the activity begins, prepare a page that contains the sight words. Provide each student with a copy of the page. The students should cut the sight words from their pages. When a student has cut out the sight words, he/she should lay them on his/her desk in a circle. Then, each student should place a pen or pencil in the center of the circle of sight word cards. Each student should spin the pen/pencil. Say a sight word. Any student or students whose pens/pencils are pointing to the sight word you said, should call "Bingo." The student or students should then remove those sight words from their desks. Continue in this way until a student or students have no sight words left on their desks.

WRITING



Letter Encode

Provide each student with four copies of the alphabet page from the end of this unit. The students should cut out the letters and place them in individual envelopes. Each student should write his/her name on the envelope. These cut out letters will be used for encoding activities throughout this math enrichment program. Have the students lay their cut out letters on the floor or desks. Show a picture from this unit. The students should then use the cut out letters to spell the word for it. Repeat this process, until all of the math words have been spelled.

Numbered Illustrations

Mount the vocabulary pictures on the chalkboard and number each one. Provide each student with writing paper and a pen. Call the number of a picture. Each student should write the vocabulary word for the picture represented by that number. Repeat until all vocabulary words have been written. Review the students' responses.

VOCABULARY PICTURES

DESCRIBE

EXPLAIN

IDENTIFY

MODEL


JK
E
C
A
F
D
B

ORDER

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Listening: Mini Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

STUDENT SUPPORT MATERIALS

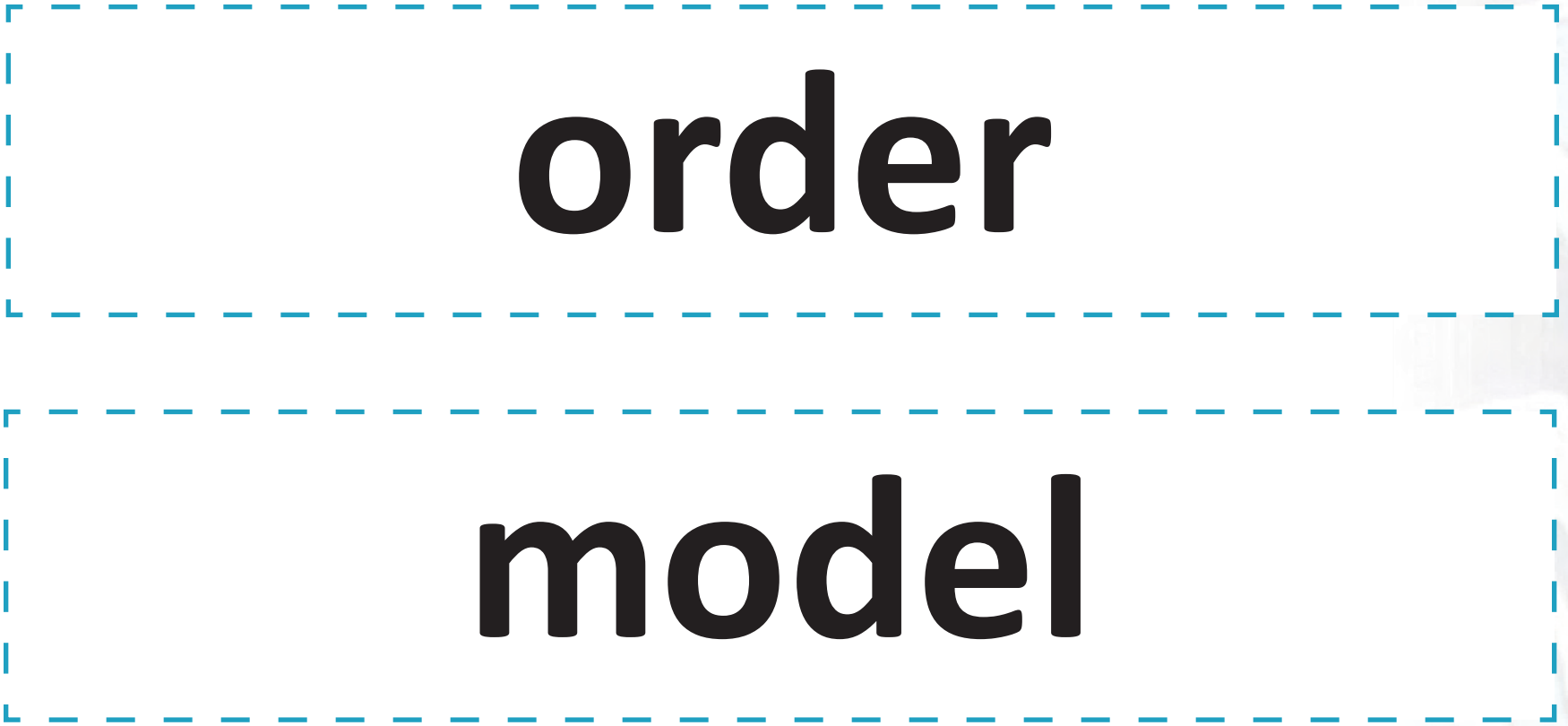
Reading • Sight Recognition and Encoding

Reading Comprehension

explain

describe

identify


order
model

Sight Words Activity Page

Have the students circle the word for each picture.

identify
describe
explain
order
model

identify
describe
explain
order
model

identify
describe
explain
order
model

identify
describe
explain
order
model

identify
describe
explain
order
model

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

or	plain
ex	cribe
iden	der
des	del
mo	tify

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

_____der

ex_____ain

i_____tify

descr_____

_____del

ibe	or	mo
pl	den	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

This is when we know what something, someone, etc. is.	**This is when we tell how something looks, acts, or works, etc.**	**This is something we do when we sleep.**
This is a type of book used in math.	**This is when we tell how, why, when, etc. about something.**	**This is when we add whole numbers and fractions together.**
This is when we think about what happens first, second, etc.	**This is when we ask a question about math.**	**This is when we show how something works, looks, etc.**

1. explain **2. order** **3. model** **4. describe** **5. identify**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. What is the order used in addition, multiplication, subtraction, and division?
   - ❍ It is the use of whole numbers in place of fractions.
   - ❍ It is what needs to be done first, second, and so on.
   - ❍ It is when a person buys a math book.

2. What can we describe in math?
   - ❍ the weather
   - ❍ how to solve a problem
   - ❍ the things we need to read

3. What order is there in math?
   - ❍ colors
   - ❍ operations
   - ❍ smells

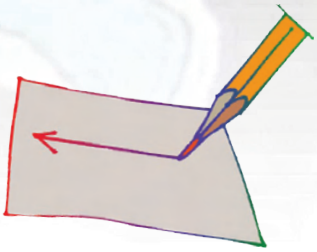
4. How can a person explain something in math?
   - ❍ by telling how he/she got the answer
   - ❍ by going to sleep after finding the answer
   - ❍ by not saying anything after finding the answer

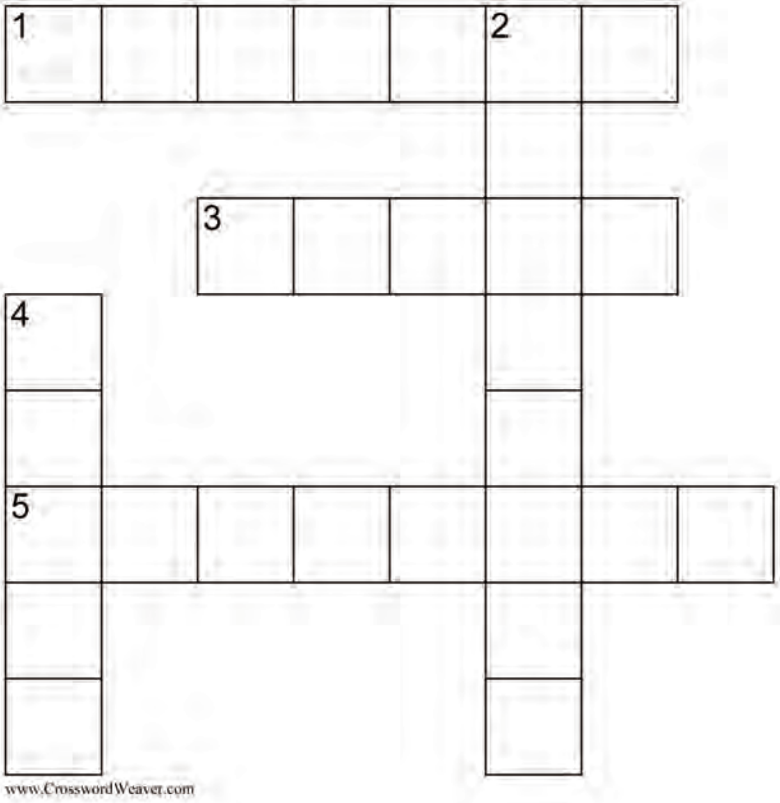
5. What is one thing we can identify in math?
   - ❍ what we have to do to find food
   - ❍ what we might do to solve a problem
   - ❍ what we might show before eating a meal

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





ACROSS

1 To tell why, who, where, how, etc. This includes explaining math operations.

3 To put something in a sequence. This also relates to the order of operations in math.

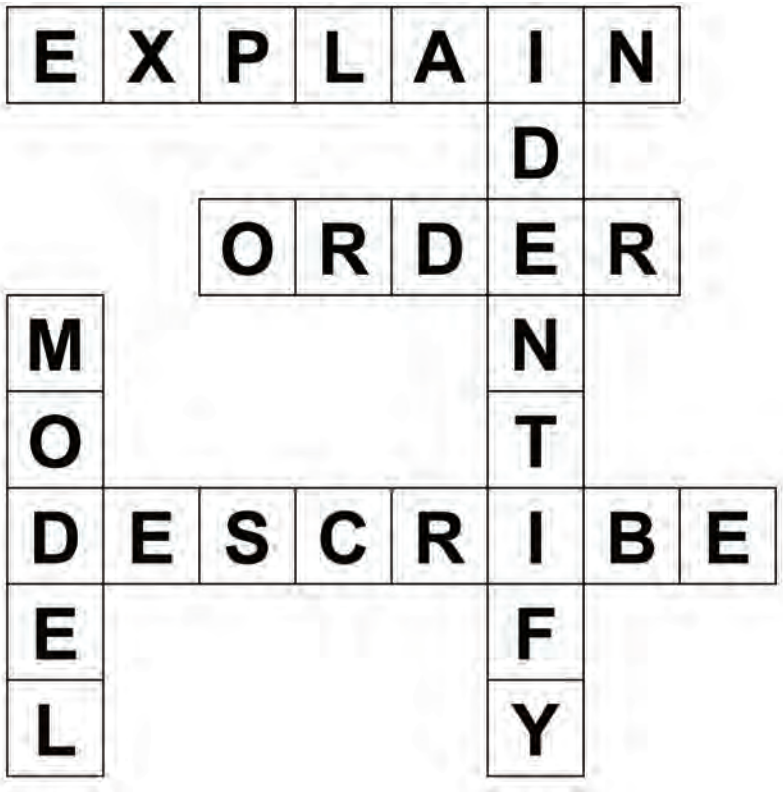
5 To tell something about an item, situation, etc. This includes describing patterns in the number system.

DOWN

2 To recognize something. This can involve one or all of the five senses. This includes idenifying simple fractions.

4 To show or represent something. For example, modeling one-to-one correspondence with whole numbers.

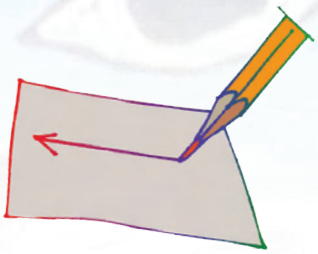
Crossword Puzzle Answers



Basic Writing Activity Page

Have the students write the word for each picture.

Alphabet Page Letter Encode



a b c d e f

g h i j k l

m n o p q r

s t u v w x

y z

UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 1

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **IDENTIFY**.
2. Write the number 2 on top of the picture for **DESCRIBE**.
3. Write the number 3 on top of the picture for **EXPLAIN**.
4. Write the number 4 on top of the picture for **ORDER**.
5. Write the number 5 on top of the picture for **MODEL**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. When we identify something, we know what it is.
2. When we describe something, we tell something about it.
3. When we explain something, we don't know what it is.
4. When things are in order, they are mixed-up.
5. When we model something, we show how to do it.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 1

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**

1. T F

2. T F

3. T F

4. T F

5. T F

identify
describe
explain
order
model

identify
describe
explain
order
model

identify
describe
explain
order
model

identify
describe
explain
order
model

identify
describe
explain
order
model

iden

digy
dify
tfy
ntify
fy
lify
tify
rify
hify

des

ribe
rube
rabe
crabe
crybe
crube
crebe
dribe
cribe

ex

plane
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plaine
plain
pluene
plaene
ane
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dar
dir
der
er
rder
rdar
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1. When we identify something,
   - ❍ we say we have never seen it before.
   - ❍ we don't know what it is.
   - ❍ we know what it is.

2. We can use the following to describe something:
   - ❍ air.
   - ❍ words.
   - ❍ ears.

3. When we explain something, we
   - ❍ tell about it.
   - ❍ ask about it.
   - ❍ say we never did it.

4. When things are in order, they are
   - ❍ disorganized.
   - ❍ big.
   - ❍ organized.

5. When we show how to do something, we are
   - ❍ predicting.
   - ❍ modeling.
   - ❍ inferring.

IDENTIFY

_____

DESCRIBE

_____

EXPLAIN

_____

ORDER

_____

MODEL

_____

UNIT 2

Note: In this program, Units 1 to 5 contain readiness language content. The key words were selected from previous math levels and lead the students into the grade 6 program. All key terms are based on the Math Standards for Alaska and reflect terms vital to academic achievement in math.

KEY VOCABULARY

Key Vocabulary

EQUAL	*Having the same amount or value.*
SET	*A collection of items.*
ELEMENT	*A member of a set.*

Key Vocabulary

PARENTHESES	*A pair of symbols used to enclose part of a mathematical expression.*
INEQUALITY	*Not equal in size, amount, or value.*

LESSONS

Language and Skills Development

LISTENING

Turn and Face

Mount the vocabulary pictures on the walls and board. Group the students together in the center of the classroom. Say one of the vocabulary words and the students should turn to face the picture for the word you said. Depending upon the size of your class, this activity may be done in small groups. This activity may also be done in team form. In this case, have a player from each team stand in the center of the classroom. When a player faces the wrong direction (i.e., the wrong picture), he/she is "out" until a later round of the activity. Repeat until all players have had an opportunity to participate.

Flashlight Find

Mount the math vocabulary pictures on the walls, board and windows. Have a student stand in the center of the classroom with a flashlight. Say one of the vocabulary words and the student must find the picture for the vocabulary word you said using the light of the flashlight. This activity may also be conducted in teams. In this case, have two flashlights available. Have a player from each team stand in the center of the classroom. When you say the vocabulary word, each player must attempt to find the correct picture with the light of his/her flashlight. The first player to correctly identify the picture for the vocabulary word you said wins the round. Repeat until all players have played.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

Flip of the Coin

Provide each student with a penny. Keep one penny for yourself. Mount the vocabulary pictures on the board. Have the students (gently) toss their pennies into the air. Each student should look to see which side of his/her penny is face-up. Toss your penny into the air in the same way. Call the side of your penny that is face-up. The students who have the same side of coin face up must then identify (orally) a vocabulary picture you point to. For example, if the heads side of your coin is face up, the students who have heads showing on their coins must then orally identify the vocabulary picture you point to. Repeat this process a number of times.

Language and Skills Development

READING

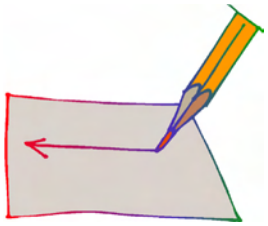
Balloon Volleyball

Group the students into two teams. The two teams should stand, facing one another. Toss a round, inflated balloon to the members of Team One. The members of Team One must then bounce the balloon to the members of Team Two. The players should continue to bounce the balloon back and forth in this way until a team loses the balloon. You may wish to establish the rule that players may not move their feet during the activity. When a team loses the balloon, show them a vocabulary picture and all team members in that team must say the vocabulary word for it. Repeat until players in both teams have responded a number of times.

Half Time

Before the activity begins, cut each of the sight words in half. Keep one half of each sight word and give the remaining halves to the students. Hold up one of your halves and the student who has the other half of that word must show his/her half and say the sight word. Repeat in this way until all students have responded. An alternative to this approach is to give all of the word halves to the students. Say one of the sight words and the two students who have the halves that make up the sight word must show their halves. Depending upon the number of students in your class, you may wish to prepare extra sight word cards for this activity.

WRITING



The Other Half

Cut each of the sight words in half. Give each student a sheet of writing paper, a pen, and one of the word halves. Each student should glue the word half on his/her writing paper and then complete the spelling of the word. You may wish to have enough word halves prepared so that each student completes more than one word. Afterwards, review the students' responses.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

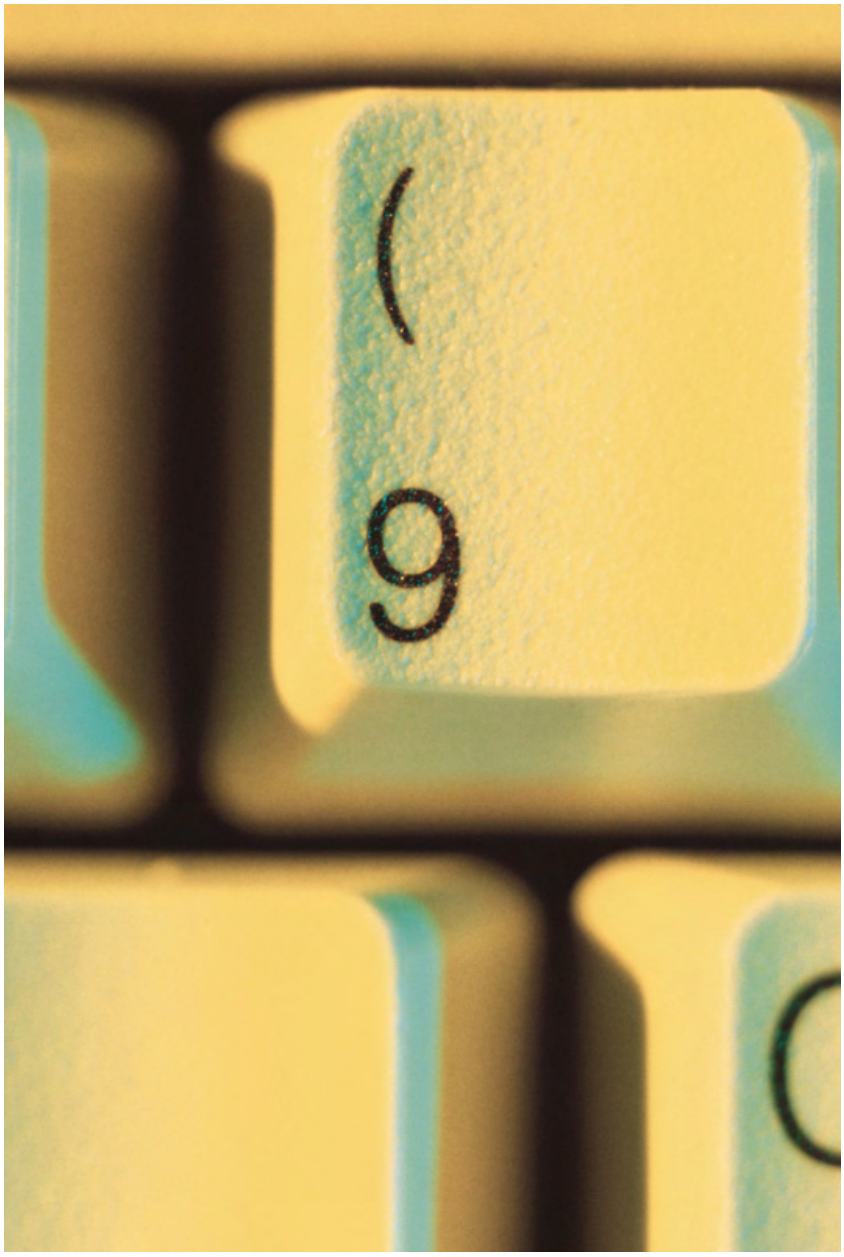
VOCABULARY PICTURES

ELEMENT


2=4

EQUAL

INEQUALITY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PARENTHESES

SET

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

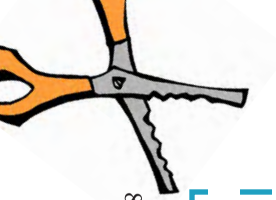
Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.

STUDENT SUPPORT MATERIALS

Reading • Sight Recognition and Encoding

Reading Comprehension



element

set

equal

inequality

parentheses

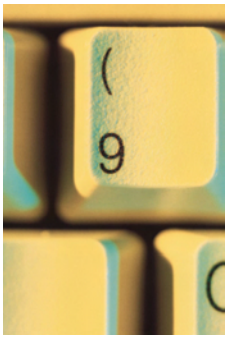
Sight Words Activity Page

Have the students circle the word for each picture.

equal
set
element
parentheses
inequality

equal
set
element
parentheses
inequality

equal
set
element
parentheses
inequality



equal
set
element
parentheses
inequality

equal
set
element
parentheses
inequality

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

eq	theses
s	ity
ele	et
paren	ual
inequal	ment

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

e_____

s_____

e_____**ment**

parenthe_____

in_____**ity**

ses	qual	equal
le	et	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

These are whole numbers.	**This is a group of things.**	**This is a part of a set.**
These can be used to mark off parts of a math sentence.	**These are fractions.**	**These are part of an addition sentence.**
These are found in a circle.	**This is when things are not the same.**	**This is when things are the same.**

1. equal	**2. set**	**3. element**	**4. parentheses**	**5. inequality**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. When things are equal, they are
   - ❍ different.
   - ❍ the same.
   - ❍ almost the same.

2. A set is
   - ❍ a circle.
   - ❍ a thing used to show the temperature.
   - ❍ a collection of things.

3. An element is
   - ❍ part of a circle.
   - ❍ part of a set.
   - ❍ part of a score.

4. Parts of a math sentence can be marked off with
   - ❍ parachutes.
   - ❍ parentheses.
   - ❍ place value.

5. Four and six would be examples of
   - ❍ equality.
   - ❍ equal.
   - ❍ inequality

Which Belongs?

Have the students write the word that is correct for each sentence.

1. Things are **equal/element** when they are the same.

2. A **score/set** contains elements

3. An **element/equation** is found in a set.

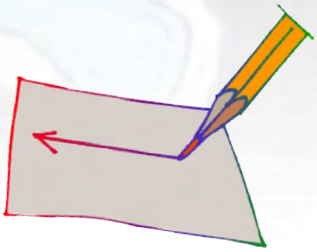
4. **Parentheses/Patterns** are used to mark off parts of math sentences.

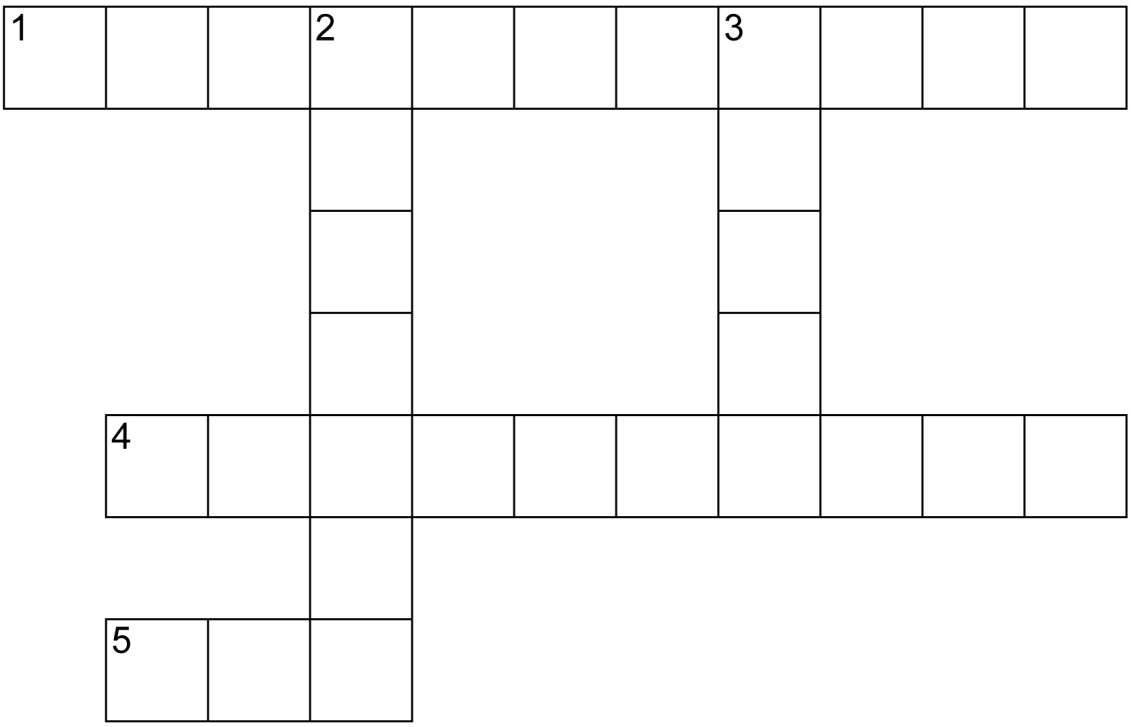
5. **Increase/Inequality** is when things are not the same.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





www.CrosswordWeaver.com

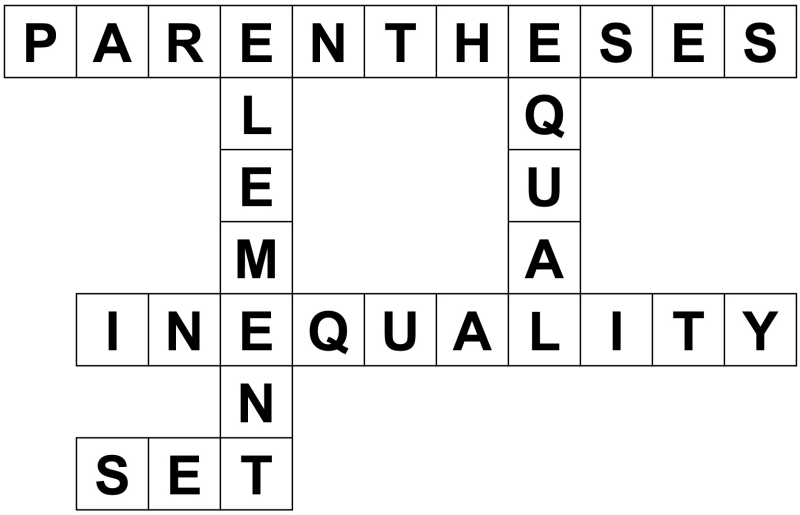
ACROSS

1 A pair of symbols used to enclose part of a mathematical expression.
4 Not equal in size, amount, or value.
5 A collection of items.

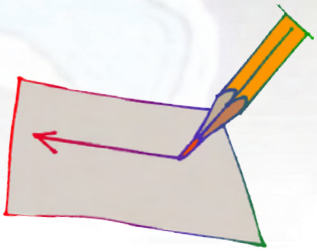
DOWN

2 A member of a set.
3 Having the same amount or value.

Crossword Puzzle Answers



Basic Writing Activity Page



Have the students write the word for each picture.

UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 2

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **EQUAL**.
2. Write the number 2 on top of the picture for **SET**.
3. Write the number 3 on top of the picture for **ELEMENT**.
4. Write the number 4 on top of the picture for **PARENTHESES**.
5. Write the number 5 on top of the picture for **INEQUALITY**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Things in order are always equal.
2. A set is a collection of things.
3. An element is a part of a set.
4. Parentheses identify elements in a set.
5. Inequality means that things in a set are equal.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 2

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**


(
9


2=4

1. T F

2. T F

3. T F

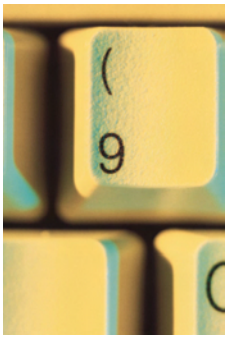
4. T F

5. T F

equal
set
element
parentheses
inequality

equal
set
element
parentheses
inequality

equal
set
element
parentheses
inequality



equal
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element
parentheses
inequality

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set
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inequality

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qyuelity
quelity
quolity
quility
uility
uelity
quality
qulity
uality

1. Which of these would be equal?
   - ❍ a rock and a feather
   - ❍ a feather and a salmon
   - ❍ two feathers

2. What is a set?
   - ❍ It is a group of things.
   - ❍ It is when we model something.
   - ❍ It is when we identify something.

3. What is an element?
   - ❍ It is things that are in order.
   - ❍ It is part of a set.
   - ❍ It is what we use to explain something.

4. Which of these are parentheses?
   - ❍ symbols that can be used in a math sentence
   - ❍ symbols that show inequality
   - ❍ symbols that show things that are equal

5. Which word best means inequality?
   - ❍ same
   - ❍ big
   - ❍ different


(
9


2=4

EQUAL

_____

SET

_____

ELEMENT

_____

PARENTHESES

_____

INEQUALITY

_____

UNIT 3

Note: In this program, Units 1 to 5 contain readiness language content. The key words were selected from previous math levels and lead the students into the grade 6 program. All key terms are based on the Math Standards for Alaska and reflect terms vital to academic achievement in math.

KEY VOCABULARY

Key Vocabulary

VARIOUS	*Relating to a number of different items. This can relate to ordinal and cardinal numbers.*
LABEL	*A word or phrase that identifies something. In math, the students can label fractions by their types.*
DEFINE	*To describe something. This can relate to defining simple fractions.*

Key Vocabulary

EXTEND

This refers to stretching out something. In math, this includes extending patterns inherent in the number system.

CONVERT

To change something into a different form or property. In math, this can include converting numbers from standard forms to expanded forms.

LESSONS

Language and Skills Development

LISTENING

Let's Move

Identify an appropriate body movement for each vocabulary word. This may involve movements of hands, arms, legs, etc. Practice the body movements with the students. When the students are able to perform the body movements well, say a vocabulary word. The students should respond with the appropriate body movement. You may wish to say the vocabulary words in a running story. When a vocabulary word is heard, the students should perform the appropriate body movement. Repeat, until the students have responded to each word a number of times. Rather than using body movements, or—in addition to the body movements—you may wish to use "sound effects" for identifying vocabulary words. The students should perform the appropriate body movements/sound effects for the words you say.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

The Disappearing Pictures

Mount five or six pictures on the board, vertically. Point to the picture at the top and tell the students to name it. Continue in this way until the students have named all of the pictures from top to bottom. Then, remove the last picture and repeat this process—the students should say all of the vocabulary words, including the name for the "missing" picture. Then, remove another picture from the board and have the students repeat this process. Continue in this way until the students are saying all of the vocabulary words from a blank board or until the students cannot remember the "missing pictures."

Under the Bridge

Have two students stand facing one another with hands clasped. The two students should raise their hands above their heads to resemble the arch of a bridge. Have the remaining students line up in a straight line. The students should file "under the bridge" in single file. When you clap your hands, the two students should lower their hands, trapping one of the students "on the bridge." The student who is trapped should then identify a vocabulary picture you show him/her. Repeat until a number of students have responded.

Language and Skills Development

READING

Configurations

Before the activity begins, print the sight words on an overhead transparency sheet (fill the transparency with words). Place the transparency on an overhead projector and project the sight words onto the board. Review the sight words with the students. Then, outline each of the sight words on the board with chalk. When a configuration has been created for each sight word, turn the overhead projector off. Then, point to one of the configurations and call upon a student to identify the sight word for the configuration. Continue in this way until all of the sight words have been correctly identified. You may wish to turn the projector on momentarily to verify a student's response.

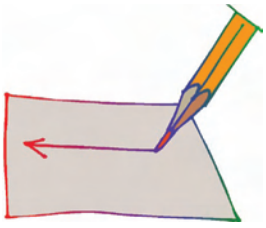
Sensory Letters

Stand behind a student. Use the index finger of your writing hand to "write" a letter/syllable from a sight word on the student's back. The student should feel the letter/syllable. Then, the student must name a sight word that contains that letter/syllable. This activity may also be done in team form. In this case, group the students into two teams. "Write" a letter/syllable on the backs of the last players in each team. When you say, "Go," the last player in each team must repeat this process with the player in front of him/her. The players should continue in this way until the first player in the team feels the letter/syllable. That player must then identify a sight word that contains that letter/syllable. The first player to do this successfully wins the round. Repeat until all players have played.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



Numbered Illustrations

Mount the vocabulary pictures on the chalkboard and number each one. Provide each student with writing paper and a pen. Call the number of a picture. Each student should write the vocabulary word for the picture represented by that number. Repeat until all vocabulary words have been written. Review the students' responses.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

VOCABULARY PICTURES


1989 · CUBA ·

CONVERT

DEFINE

EXTEND


Delta 1
DATATAINER™
Photographic Chemicals
CONTENTS
STOP
Follow Manufacturers Instructions
1/2 Gallon = 64 oz. = 1.85 Liters
Delta 1
DATATAINER
Photographic Chemicals
CONTENTS
1 QT (32 FL. OZ.) .9375 LITER

LABEL

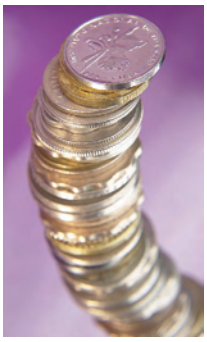
VARIOUS

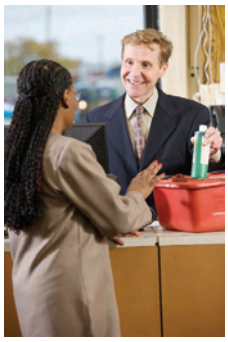
STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Numbered Pictures

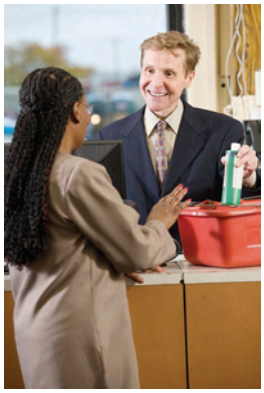
Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.





Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.



STUDENT SUPPORT MATERIALS

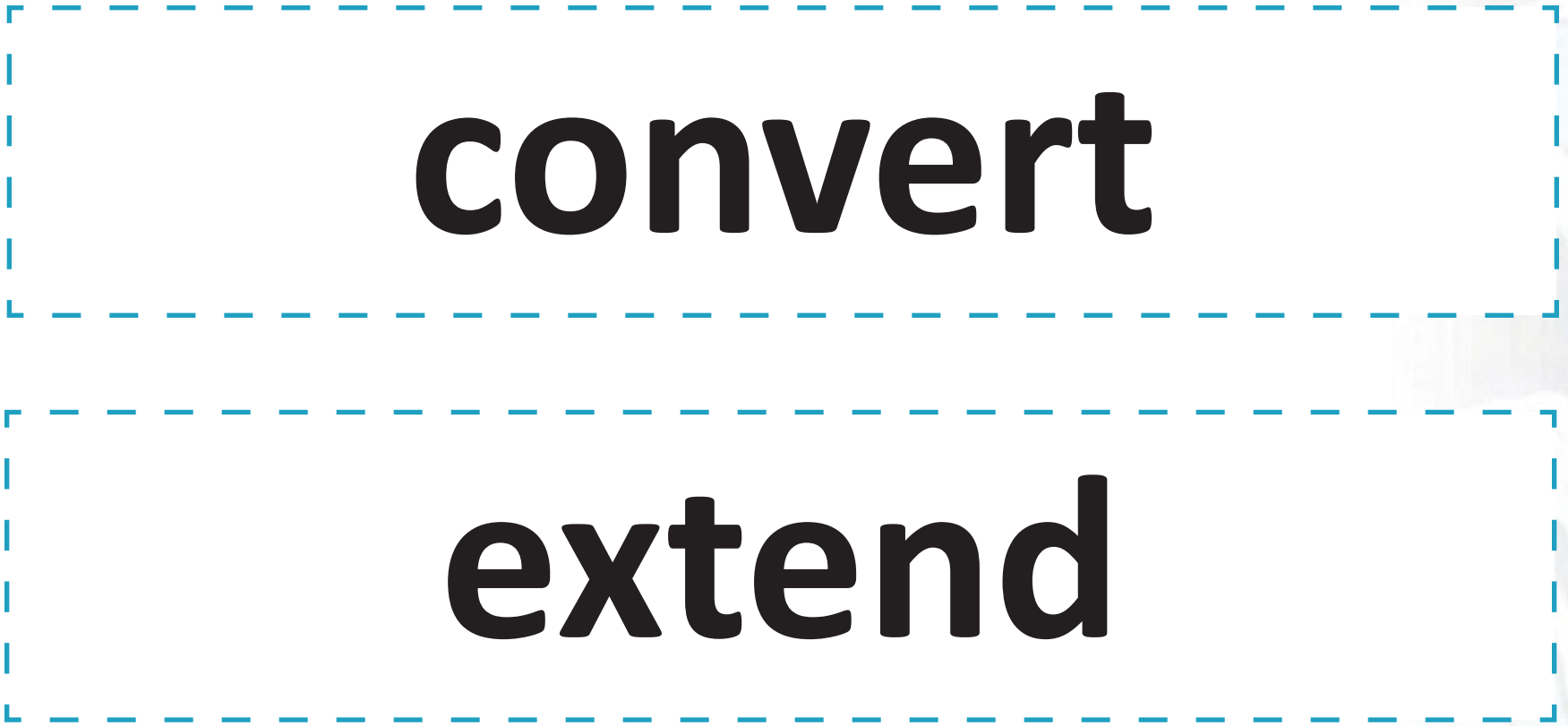
Reading • Sight Recognition and Encoding

Reading Comprehension

define

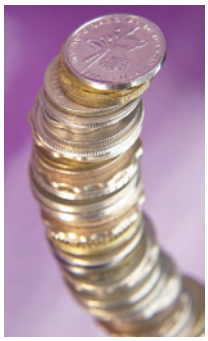
label

various

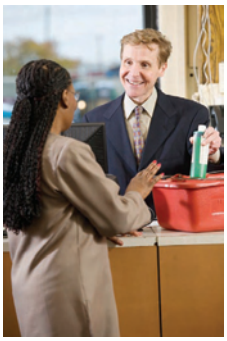

convert
extend

Sight Words Activity Page

Have the students circle the word for each picture.



various
label
define
extend
convert



various
label
define
extend
convert

various
label
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extend
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various
label
define
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convert

various
label
define
extend
convert

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

vari	**bel**
la	**ous**
de	**vert**
ex	**fine**
con	**tend**

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

var_____s

_____bels

de_____e

ex_____d

con_____t

ten	**ver**	**iou**
fin	**la**	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

This is when we describe something.	**This means inequality.**	**This is a set that has different elements.**
_____	_____	_____
This is when we change something.	**This is a number of different things.**	**This means that things are equal.**
_____	_____	_____
This can tell what something is.	**This is when we put things in an order.**	**This is when we stretch something out.**
_____	_____	_____

1. various	**2. label**	**3. define**	**4. extend**	**5. convert**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. In math, there are various
   - ❍ numbers.
   - ❍ food types.
   - ❍ plants.

2. When we label something, we
   - ❍ throw it out.
   - ❍ tell what it is.
   - ❍ buy a new one.

3. When we define something, we
   - ❍ explain it.
   - ❍ hide it.
   - ❍ mail it to someone.

4. When we extend a number, we
   - ❍ get rid of it.
   - ❍ do not change its form.
   - ❍ change its form.

5. When we convert numbers, we
   - ❍ do not change them.
   - ❍ change them into a different form.
   - ❍ change them into parentheses.

Which Belongs?

Have the students write the word that is correct for each sentence.

1. There are **variety/various** types of numbers.

2. We can **label/set** numbers by their types.

3. We can **defunct/define** what we do in math.

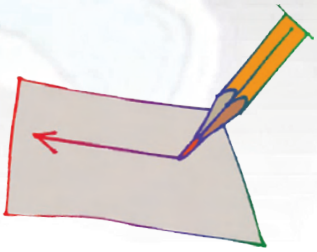
4. We can **extend/exert** a number's form.

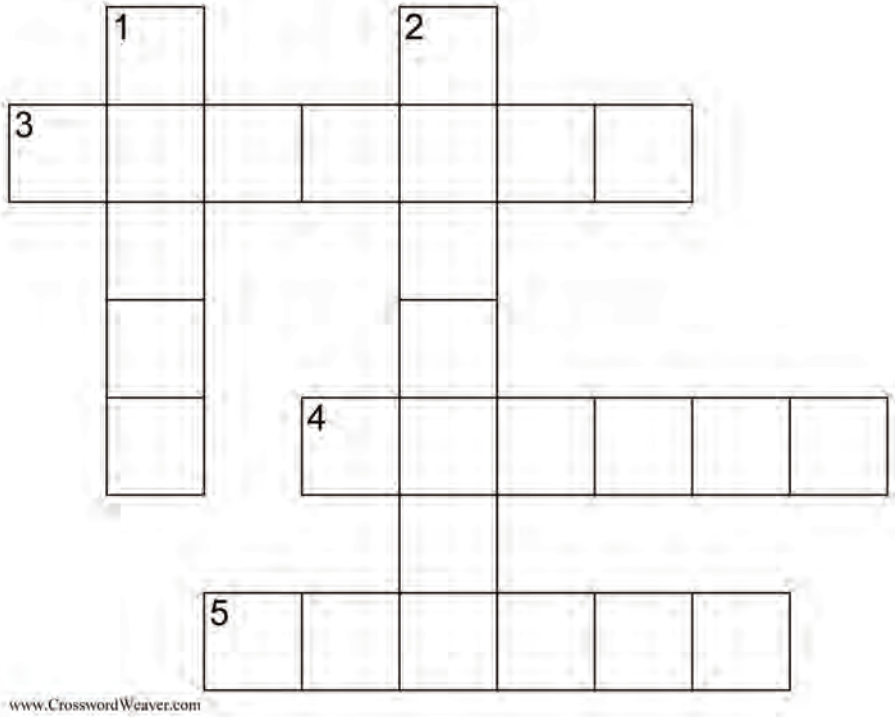
5. We can **compose/convert** fractions into whole numbers.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





ACROSS

3 Relating to a number of different items.
4 To describe something.
5 This refers to stretching out something.

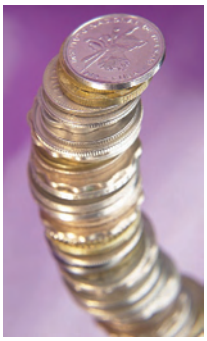
DOWN

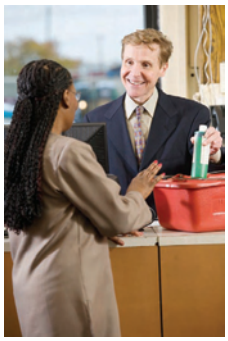
1 A word or phrase that identifies something.
2 To change something into a different form.

Crossword Puzzle Answers

Basic Writing Activity Page

Have the students write the word for each picture.





UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 3

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **VARIOUS**.
2. Write the number 2 on top of the picture for **LABEL**.
3. Write the number 3 on top of the picture for **DEFINE**.
4. Write the number 4 on top of the picture for **EXTEND**.
5. Write the number 5 on top of the picture for **CONVERT**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Various elements can be found in a set.
2. A label is an element in a set.
3. When we define something, we describe it.
4. When we extend something, we shorten it.
5. When we convert something, we don't change its form.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

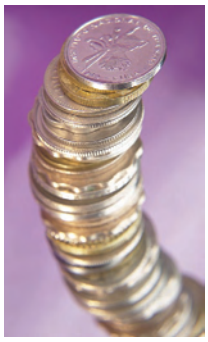
Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

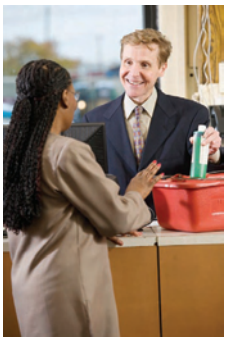
MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 3

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**






Delta 1
DATATAINER
Photographic Chemicals
Delta 1
DATATAINER

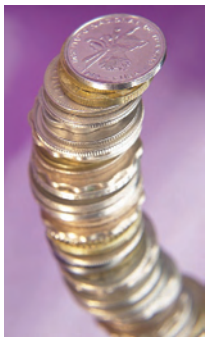
1. T F

2. T F

3. T F

4. T F

5. T F



various
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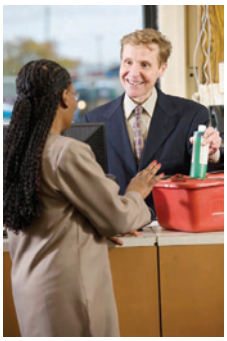

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bahl
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fone
dehn
fihn
fehl
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tand
tend
tind
und
tund
tany
tendy
tap
end

con

vart
virt
vurt
ert
art
urt
virte
vert
vet

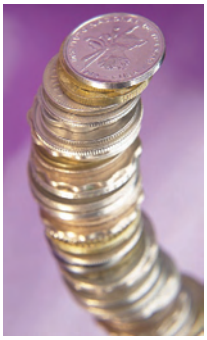
1. Which word goes with various?
   - ❍ none
   - ❍ one
   - ❍ many

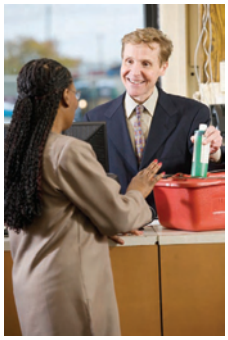
2. Where would you probably find a label?
   - ❍ in a bottle
   - ❍ under a bottle
   - ❍ on a bottle

3. Which word goes with define?
   - ❍ element
   - ❍ parentheses
   - ❍ explain

4. When we extend something, what do we do?
   - ❍ We make something shorter.
   - ❍ We make something longer.
   - ❍ We don't do anything.

5. When we convert something, we
   - ❍ change it.
   - ❍ leave it alone.
   - ❍ put it in order.






Delta 1
DATATAINER
Photographic Chemicals
Delta 1
DATATAINER
Photographic Chemicals

VARIOUS

_____

LABEL

_____

DEFINE

_____

EXTEND

_____

CONVERT

_____

UNIT 4

Note: In this program, Units 1 to 5 contain readiness language content. The key words were selected from previous math levels and lead the students into the grade 6 program. All key terms are based on the Math Standards for Alaska and reflect terms vital to academic achievement in math.

KEY VOCABULARY

Key Vocabulary

EVEN	*Numbers that can be divided by 2.*
ODD	*Numbers that cannot be divided by 2.*
NUMERAL	*A symbol used to represent a number.*

Key Vocabulary

NUMERICAL	*This relates to numbers. Things are represented by numbers rather than by letters.*
SYMBOL	*These represent math operations.*

LESSONS

Language and Skills Development

LISTENING

Nod and Clap

Mount the vocabulary pictures on the board. Point to one of the pictures and say its name. The students should nod their heads to indicate that you said the correct vocabulary word for the picture. However, when you point to a picture and say an incorrect name for it, the students should clap their hands ONCE. Repeat this process until all of the vocabulary pictures have been used a number of times in this way.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

Half Match

Before the lesson begins, prepare a photocopy of each of the vocabulary pictures. Cut each of the photocopied pictures in half. Give the picture halves to the students (a student may have more than one picture half). Say one of the vocabulary words. The two students who have the halves of the picture for that word must show their halves and repeat the word orally. Continue in this way until all of the vocabulary words have been reviewed. This activity may be repeated more than once by collecting, mixing, and redistributing the picture halves to the students. This activity may also be adapted for team form. To do this, cut each of the vocabulary pictures in half. Place half of the pictures in one pile and the other halves in another pile (one pile for each team). Say a vocabulary word. When you say "Go," the first player from each team must rush to his/her pile of picture halves. Each player must find the half of the picture for the vocabulary word you said. The first player to correctly identify the picture half and to repeat the vocabulary word for it wins the round. Repeat until all players have played.

Language and Skills Development

READING

Face

Mount the sight words around the classroom on the walls, board, and windows. Group the students into two teams. Give the first player in each team a flashlight. Darken the classroom, if possible. Say one of the sight words. When you say "Go," the students should turn their flashlights on and attempt to locate the sight word you said. The first player to do this correctly wins the round. Repeat until all players in each team have participated.

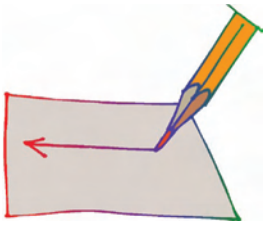
Flashlight Encode

Cut each of the sight words in half. Mount all of the word halves in a scattered form on the chalkboard. Stand in front of the chalkboard with two flashlights. Shine the light of one flashlight on a word half. Then, shine the light of the other flashlight on its matching half. The students should say the sight word. However, when the lights of the two flashlights are shining on word halves that do not go together, the students should remain silent. If four flashlights are available, this activity may be done in team form. In this case, give the first player in each team two flashlights. Say a sight word. The first player in each team must then use his/her two flashlights to illuminate the word halves for the sight word you said. The first player to do this correctly wins the round.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



Watch Your Half

Prepare a photocopy of each of the vocabulary pictures. Cut the photocopied pictures in half. Keep the picture halves in separate piles. Group the students into two teams. Give all of the picture halves from one pile to the players in Team One. Give the picture halves from the other pile to the players in Team Two. Say a vocabulary word. When you say "Go," the student from each team who has the picture half for the vocabulary word you said should rush to the board and write the word on the board. The first player to do this correctly wins the round. Repeat until all players have participated. This activity may be played more than once by collecting, mixing, and redistributing the picture halves to the two teams.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

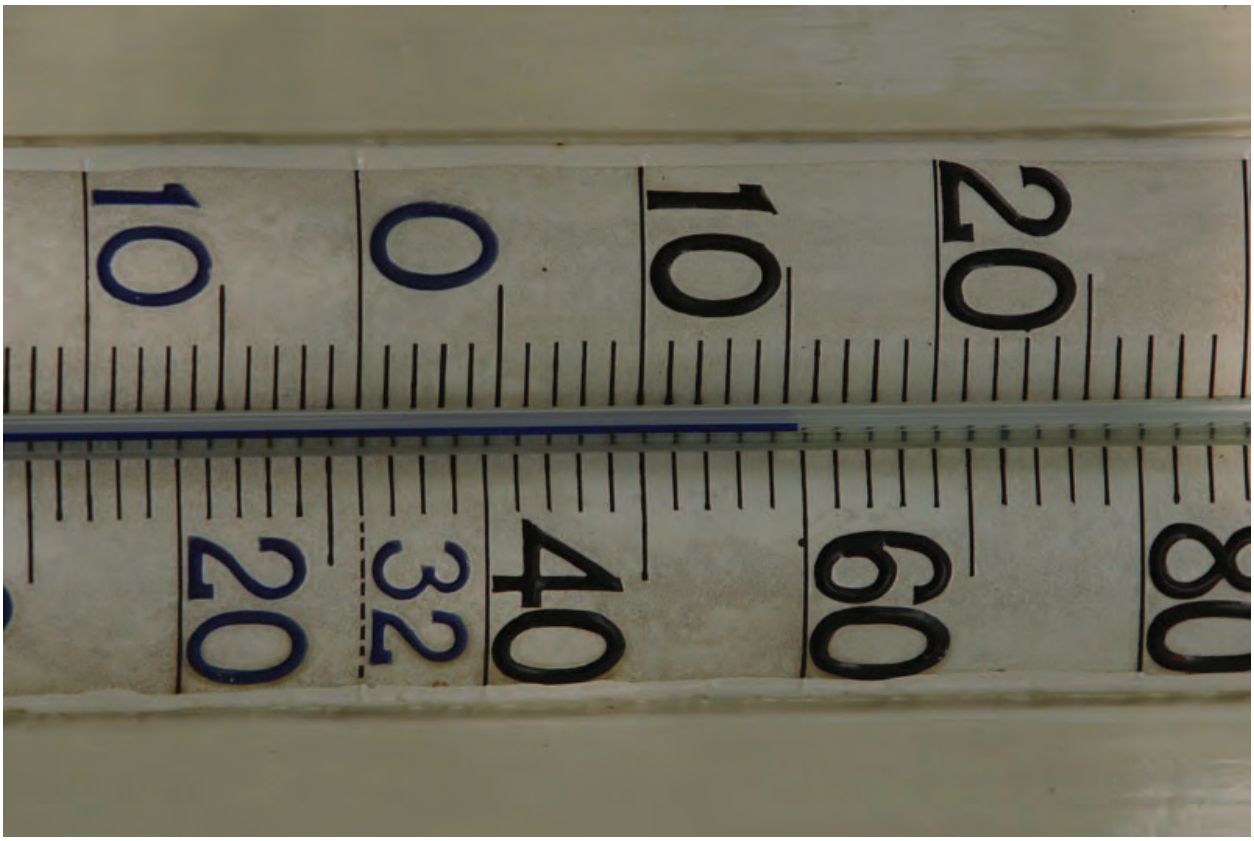
VOCABULARY PICTURES


70

EVEN


2 abc
mno 6
5 jkl
wxyz 9
ghi
8 tuv
7 pqrs

NUMERAL


10
0
10
20
20
32
40
60
80

NUMERICAL


53

ODD

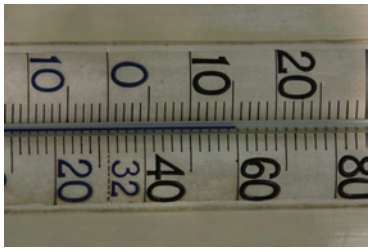
SYMBOL

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

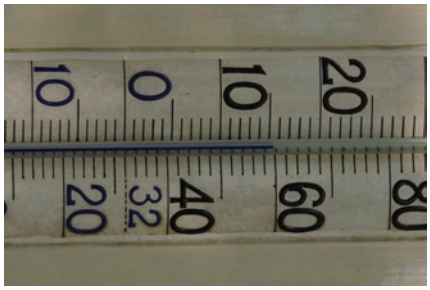
Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.



Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.



STUDENT SUPPORT MATERIALS

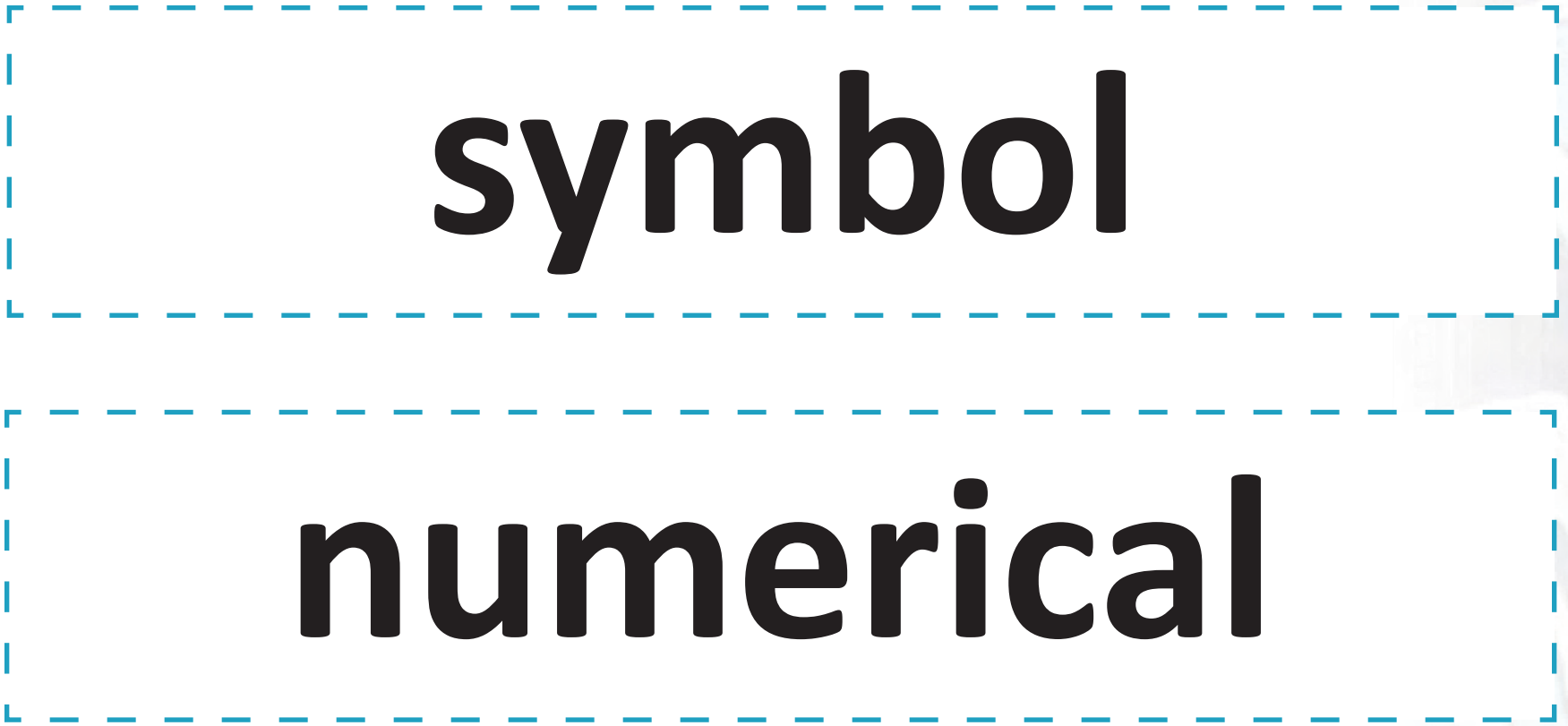
Reading • Sight Recognition and Encoding

Reading Comprehension

numeral

odd

even

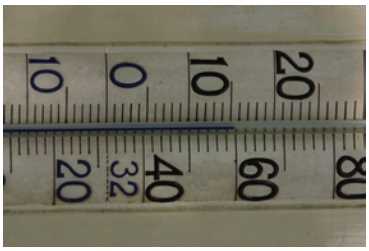

symbol
numerical

Sight Words Activity Page

Have the students circle the word for each picture.

even
odd
numeral
numerical
symbol

even
odd
numeral
numerical
symbol



even
odd
numeral
numerical
symbol

even
odd
numeral
numerical
symbol

even
odd
numeral
numerical
symbol

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

e	eral
o	ical
num	ven
numer	bol
sym	dd

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

o_____

ev_____

nu_____**al**

numer_____**cal**

sym_____

en	**bol**	**dd**
mer	**i**	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

These numbers can be divided by 2.	**This is a math sentence that has parentheses.**	**This is a symbol for a number.**
This is something that can be used to show math words.	**This is a set.**	**This is a set with different elements.**
This is when we convert numbers.	**These numbers cannot be divided by 2.**	**This relates to numbers.**

1. even	**2. odd**	**3. numeral**	**4. numerical**	**5. symbol**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. When is a number even?
   - ❍ when it can be divided by 3
   - ❍ when it cannot be divided by 2
   - ❍ when it can be divided by 2

2. When is a number odd?
   - ❍ when it can be divided by 2
   - ❍ when it cannot be divided by 2
   - ❍ when it can be divided by 3

3. What is an example of a numeral?
   - ❍ 2 is a numeral.
   - ❍ Y is a numeral.
   - ❍ + is a numeral.

4. What does numerical relate to?
   - ❍ shapes
   - ❍ sizes
   - ❍ numbers

5. Which one of these is a math symbol?
   - ❍ symbol
   - ❍ @
   - ❍ =

Which Belongs?

Have the students write the word that is correct for each sentence.

1. An **even/oven** number can be divided by 2.

2. An **equal/odd** number cannot be divided by 2.

3. A **numeral/element** is a number.

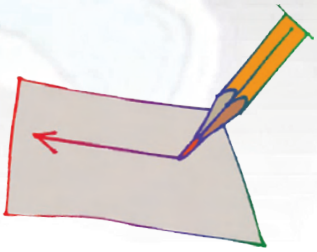
4. **Numerical/Label** is about numbers.

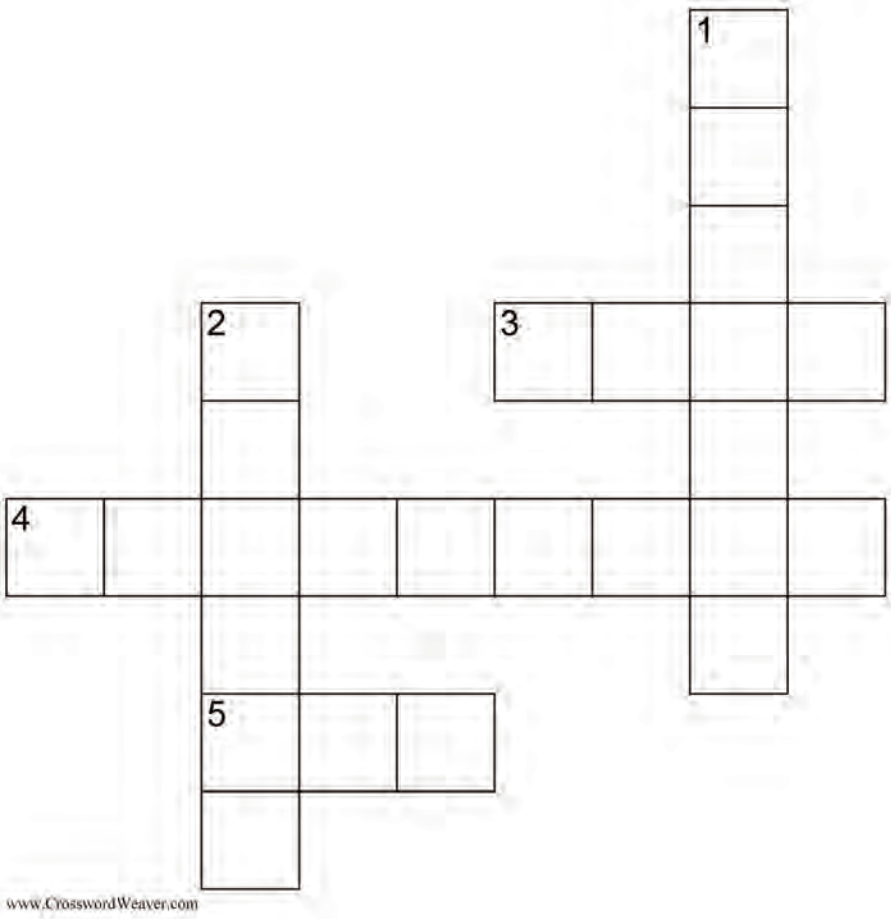
5. **Parentheses/Symbols** show different math operations and other things.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





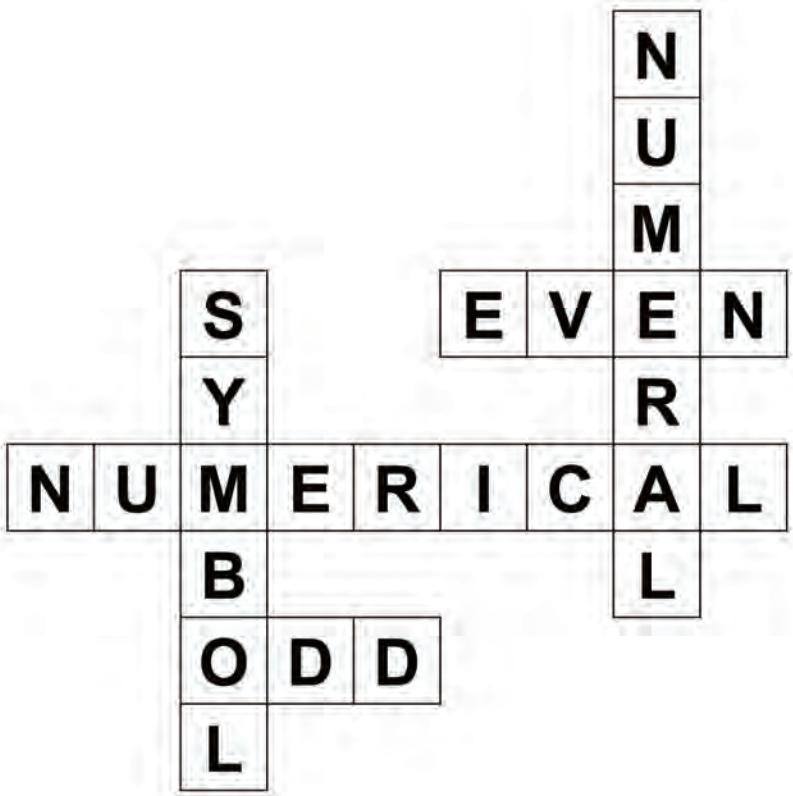
ACROSS

3 Numbers that can be divided by 2.
4 This relates to numbers.
5 Numbers that cannot be divided by 2.

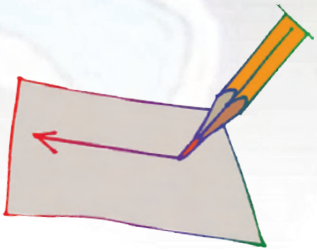
DOWN

1 A symbol used to represent a number.
2 This represents operations and other aspects of math operations.

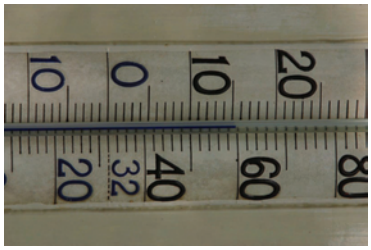
Crossword Puzzle Answers



Basic Writing Activity Page



Have the students write the word for each picture.



UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 4

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **EVEN** numbers.
2. Write the number 2 on top of the picture for **ODD** numbers.
3. Write the number 3 on top of the picture for **NUMERAL**.
4. Write the number 4 on top of the picture for **NUMERICAL**.
5. Write the number 5 on top of the picture for **SYMBOL**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Even numbers can be divided by 3.
2. Odd numbers cannot be divided by 2.
3. A numeral shows a number.
4. Numerical relates to parentheses.
5. The equal sign is a symbol used in math.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

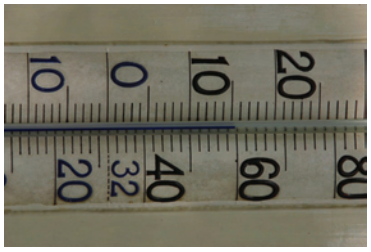
Unit Assessment Student Pages
Grade 6 • Unit 4

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**


70


2 abc
mno 6
5 jkl
ghi
wxyz 9
8 tuv
7 pqrs


10
0
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20
32
40
60
80


53

1. T F

2. T F

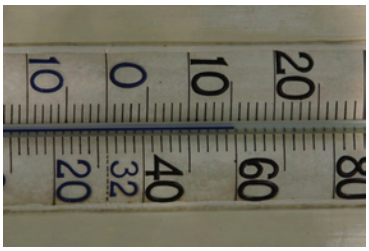
3. T F

4. T F

5. T F

even
odd
numeral
numerical
symbol

even
odd
numeral
numerical
symbol



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symbol

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bahl
bol

1 Even numbers

- ❍ are converted.
- ❍ can be divided by 2.
- ❍ have various elements.

2 Odd numbers

- ❍ can be divided by 3.
- ❍ cannot be divided by 2.
- ❍ can be divided by 2.

3 Which of these is a numeral?

- ❍ y
- ❍ (
- ❍ 4

4 Numerical has to do with

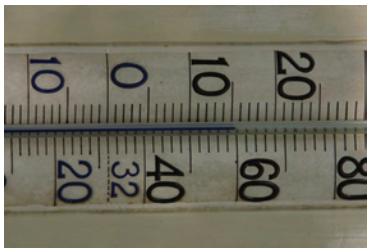
- ❍ labels.
- ❍ numbers.
- ❍ inequality.

5 Which of these is a math symbol?

- ❍ +
- ❍ &
- ❍ @


70


2 abc
mno
5 jkl
ghi
wxyz
8 tuv
7 pqrs


10
0
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32
40
60
80


53

EVEN

_____

ODD

_____

NUMERAL

_____

NUMERICAL

_____

SYMBOL

_____

UNIT 5

Note: In this program, Units 1 to 5 contain readiness language content. The key words were selected from previous math levels and lead the students into the grade 6 program. All key terms are based on the Math Standards for Alaska and reflect terms vital to academic achievement in math.

KEY VOCABULARY

Key Vocabulary

ROUNDING	*To change a number to a more convenient value.*
ESTIMATE	*To make an approximate or rough calculation, often based on rounding.*
REMAINDER	*The amount left over after dividing a number.*

Key Vocabulary

SOLVE	*To work out the answer or solution to a mathematical problem.*
DIVISIBILITY	*Refers to numbers that can be divided without a remainder. In math, there are divisibility rules. Relate this to indivisible as contained in the Pledge of Allegiance.*

LESSONS

Language and Skills Development

LISTENING

Locomotive

Have the students stand in a straight line in the center of the room. Each student should place his hands on the shoulders of the student in front of him/her. Mount a picture on each of the four walls in the classroom. Tell the students that when they hear one of the four vocabulary words (for the four pictures on the walls), they should step in that direction while still holding onto the shoulders of the players in front of them. Say the four words a number of times; the students should step toward the pictures as they are named.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

Sheet Golf

Before the activity begins, obtain an old sheet. Cut a hole (approximately two inches in diameter) in each end of the sheet. Group the students into two teams. Have the first player from each team hold opposite ends of the sheet. Place a marble or small ball in the center of the sheet. When you say "Go," the players must then lift their ends of the sheet and attempt to cause the marble or ball to fall through the hole in the other player's side of the sheet. When the ball or marble falls through one of the holes, the player on that side of the sheet must say the name of a vocabulary picture you show or he/she should repeat a sentence you said at the beginning of the round. Repeat with other pairs of students until all students have participated. If the sheet is large enough, all students can play—divide the students into four groups (one group for each side). Cut a hole in the sheet near each side. When the marble or ball falls through, all the players on that side must say the name of a vocabulary picture that you show. Repeat.

Flashlight Name

Mount the vocabulary pictures on the board and the walls of the classroom. Darken the classroom as much as possible. Use a strong flashlight to direct the students' attention to one of the pictures. The students should identify the picture that is illuminated by the light of the flashlight. Continue in this way until all of the vocabulary words have been said a number of times.

Language and Skills Development

READING

Funny Face

Have two students stand, facing one another. The object of the activity is for the students to look at each other without laughing. The first student to laugh must identify a sight word for a graphic that you show. If both students laugh at the same time, then call upon each student to identify a sight word. Repeat with other pairs of students until all students have participated.

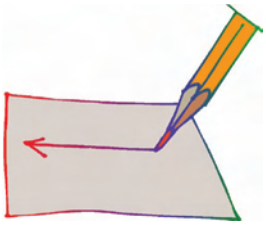
Something's Missing

Before the activity begins, prepare "clozure" word cards—sight word cards that have letters/syllables missing. Show one of the clozure word cards to the students and call upon them to identify the sight word it represents. This activity may also be done in team form. In this case, group the students into two teams. Lay the clozure word cards on the floor at the other end of the classroom. Say one of the sight words (or say a different sight word to the first player in each team). When you say "Go," the first player from each team must rush to the clozure word cards and find the clozure word card for the sight word you said. Repeat until all players have played.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



Wrong!

Provide each student with writing paper and a pen. Write the sight words on the chalkboard, purposely misspelling some of them. The students should write only those words that are misspelled, correcting the errors as they write the words. Afterward, review the students' responses.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

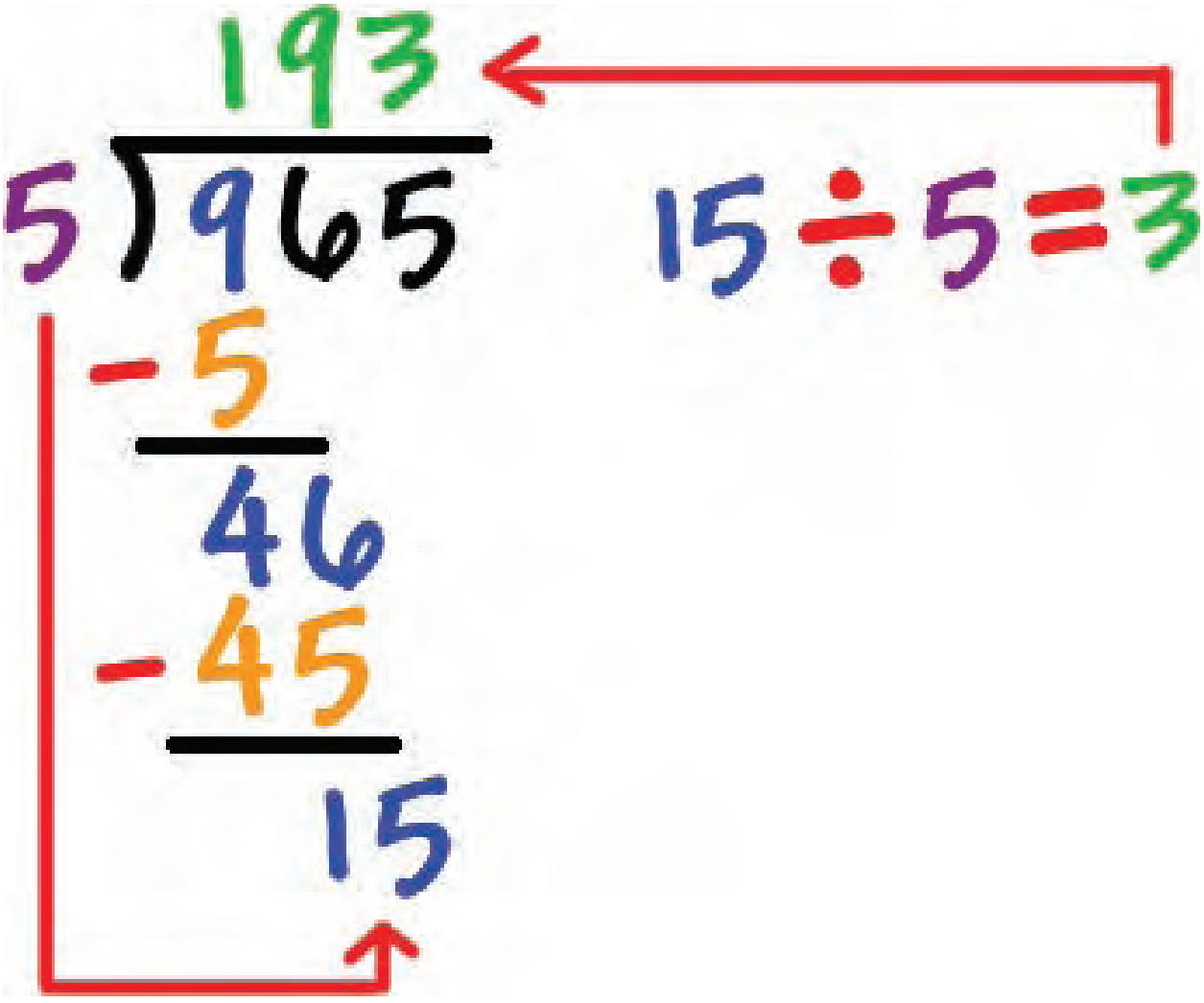
VOCABULARY PICTURES


14

DIVISIBILITY


LIFT

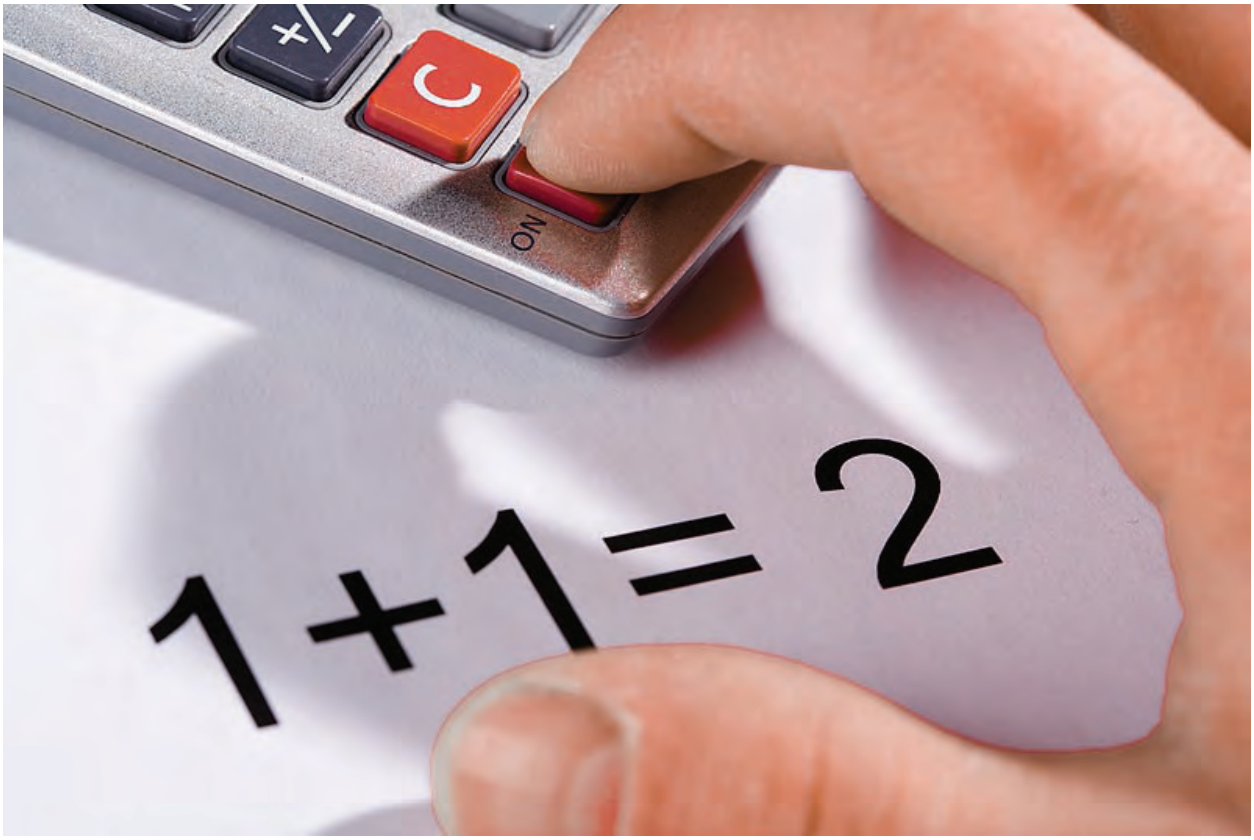
ESTIMATE


193
5)965
-5
46
-45
15
15 ÷ 5 = 3

REMAINDER


80
100

ROUNDING


+/-
C
ON
1+1=2

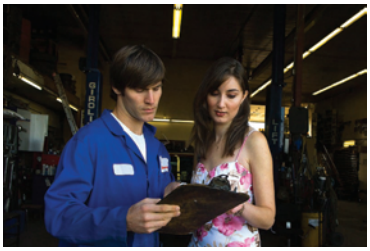
SOLVE

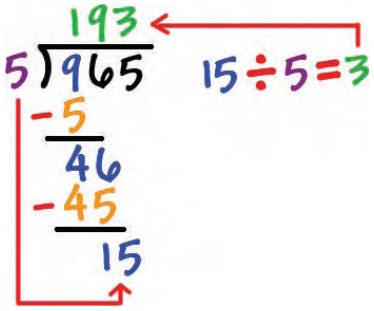
STUDENT SUPPORT MATERIALS

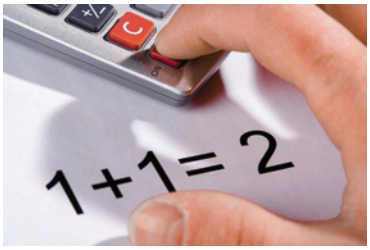
Listening • Mini Pictures

Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

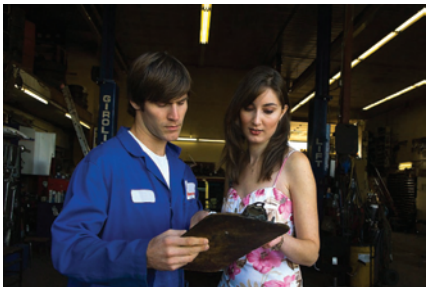


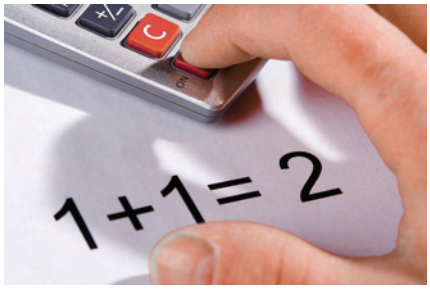


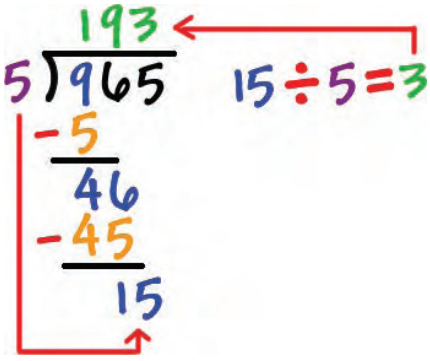


Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.







STUDENT SUPPORT MATERIALS

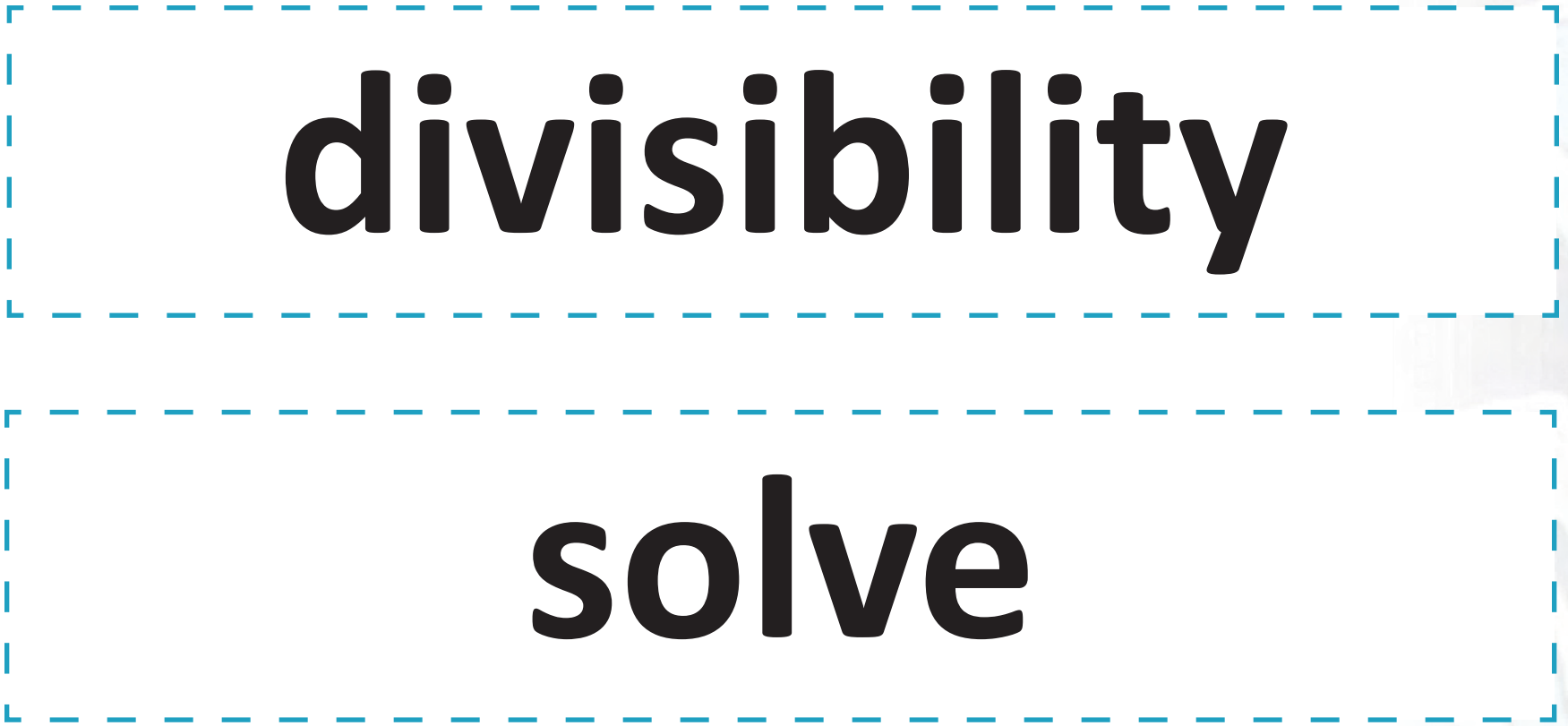
Reading • Sight Recognition and Encoding

Reading Comprehension

remainder

estimate

rounding


divisibility
solve

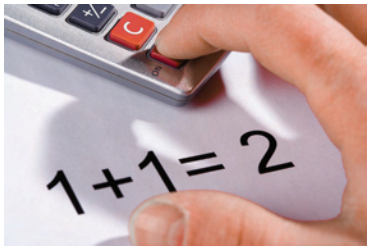
Sight Words Activity Page

Have the students circle the word for each picture.

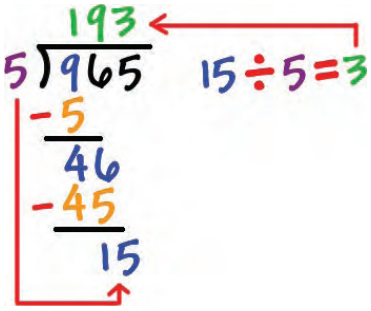
rounding
estimate
remainder
divisibility
solve

rounding
estimate
remainder
divisibility
solve

rounding
estimate
remainder
divisibility
solve



rounding
estimate
remainder
divisibility
solve



rounding
estimate
remainder
divisibility
solve

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

round	der
es	bility
remain	timate
divisi	ve
sol	ing

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

r_____ding

_____timate

re_____der

di_____ibility

s_____ve

ol	vis	es
main	oun	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

This is how we find the answer to a math question.	**These numbers cannot be divided by 2.**	**This is what is left over when we divide.**
This is somethng that can be used to show numbers.	**This is when we change the value of a number.**	**This is a symbol for equal.**
We are guessing when we do this.	**This is when we order numbers by their types.**	**This means that a number can be divided by 2.**

1. rounding **2. estimate** **3. remainder** **4. divisibility** **5. solve**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. What are we doing when we round numbers?
   - ❍ We are converting them to a different value.
   - ❍ We are explaining odd numbers.
   - ❍ We are putting numerals in parentheses.

2. When we estimate, what are we doing?
   - ❍ We are identifying odd and even numbers.
   - ❍ We are guessing.
   - ❍ We are labeling numbers by their values.

3. When do we get a remainder?
   - ❍ When we add numerals.
   - ❍ When we divide numerals.
   - ❍ When we order numerals by their values.

4. Divisibility means that
   - ❍ a number is odd or even.
   - ❍ a number is in a set.
   - ❍ a number can be divided.

5. When we solve a problem, we
   - ❍ describe the problem.
   - ❍ identify the problem.
   - ❍ answer the problem.

Which Belongs?

Have the students write the word that is correct for each sentence.

1. We can change the number 27 by **rounding/identifying** it.

2. When we **extricate/estimate**, we are guessing.

3. The **remainder/model** is left over when we divide numbers.

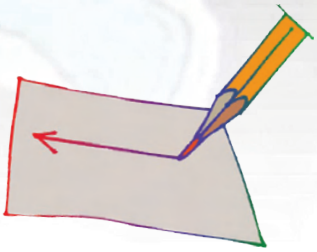
4. There are **defining/divisibility** rules in math.

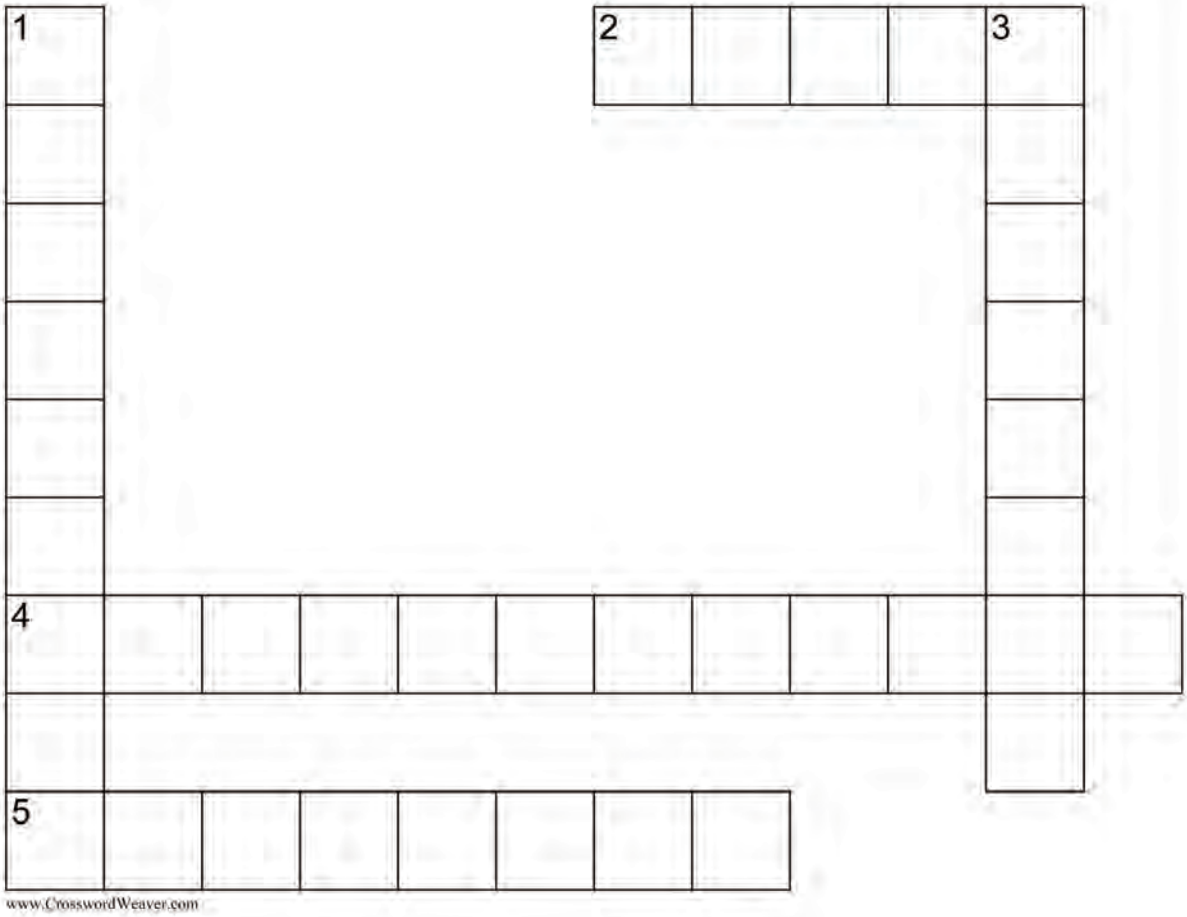
5. We can **sieve/solve** math problems.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





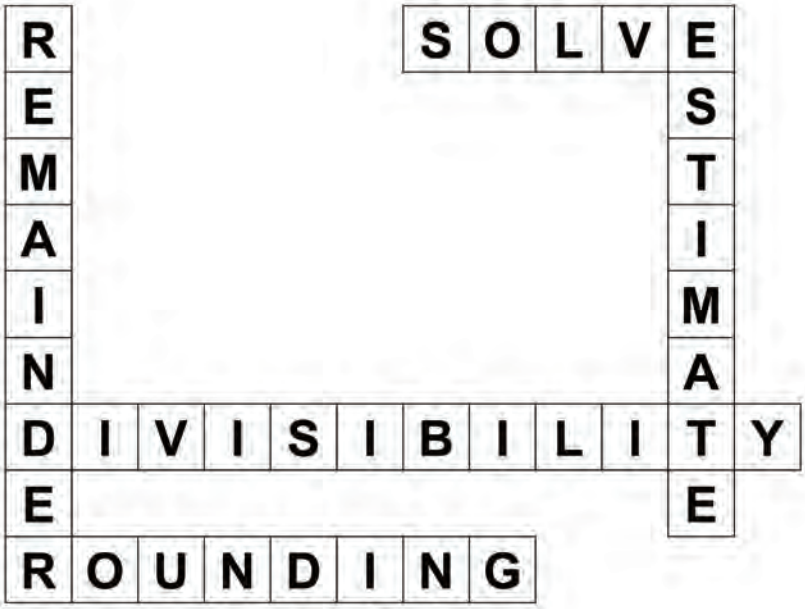
ACROSS

2 To work out the answer or solution to a mathematical problem.
4 This refers to numbers that can be divided without a remainder.
5 Changing a number to a more convenient value.

DOWN

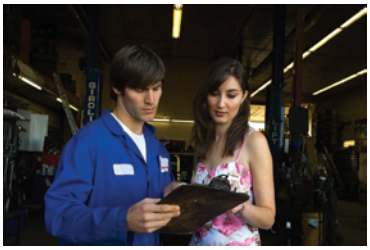
1 The amount left over after dividing a number.
3 To make an approximate or rough calculation, often based on rounding.

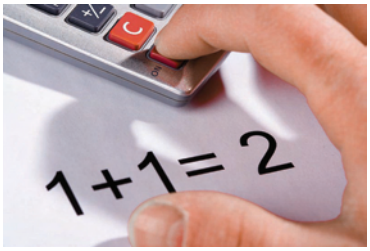
Crossword Puzzle Answers

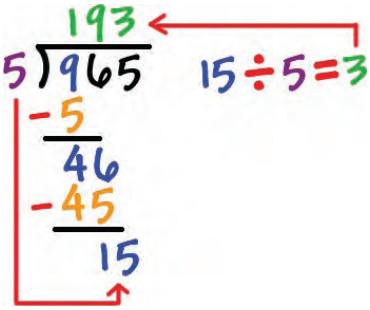


Basic Writing Activity Page

Have the students write the word for each picture.







UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 5

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **ROUNDING**.
2. Write the number 2 on top of the picture for **ESTIMATE**.
3. Write the number 3 on top of the picture for **REMAINDER**.
4. Write the number 4 on top of the picture for **SOLVE**.
5. Write the number 5 on top of the picture for **DIVISIBILITY**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Rounding numbers changes their value.
2. When we estimate, we tell about inequalities.
3. A remainder is the amount left over after dividing.
4. When we solve a problem, we find its answer.
5. Divisibility refers to numbers that can be divided with no remainders.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

SCIENCE PROGRAM

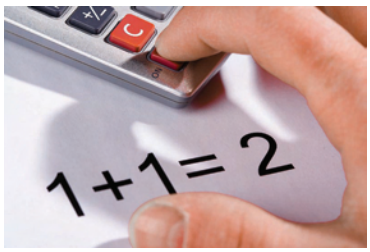
Unit Assessment Student Pages
Grade 6 • Unit 5

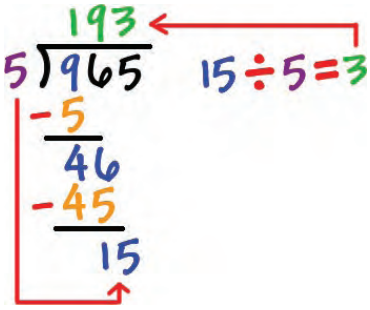
Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**


14


80
100


1+1= 2


193
5 965
15÷5=3
-5
46
-45
15

1. T F

2. T F

3. T F

4. T F

5. T F

rounding
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remainder
solve
divisibility

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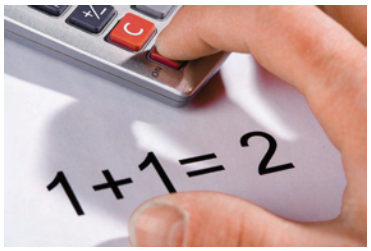

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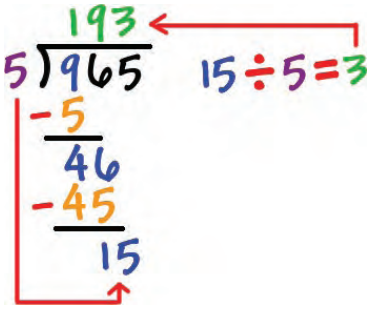

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1 When we round numbers, it makes it
- ❍ harder to read numbers.
- ❍ easier to find parentheses.
- ❍ easier to read numbers.

2 When we estimate we
- ❍ know how many.
- ❍ guess how many.
- ❍ extend numerals.

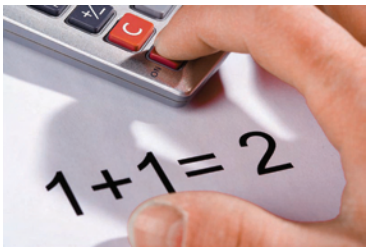
3 A remainder is what is left over when we
- ❍ add.
- ❍ multiply.
- ❍ divide.

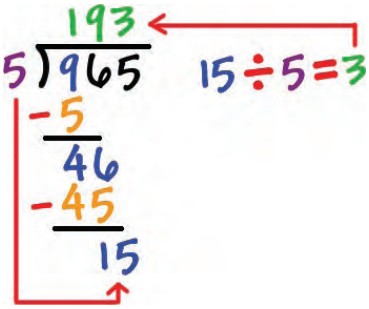
4 When we solve a problem, we
- ❍ find its answer.
- ❍ make up various symbols.
- ❍ estimate.

5 Divisibility relates to dividing
- ❍ with no remainder.
- ❍ with a small remainder.
- ❍ with a big remainder.


14


100
80


1+1= 2


193
5 965
15÷5=3
-5
46
-45
15

ROUNDING

_____

ESTIMATE

_____

REMAINDER

_____

SOLVE

_____

DIVISIBILITY

_____