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WINDOWS

Novell Network Installation Instructions

1. Logon to the SERVER from a workstation as Sys Op or Admin.
2. Insert the CD into CD ROM Drive and locate the grade level installer icon and double-click the installer icon.
3. Install to the following directory: F:\Tyera\X where "X" stands for the grade level.
4. After the installation, assign user rights to F:\Tyera directory.
(Read, Write, File Scan)
5. The path to the records directory is kept in a file called Where.Txt located in the Tyera folder where you installed the software. Make sure the file reflects the correct path such as: F:\Tyera\RECORDS\

Make sure you leave the backslash at the end of the line.

INSTALLATION INSTRUCTIONS: NT SERVER

Step 1 At the SERVER

1. On Drive C or any other available drive on the server, create a New Folder and name it Tyera
2. From File Menu Click Sharing , Shared As and Maximum Allowed.
3. Click OK and close the Window of the Drive you selected in step 1 above.
4. Right-Click NetWork Neighborhood and Click on Map NetWork Drive
5. Choose Drive F or any other available Drive letter you wish to use for all the stations within the network.
6. On Path, scroll down to locate the Tyera folder : See example below

\\ServerName\Tyera

7. Click OK and close the Tyera folder.
8. Insert the CD into the CD Rom drive, navigate to the grade level folder and double-click the installer icon.
9. On the lower window choose the mapped Tyera Drive and click OK.
10. Follow the installation instructions on the screen until finished.
11. Open the mapped drive (Tyera) of the server and edit 'WHERE.TXT" to reflect the location of your record files. This path is necessary so that all the stations can send the Records to the same folder. Change from C:\Tyera\RECORDS\ to reflect the letter of your mapped drive. Example: F:\Tyera\RECORDS\
12. On the Tyera folder, locate the only .EXE file and create a shortcut and drag it to the desktop.

Step 2 At the WorkStation

From NetWork Neighborhood, locate the Tyera folder on the server and map it to the same Drive Letter you chose at the Server so that all stations are mapped to the same Drive. Create a shortcut of the only *.EXE file in the directory and drag it to the WorkStation's Desktop. The software is now available from the station. Repeat for the other stations. Map all stations to the same Drive Letter.

WINDOWS

StandAlone Installation Instructions

1. Insert the CD into the CD Rom drive and locate the grade level folder.
2. Double-click the installer icon.
3. Accept the default directory for the installation. The software will install to C:\Tyera\X where "X" stands for the grade level.
4. The installation will create the appropriate Login icons within a folder. Under Windows 9x, you can run any of the Login scripts from the Programs menu or you can create a shortcut and drag it to the desktop to make it easier for your students to run the software.
5. In the unlikely event you may have a technical question, please review the Frequently Asked Questions before placing your call. If your problem is not listed or you feel you need additional clarification, please call. You may also write down your question/problem or concern and Fax it to 281-232-2935 and receive an immediate response via FAX. Make sure you include your Phone number and Fax number and the best time for a tech representative to call you.

Macintosh Network Installation Instructions

1. Insert CD into file server and double-click the grade level folder to be installed.
2. Double-click the installer icon and follow the screen instructions until you see the message telling you the software has been successfully installed.
3. Copy "FILE.FXE" from the grade level folder of the CD into the folder where you installed the programs on the file server otherwise you will get error 999 when you try to run the software.
4. Open the "WHERE" file in each of the folders you just installed. The first line should have the exact name of the SERVER. If it is, then close the "WHERE" file otherwise make the adjustment. Records will be sent to the referenced folder.

* * * * *

After installing the software, set the file sharing on the installed folder. Begin by locating the folder on your networked hard drive. Select the installed folder by clicking on it once in the Finder window.

For OS 7.x systems:

- (1) Select "Sharing..." from the File menu.
- (2) Check the box labeled "Share this item and its contents".
- (3) Check each of the three boxes to the right of the label "Everyone" so that all users may "See Folders", "See Files," and "Make Changes."
- (4) Check the box labeled "Make all currently enclosed folders like this one."
- (5) Close the window and accept all the changes.

For OS 8.x and OS 9.x

- (1) Select "Get Info" from the File menu.
- (2) Select "Sharing" from the Show drop down list.
- (3) Check the box labeled "Share this item and its contents".
- (4) Change the icon to the right of the label "Everyone" to allow all users the privileges to read and write.
- (5) Click the "Copy" button to apply these rights to the remainder of the files.
- (6) Close the window and accept all the changes.

In the event AppleShare reports a "File cannot be opened because it is already in use" error, then make sure you lock the files on the server otherwise AppleShare will not let you use the file simultaneously.

Macintosh

StandAlone Installation Instructions

1. Insert the CD into the CD Rom drive.
2. Locate the grade level folder, and double-click the installer icon. Read and respond to the questions on the screen until you get the message indicating the software installed successfully.
3. Press the [QUIT] button, but do not remove disk from the drive until you complete step 4 below.
4. Drag "FILE.FXE" from the CD to the red folder where the software was installed. The programs will not work without the file named "FILE.FXE" being in the same folder as the rest of the programs.
5. Open the "WHERE.TXT" file in each of the folders you just installed. The first line should have the exact name as your Mac. If it is the same, close the "WHERE" file, otherwise make the adjustment. The programs are now ready. Select the folder you want and double-click the Program icon. To make it easier for your students, make an alias of the program and drag it to the desktop.

Windows Management System

The management system is quite simple. Students click on the Student Login button to use the software. Teachers click on the Management button to accomplish administrative tasks. First teachers must be added to the teacher list so that their respective rosters can be created. Student names are added one at a time along with a student password. Only students appearing on a teacher's roster can use the program.

Once the computer adds a student's name to the roster, the Management System will keep such information as the student's name, the date and time of the last session, how much time was spent on the lesson, the grade, mastery status, and the total time spent on each of the objectives throughout the entire year.

Additionally, the Management System will provide each student his/her individual report for the Writing Programs, The Reading Programs, and the Math Programs.

Within each individual menu is a "Report" button the student can select to see his/her report for each of the three areas. If a printer is available, the report can be printed by simply clicking on the "Print" button at the bottom of the report screen.

The computer will continue to update a student's information as long as the student's directory is present. At the end of the year students should be deleted from the hard drive or network. Deleting students is also quite simple. Delete the student's directory from the hard drive.

If you wish to delete everyone from the system at once, then delete the RECORDS directory which is located in C:\Tyera\RECORDS. If you have a NetWork version, the location is F:\Tyera\RECORDS. On NT Server, trash the entire mapped drive where the records reside.

For technical assistance, review the Frequently Asked Questions prior to placing your call. If your problem is not listed or you need additional help, please call the number below. You may also describe your technical problem in writing and Fax to 281-232-2935 for an immediate response via Fax. Please provide you phone number and fax and the best time for a tech representative to call you.

Macintosh Management System

The management system is quite simple. Students click on the Student Login button to use the software. Teachers click on the Management button to accomplish administrative tasks. First teachers must be added to the teacher list so that their respective rosters can be created. Once a teacher's roster is created, students appearing on the roster can use the program.

Once the computer adds a student's name to the roster, the Management System will keep such information as the student's name, the date and time of the last session, how much time was spent on a lesson, the grade, mastery status, and the total time spent on each of the objectives throughout the entire year.

Additionally, the Management System will provide each student his/her individual report for the Writing Programs, The Reading Programs, and the Math Programs.

Within each individual menu is a "Report" button the student can select to see his/her report for each of the three areas. If a printer is available, the report can be printed by simply clicking on the "Print" button at the bottom of the report screen.

The computer will continue to update a student's information as long as the student's folder is present. At the end of the year students should be deleted from the hard drive. Deleting students is also quite simple. Delete the student's folder from the hard drive by putting it into the trash.

If you wish to delete everyone from the system at once, then delete the entire RECORDS folder which is located in the Tyera folder inside the System Folder.

For technical assistance, review the Frequently Asked Questions prior to placing your call. If your problem is not listed or you need additional help, please call the number below. You may also describe your technical problem in writing and Fax to 281-232-2935 for an immediate response via Fax. Please provide you phone number and fax and the best time for a tech representative to call you.

Windows

Frequently Asked Questions and Trouble Shooting

1. After entering my password during Login the computer seems to be in a loop and the program doesn't do anything. What is wrong?

Open the "WHERE.TXT" file in the programs directory and make sure it has the following: C:\Tyera\RECORDS\

On Novell network, it should have: F:\Tyera\RECORDS\ or the mapped drive.

On Windows NT, it should reflect the mapped drive letter.

2. We have the Management System on the network yet the student reports have nothing in them. What is wrong?

Assign user rights (Read, Write, File Scan) to the RECORDS directory so the networking software will allow our software to write to the data files and also assign user rights to the Tyera Directory.

4. I am using the software on a Network, but only one student at a time can use the software. What is wrong?

Tag the folders as shareable so that more than one student can use the programs. Also remember to assign user rights accordingly.

5. I get error #999 when trying to use the software, and there is a message to call technical support. What is wrong?

The path to the record files is incorrect or the user does not have the rights to the Tyera\XRECORDS\ directory.

Macintosh

Frequently Asked Questions and Trouble Shooting

1. After entering my password during Login the computer tells me to insert the disk called Macintosh HD. What is wrong?

Open the "WHERE.TXT" file which resides in the same folder as the programs and change the first of three lines to show your Mac's name.

2. When trying to print a report, students get an "Out of Memory" error.

Your monitor is set to either 256 or millions of colors. Go to the Control Panel and reset the Monitor setting to 16 colors, print the report, and reset the colors to the previous setting.

3. I am using the software on a Network, but only one student at a time can use the software. What is wrong?

From your server run AppleShare and tag the folders as shareable so that more than one student can use the programs. Remember to assign user rights to the folders you want the students to use.

4. I get error #999 when trying to use the software, and there is a message to call technical support. What is wrong? Copy FILE.FXE to the red folder.

After installing the software, set the file sharing on the installed folder. Begin by locating the folder on your networked hard drive. Select the installed folder by clicking on it once in the Finder window.

For OS 7.x systems:

- (1) Select "Sharing..." from the File menu.
- (2) Check the box labeled "Share this item and its contents".
- (3) Check each of the three boxes to the right of the label "Everyone" so that all users may "See Folders", "See Files," and "Make Changes."
- (4) Check the box labeled "Make all currently enclosed folders like this one."
- (5) Close the window and accept all the changes.

For OS 8.x and OS 9.x

- (1) Select "Get Info" from the File menu.
- (2) Select "Sharing" from the Show drop down list.
- (3) Check the box labeled "Share this item and its contents".
- (4) Change the icon to the right of the label "Everyone" to allow all users the privileges to

read and write.

- (5) Click the "Copy" button to apply these rights to the remainder of the files.
- (6) Close the window and accept all the changes.

Creating Teachers' List

Double-Click the Program icon to run the program.

Click the Management Button to create the teacher list. Enter the name of the first month of the year as your **password**. Do not share the password with your students. Students will have their own password when the rosters are created. In the event the students forget their individual password, teachers can look inside the student folder to find out their password.

Click the Add Teachers button and enter the names of your teachers. Then add the students to each of the teachers on the list to create the rosters.

Student Login

Students log onto the system by double-clicking the appropriate Program icon. The program will then show the list of teachers that have been entered into the system. Students select their teacher by clicking on their teacher's name.

Once the teacher is selected, the class roster will appear so that students can click on their name to begin. After the student has clicked on his/her name, the program will ask for a password. Teachers should assign and control the password for each student.

Once the roster is complete, tag it as a "Read Only" file to prevent problems. The name of the roster is located in the teacher's folder under the Records directory within the Tyera folder and is called Users.Txt.

Upon enrollment, students will see a general menu to select Reading, Writing, or Math. Once students make their selection, they will be shown another menu showing the Program Titles under the subject selected. To return to the main menu, students click on the "Quit" button or Control Q will always quit any program.

Essential Knowledge and Skills

DOMAIN: READING COMPREHENSION

Objective 1 Word Meaning

The student will determine the meaning of words in a variety of written texts.

- (3.5) **Reading/word identification.** The student uses a variety of word identification strategies. The student is expected to:
- (D) use root words and other structural cues, such as prefixes, suffixes, and derivational endings, to recognize words (3)
 - (E) use knowledge of word order (syntax) and context to support word identification and confirm word meaning (1-3)
- (3.8) **Reading/vocabulary development.** The student develops an extensive vocabulary. The student is expected to:
- (D) demonstrate knowledge of synonyms, antonyms, *[and multi-meaning words]* (for example, by sorting, classifying, and identifying related words) (3)

Objective 2 Supporting Ideas

The student will identify supporting ideas in a variety of written texts.

- (3.7) **Reading/variety of texts.** The student reads widely for different purposes in varied sources. The student is expected to:
- (B) read from a variety of genres for pleasure and to acquire information *[from both*

print and electronic sources] (2-3)

- (3.9) **Reading/comprehension.** The student uses a variety of strategies to comprehend selections *[read aloud and selections]* read independently. The student is expected to:
- (C) retell *[or act out]* the order of important events in stories (K-3)
- (3.11) **Reading/text structures/literary concepts.** The student analyzes the characteristics of various types of texts. The student is expected to:
- (I) identify the importance of the setting to a story's meaning (1-3)
- (3.12) Reading/inquiry/research. The student generates questions and conducts research using information from various sources. The student is expected to:
- (E) interpret and use graphic sources of information, including maps, charts, graphs, and diagrams (2-3)

Objective 3 Main Idea

The student will summarize a variety of written texts.

- (3.9) **Reading/comprehension.** The student uses a variety of strategies to comprehend selections *[read aloud and selections]* read independently. The student is expected to:
- (H) produce summaries of text selections (2-3)
- (3.11) **Reading/text structures/literary concepts.** The student analyzes the characteristics of various types of texts. The student is expected to:
- (J) recognize the story problem(s) or plot (1-3)

Objective 4 Relationships & Outcomes

The student will perceive relationships and recognize outcomes in a variety of written texts.

- (3.9) **Reading/comprehension.** The student uses a variety of strategies to comprehend selections *[read aloud and selections]* read independently. The student is expected to:

- (F) make and explain inferences from texts, such as determining important ideas, causes and effects, making predictions, and drawing conclusions (1-3)
- (G) identify similarities and differences across texts, such as in topics, characters, and themes (3)

Objective 5 Analyze Information

The student will analyze information in a variety of written texts in order to make inferences and generalizations.

- (3.9) **Reading/comprehension.** The student uses a variety of strategies to comprehend selections [*read aloud and selections*] read independently. The student is expected to:
 - (F) make and explain inferences from texts, such as determining important ideas, causes and effects, making predictions, and drawing conclusions (1-3)
- (3.10) **Reading/literary response.** The student responds to various texts. The student is expected to:
 - (C) support interpretations or conclusions with examples drawn from text (2-3)
- (3.11) **Reading/text structures/literary concepts.** The student analyzes the characteristics of various types of texts. The student is expected to:
 - (H) analyze characters, including their traits, feelings, relationships, and changes (1-3)
- (3.12) **Reading/inquiry/research.** The student generates questions and conducts research using information from various sources. The student is expected to:
 - (E) interpret and use graphic sources of information, including maps, charts, graphs, and diagrams (2-3)

Objective 6 Point of View

The student will recognize points of view, propaganda, and/or statements of fact and

opinion in a variety of written texts.

(3.9) **Reading/comprehension.** The student uses a variety of strategies to comprehend selections *[read aloud and selections]* read independently. The student is expected to:

- (J) distinguish fact from opinion in various texts, including news stories and advertisements (3)

SENTENCE CONSTRUCTION

Sentence Construction: Students in Grade 3 should be able to recognize appropriate sentence construction within the context of a written passage.

Rationale

Effective written communication of facts and ideas involves the use of sentences that express a central thought, have clearly related and logically arranged sentence parts, and vary in length and structure.

Well-written sentences convey the writer's ideas in a clear, precise, and organized way.

Items for this objective will assess the student's ability to recognize correct and effective sentence structures in a variety of types of passages.

Instructional Targets

Items for this objective will assess the following instructional targets:

- *recognize complete sentences and avoid fragments.

Description of Questions

1. The student will be presented with a passage composed of several sentences. The passage will contain both complete sentences and fragments. The sentences or sentence part(s) to be tested will be underlined in the passage.
2. Underlined sections will consist of correct sentences or fragments.
3. Questions will require the student to determine the correctly written revision of the underlined sections.

Description of Answer Choices

Answer choices for this objective will contain basic sentence construction errors involving the incomplete expression of an idea. Incorrect choices will lack the sentence element(s) necessary to form a complete sentence. "No mistake" may be used as an answer choice.

ENGLISH USAGE

English Usage: Third Grade students should be able to recognize appropriate English usage within the context of a written passage.

Rationale

A knowledge of basic concepts of standard English usage is a useful tool in effective written communication. Understanding the grammatical devices of standard English provides a framework for using words to express clearly the relationships within sentences and to convey accurately the writer's message. For example, the tense of the verb establishes the time of events in a sentence.

Items for this objective will assess the student's ability to recognize correct usage and appropriate grammatical form in a variety of situations.

Instructional Targets

Items for this objective will assess the following instructional targets:

- * Recognize correct person and number of regular verbs and irregular verbs with simple subjects, including personal pronouns
- * Recognize correct verb tense and correct form of tense of regular verbs
- * Recognize correct verb tense and correct form of tense of irregular verbs

Description of Questions

1. The student will be presented with a passage composed of several sentences that contain blanks that take the place of the words to be tested.
2. Questions will require the students to identify the appropriate grammatical form of a word or words to fit the context of a given sentence.

Description of Answer Choices

Answer choices will vary depending upon the instructional target being assessed.

1. For items dealing with person/number, incorrect choices will be verbs that do not agree in person and/or number with the subject.
2. Items dealing with tense will include choices that are in an incorrect tense for the context of a given sentence or that are an incorrect form of the verb.

SPELLING LIST

add	again	ago
also	always	animal
another	asked	ate
aunt	away	bank
before	block	blue
boot	both	bread
bright	broke	but
cage	catch	cave
children	church	class
clean	clock	close
coming	crying	dance
desk	dinner	dirt
dish	dishes	drink
dry	duck	egg
even	eye	face
fall	father	few
fight	fill	first
fishing	flag	found
fox	friend	front
gate	glass	gone
good	grass	gray
great	guess	gum
hang	hay	helped
hold	hung	hunt
ice	ill	its
job	joke	jug
jump	kick	kill
king	kite	kitten
know	lake	late
leave	left	leg
liked	looked	lot
lunch	make	mean
merry	mine	missed
money	mother	mouse

name
night
noon
one
paper
pen
picture
place
pond
rabbit
rang
road
rose
sack
second
send
shall
shine
shot
skate
smoke
sold
spelling
spring
star
step
sun
swing
tail
ten
their
there
those
till
trip
upon
wait
week
when
win
with
year

neck
nine
nose
only
park
pencil
pie
plant
pool
race
rest
rob
round
school
seen
sent
sheep
shirt
should
slide
snake
sorry
spend
stamp
started
stick
super
table
teacher
tent
them
thing
thought
today
truck
use
wall
well
where
window
write
yet

nest
none
off
open
pat
pick
pin
please
present
rain
right
rode
rub
sea
sell
shade
shell
shoot
sick
small
snow
spell
splash
stand
stayed
still
swim
tag
teeth
thank
then
think
throw
tooth
until
vacation
wanted
what
while
winter
wrote
zoo

CAPITALIZATION

Capitalization: Third grade students should be able to capitalize the following:

- A. First word in a sentence (e.g., My favorite movie is about a beautiful dog.)
- B. The pronoun "I" (e.g., She and I will go to see the new movie.)
- C. The name of a person (e.g. John, Mary, Sue, Bill).
- D. The names of the days of the week.
- E. The names of the months of the year.
- F. Proper nouns (e.g. Main Street, George Memorial Library)

PUNCTUATION

Punctuation: Third grade students should be familiar with the following rules.

- A. End punctuation
 - 1. Period
 - a. At the end of a declarative sentence (e.g., My family visited the zoo last Saturday.)
 - b. Question mark at the end of a direct question (e.g. Do you like math more than English?).
 - c. Exclamation mark at the end of an exclamatory sentence (e.g. Hooray, we won the game!).
- B. Commas

1. After the opening of a friendly letter (e.g., Dear Maria,)
2. After the closing of a letter (e.g., Your friend,)
3. Between the day and year in a date (e.g., October 12, 1995)
4. Between city and state (e.g., Denver, Colorado)

DOMAIN: CONCEPTS

Objective 1 Number Concepts

The student will demonstrate an understanding of number concepts.

- (3.1) **Number, operation, and quantitative reasoning.** The student uses place value to communicate about increasingly large whole numbers in verbal and written form, including money. The student is expected to:
- (A) use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999
 - (B) use place value to compare and order whole numbers through 9,999
 - (C) determine the value of collection of coins and bills
- (3.2) **Number, operation, and quantitative reasoning.** The student uses fraction names and symbols to describe fractional parts of whole objects or sets of objects. The student is expected to:
- (C) use fraction names and symbols to describe fractional parts of whole objects or sets of objects with denominators of 12 or less

Objective 2 Math Relations

The student will demonstrate an understanding of mathematical relations, functions, and other algebraic concepts.

- (3.6) **Patterns, relationships, and algebraic thinking.** The student uses patterns to solve problems. The student is expected to:
- (A) identify and extend whole-number and geometric patterns to make

predictions and solve problems

(C) identify patterns in related multiplication and division sentences (fact families), such as $2 \times 3 = 6$, $3 \times 2 = 6$, $6 \div 2 = 3$, $6 \div 3 = 2$

(3.7) Patterns, relationships, and algebraic thinking. The student uses lists, tables, and charts to express patterns and relationships. The student is expected to:

(A) generate a table of paired numbers based on a real-life situation, such as insects and legs identify patterns in a table of related number pairs based on a real-life situation and extend the table

Objective 3 Geometric Properties

The student will demonstrate an understanding of geometric properties and relationships.

(3.8) Geometry and spatial reasoning. The student uses formal geometric vocabulary. The student is expected to:

name, describe, and compare shapes and solids using formal geometric vocabulary

(3.9) Geometry and spatial reasoning. The student recognizes congruence and symmetry. The student is expected to:

(A) identify congruent shapes
(C) identify lines of symmetry in shapes

(3.10) Geometry and spatial reasoning. The student recognizes that numbers can be represented by points on a line. The student is expected to:
locate and name points on a line using whole numbers [*and fractions such as halves*]

Objective 4 Measurement Concepts

The student will demonstrate an understanding of measurement concepts using metric and customary units.

(3.11) Measurement. The student selects and uses appropriate units and procedures to measure length and area. The student is expected to:

(A) estimate and measure lengths using standard units such as inch, foot, yard,

centimeter, decimeter, and meter

(B) use linear measure to find the perimeter of a shape

(3.12) **Measurement.** The student measures time and temperature. The student is expected to:

(A) tell and write time shown on traditional and digital clocks

(B) use a thermometer to measure temperature

Objective 5 Probability & Statistics

The student will demonstrate an understanding of probability and statistics.

(3.14) **Probability and statistics.** The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to:

(A) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data

(B) interpret information from pictographs and bar graphs

DOMAIN: OPERATIONS

Objective 6 Addition

The student will use the operation of addition to solve problems.

(3.3) **Number, operation, and quantitative reasoning.** The student adds and subtracts to solve meaningful problems involving whole numbers. The student is expected to:

(A) model addition and subtraction using pictures, words, and numbers

Objective 7 Subtraction

The student will use the operation of subtraction to solve problems.

(3.3) Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers. The student is expected to:

(A) model addition and subtraction using pictures, words, and number

Objective 8 Multiplication

The student will use the operation of multiplication to solve problems.

(3.4) Number, operation, and quantitative reasoning. The student recognizes and solves problems in multiplication and division situations. The student is expected to:

(B) solve and record multiplication problems (one-digit multiplier)

Objective 9 Division

The student will use the operation of division to solve problems.

(3.4) Number, operation, and quantitative reasoning. The student recognizes and solves problems in multiplication and division situations. The student is expected to:

(C) use models to solve division problems and use number sentences to record the solutions

DOMAIN: PROBLEM SOLVING

Objective 10 Estimating Solutions

The student will estimate solutions to a problem situation.

(3.5) Number, operation, and quantitative reasoning. The student estimates to determine reasonable results. The student is expected to:

(B) estimate sums and differences beyond basic facts

Objective 11 Solution Strategies

The student will determine solution strategies and will analyze or solve problems.

(3.3) Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers. The student is expected to:

(B) select addition or subtraction and use the operation to solve problems involving whole numbers through 999

(3.13) Measurement. The student applies measurement concepts. The student is expected to: measure to solve problems involving length, *[area,]* temperature, and time

Objective 12 Mathematical Representation

The student will express or solve problems using mathematical representation.

(3.3) Number, operation, and quantitative reasoning. The student adds and subtracts to

solve meaningful problems involving whole numbers. The student is expected to:

(A) model addition and subtraction using pictures, words, and numbers

(3.4) Number, operation, and quantitative reasoning. The student recognizes and solves problems in multiplication and division situations. The student is expected to:

(B) solve and record multiplication problems (one-digit multiplier)

(C) use models to solve division problems and use number sentences to record the solutions

(3.14) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to:

(B) interpret information from pictographs and bar graphs

Objective 13 Evaluate Reasonableness

The student will evaluate the reasonableness of a solution to a problem situation.

(3.15) Underlying processes and mathematical tools. The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness

A Key to Understanding the Essential Knowledge Skills

Example from Objective 1

-A- (3.8) **Reading/vocabulary development.** The student develops an extensive vocabulary. The student is expected to:

-C-

-B- (D) demonstrate knowledge of synonyms, antonyms, *[and multi-meaning words]* (for

example, by sorting, classifying, and identifying related words) (3)

Example from Objective 5

(3.9) Reading/comprehension. The student uses a variety of strategies to comprehend selections *[read aloud and selections]* read independently. The student is expected to:

(F) make and explain inferences from texts, such as determining important ideas, causes and effects, making predictions, and drawing conclusions (1-3) -E

-D-

KEY

A. Knowledge and Skills Statement

This broad statement describes what students should know and be able to do for Grade 3 reading. The number preceding the statement identifies the grade and number of the knowledge and skills statement.

B. Student Expectation

This specific statement describes what students should be able to do to demonstrate proficiency in what is described in the knowledge and skills statement. Students will be tested on skills outlined in the student expectation statement.

C. *[Italicized, bracketed text]*

Although the entire student expectation has been provided for reference, text in bracketed italics indicates that this portion of the student expectation will not be tested .

D. Underlined text

Underlined text indicates that this portion of the student expectation is not tested in this objective but is tested in another objective.

E. (1-3)

The student expectation is taught from Grade 1 through Grade 3.

A Key to Understanding the Essential Knowledge Skills

Example from Objective 3

-A- (3.10) Geometry and spatial reasoning. The student recognizes that numbers can be represented by points on a line. The student is expected to:

-B- locate and name points on a line using whole numbers *[and fractions such as halves]*

-C-

Example from Objective 6

(3.3) **Number, operation, and quantitative reasoning.** The student adds and subtracts to solve meaningful problems involving whole numbers. The student is expected to:

-B- (A) model addition and subtraction using pictures, words, and numbers

-D-

KEY

A. Knowledge and Skills Statement

This broad statement describes what students should know and be able to do for Grade 3 mathematics. The number preceding the statement identifies the grade and number of the knowledge and skills statement.

B. Student Expectation

This specific statement describes what students should be able to do to demonstrate proficiency in what is described in the knowledge and skills statement. Students will be tested on skills outlined in the student expectation statement.

C. *[Italicized, bracketed text]*

Although the entire student expectation has been provided for reference, text in bracketed italics indicates that this portion of the student expectation will not be tested.

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