



OVERVIEW

Spiraled Practice Including Class and Student Profiles

This document was created with all students in mind and provides teachers with sets of 3 spiraled questions to assess student mastery of the TEKS assessed on STAAR as well as Class and Student Profiles designed for recording and analysis of performance data. Each question in this document is correlated to a specific STAAR Category and TEKS.

This document provides both multiple choice and answer grid formats. However, the questions can easily be utilized without the multiple choice answers or answer grid. The questions are spiraled through all TEKS and pieces of TEKS that are eligible for assessment on STAAR. Twenty spirals are provided for each six weeks for a total of 120 Spiraled Practice sets.

The spiraling of the questions takes into consideration the following information from the STAAR Mathematics Blueprint documents released from the TEA in January 2014:

- The % of questions on each grade level STAAR that will assess Readiness Standards
- The % of questions on each grade level that STAAR will assess Supporting Standards
- The number of questions on each grade level STAAR that will be multiple choice format and 3 questions will be griddable format

The Profiles were designed to enable teachers and students to keep a record of mastery of all TEKS, not just the ones assessed on STAAR. Every question on each Spiraled Practice is correlated on the Profiles. Teachers keep a Class Profile to guide plans for instruction for each class they teach. Students keep a Student Profile so they will know their own individual strengths and weaknesses. Teachers view individual Student Profiles to guide plans for small group instruction and individualized tutorials.

NOTE: There is no answer key provided for this document, as the authors' philosophy is that each teacher should create a personalized Solutions Manual so the teacher becomes more familiar with the Revised TEKS and assessment of the Revised TEKS, as well as formulates various solution strategies for each question. Teachers are encouraged to communicate with the authors regarding discussion of any question in this document.

AUTHORS' VISION FOR IMPLEMENTATION – SPIRALED PRACTICE

- Begin the class period with a Spiraled Practice. Students work in Partner Pairs until Six Weeks 4 when they begin working individually without assistance.
- Students should first identify the **MAIN IDEA** and **SUPPORTING DETAILS** for each problem, and then work each problem – they must show all work they do to help them choose their answer – the objective would be that anyone who looks at their paper should be able to understand how they chose their answer.
- After students begin working, quietly assign three different Partner Pairs as **SHARE PAIRS** for the 3 problems. If you have an opaque projection device, the share pairs will share their work from their paper. If you do not, then prior to class label 3 different transparencies as 1, 2, and 3 (small numbers in the top left corner of each transparency) and distribute the blank transparencies and overhead pens to the **SHARE PAIRS** so they will be able to show their work utilizing an overhead projector.
- The **SHARE PAIRS** are assigned to work on their assigned problem **FIRST**, then complete the other questions if they have time – they must **SHOW** all work – the teacher should monitor the share pairs closely and answer any questions they have about the problem.
- **ALL** students should work in pairs to complete a Spiraled Practice in 6 minutes – each student recording on their individual page(s). Call **TIME** after 6 minutes.
- Immediately **SHARE PAIR 1** places their paper or paper or transparency on the projection device and shares how they solved the problem. First, they say “The main idea of the problem is...”; next they say “The supporting details in the problem are...”. Finally they share the process they used to answer the problem. After sharing, they ask the class: “Did anyone get a different answer?” and “Did anyone solve the problem differently?” If someone did, they share and discussion follows. If the **SHARE PAIR** could not complete the problem (however, ever share pair/student should be expected to find the main idea and supporting details in each problem, even if they cannot answer the problem), they ask the class if anyone could complete the problem – if so, a pair that completed the problem is asked to come up and share their work with discussion following.
- If no student could answer the problem correctly, the teacher makes a decision whether to continue discussion of the problem at this point, or to delay discussion until a more appropriate time (if the decision is made to delay discussion, tell the students that they will be working on this problem in a major lesson later and discussion will continue then).

AUTHORS' VISION FOR IMPLEMENTATION – PROFILE BOOKLETS

CLASS PROFILE:

- Teachers record in a Class Profile for each class. The questions on each Spiraled Practice are correlated on the Class Profile.
- Suggestion for recording class data:
Record + if class data demonstrates mastery
Record – if class data demonstrates improvement needed
- Record + based on the following:
August/September – Record + if 50% or higher of class demonstrates mastery
October – Record + if 60% or higher of class demonstrates mastery
November – Record + if 70% or higher of class demonstrates mastery
December – Record + if 80% or higher of class demonstrates mastery
January-May – Record + if 90% or higher of class demonstrates mastery
- Periodically highlight all + in **green** and highlight all – in **hot pink**.
- Begin glancing over each Class Profile by TEKS to identify areas of strength and weakness. Use this data to make instructional decisions regarding focus for instructional time by class.

STUDENT PROFILE:

- Each student records in an individual Student Profile – teachers do not record in Student Profiles. The questions on each Spiraled Practice are correlated on the Student Profile.
- Record +/- based on the following:
Record + if answer is correct
Record – if answer is incorrect
- Periodically highlight all + in **green** and highlight all – in **hot pink**.
- **Student** – Periodically glance over the Student Profile to identify areas of strength and weakness
- **Teacher** – Periodically glance over each Student Profile by TEKS to identify areas of strength and weakness. Use data to make instructional decisions regarding focus for tutorial time.

OVERVIEW

Open-Ended Skills and Concepts

This document was created with all students in mind and provides teachers with sets of 5 open-ended questions to assess student mastery of TEKS assessed on STAAR as well as Class and Student Profiles designed for recording and analysis of performance data. Each set of questions in this document is correlated to a specific Category and TEKS. These materials can be utilized for guided practice, independent practice, or homework. These materials can be utilized with a whole class, small groups and/or tutorial settings.

NOTE: There is no answer key provided for the Skills and Concepts problems as the authors' philosophy is that each teacher should create a personalized Solutions Manual so the teacher becomes more familiar with the Revised TEKS and assessment of the Revised TEKS, as well as formulates various solution strategies for each question. Teachers are encouraged to communicate with the authors regarding discussion of any question in this document.

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- Skills and Concepts are open-ended questions that are organized by individual TEKS. Each Skills and Concepts includes 5 open-ended questions.
- The teacher sets a time limit prior to students' beginning the Skills and Concepts if the material is being utilized for independent practice.
- Students work on Skills and Concepts in Partner Pairs even during independent practice. Partner Pairs are given specific "share questions" on the Skills and Concepts. The process that should be followed by all Partner Pairs is to complete the question(s) they are assigned, then work on the other questions until time is called.
- The teacher calls time and the Partner Pairs guide class discussion on their "share questions" assignments. Students who did not complete the Skills and Concepts prior to the time limit may record on their individual papers during the discussion time but must record in a different color.
- A Skills and Concepts should not be sent home for homework until the majority of the class has demonstrated mastery of the TEKS addressed.

OVERVIEW

Problem-Solving Projections

The Problem-Solving Projections were created with all students in mind and provide teachers with large print projections for problem-solving questions that address all TEKS, including the Process Standards TEKS. Each Problem-Solving Projection is correlated to a specific TEKS Category and TEKS.

The Problem-Solving Projections include a general set of questions that should be addressed by students as they solve the problems and during class discussion of the solution process for each problem. Teachers should make a copy of these questions and distribute for each student to keep in their math notebook.

The Problem-Solving Questions include the following:

1. What is the main idea of this problem?
2. What are the supporting details in this problem?
3. What skills, concepts and understanding of math vocabulary are needed to be able to answer this problem?
4. Did this problem involve mathematics arising in everyday life, society, or the work place?
5. What is a good problem-solving strategy for this problem?
6. Can you explain how you used any math tools, mental math, estimation or number sense to solve this problem?
7. Did this problem involve using multiple representations (symbols, diagrams, graphs, language)?
8. Did you use any relationships to solve this problem?
9. How can you justify your solution?
10. How can you check for reasonableness of your solution to this problem?

The Problem-Solving Projections can be utilized for instruction, guided practice or independent practice. These materials can be utilized with a whole class, small groups and/or tutorial settings.

NOTE: There is no answer key provided for these problems as the authors' philosophy is that each teacher should create a personalized Solutions Manual so the teacher becomes more familiar with the Revised TEKS and assessment of the Revised TEKS, as well as formulates various solution strategies for each question. Teachers are encouraged to communicate with the authors regarding discussion of any question in this document.

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Students work with Partner Pairs to answer these problems. The teacher projects the problem then sets a time limit prior to students' beginning their work. Partner Pairs are given specific "share" questions from 1-10 on the Problem-Solving Questions page. The process that should be followed by students for all problems is to answer questions 1-3, then complete the solution to the problem, and finally answer questions 4-10.

The teacher calls time and the Partner Pairs guide class discussion on their "share" assignments. Students who did not complete the solution to the problem prior to the time limit must complete recording in a different color.

OVERVIEW

Mini-Assessments and Periodic Assessments

Mini-Assessments

The Mini-Assessments were created with all students in mind and provide teachers with 10-question assessments that address each TEKS in each STAAR Reporting Category with focus on the Process Standards TEKS. Each Mini-Assessment is correlated to a specific Category and TEKS. These assessments should not be utilized until after all instruction has been completed for the TEKS addressed in the assessment.

- The Mini-Assessments can be utilized at any time after instruction has occurred for the TEKS addressed in the assessment.
- Allow approximately 20 minutes for completion of each Mini-Assessment (the amount of time may vary for some assessments). No assistance should be given during this time except as allowed on STAAR for Grade 3.
- The Mini-Assessments should be completed by individual students, graded by the teacher and performance discussed by the teacher with individual students.

Periodic Assessments

The Periodic Assessments were created with all students in mind and provide teachers with a 20-question tool to periodically assess multi-TEKS. These assessments should not be utilized until after all instruction has been completed for all TEKS addressed in the assessment.

- The Periodic Assessments can be utilized at any time after instruction has occurred for all TEKS addressed in the assessment.
- Allow approximately 40 minutes for completion of each Periodic Assessment (the amount of time may vary for some assessments). No assistance should be given during this time except as allowed on STAAR for Grade 3.
- The Periodic Assessments should be completed by individual students, graded by the teacher and performance discussed by the teacher with individual students.

An answer key is provided for the Mini-Assessments and Periodic Assessments. Teachers should consider creation of a personalized Solutions Manual to become more familiar with the Revised TEKS and assessment of the Revised TEKS, as well as to formulate various solution strategies for each question. Teachers are encouraged to communicate with the authors regarding discussion of any question in this document.

OVERVIEW

Grades 3-5 TEKS-Based Lessons

Implementation of Lessons

Implementing these lessons requires a different way of teaching. The traditional teacher roles of authority figure and information disseminator must change to learning facilitator and instructional decision maker.

Knowledge about students and how they learn mathematics can contribute to establishing an environment that is conducive for learning. The lessons are designed to meet the requirements of the Revised Texas Essential Knowledge and Skills for grade level mathematics.

The design of each lesson is consistent and includes a format for delivery of instruction, assessment, and homework. Where appropriate, the use of manipulatives and technology is included in the lesson. Cooperative learning as a learning setting is utilized in each lesson.

The Role of Assessment

Making changes in the content and methods of mathematics instruction also requires making changes in why and how students' work is assessed. Evaluation should be an integral part of instruction and not be limited to grading and testing.

There are at least four reasons for collecting evaluation information:

- to make decisions about the content and methods of mathematics instruction
- to make decisions about classroom climate
- to help in communicating what is important
- to assign grades

Assessment includes much more than marking right and wrong answers. It "must be more than testing; it must be a continuous, dynamic, and often informal process" (NCTM 1989, p. 203). The *Curriculum and Evaluation Standards* recommends that teachers use a variety of types of evaluation: (1) *observing and questioning students* (2) *using assessment data reported by students*; (3) *assessing students' written mathematics work*; and (4) *using multiple-choice or short-answer items*. Use of these methods of collecting assessment data will contribute to a thorough evaluation of students' work.

Implementing the assessment process in the TEKSING TOWARD STAAR Lessons may require significant changes in how teachers view and use assessment in the classroom. Teachers will assess frequently to monitor individual performance and guide instruction.

Intent of the TEKSING TOWARD STAAR Lessons is to provide teachers with structure for instruction and assessment for the REVISED TEKS that incorporates characteristics of a good mathematics learning environment and the role of assessment.

Data Gathering and Analysis

Recording and analysis of data is a critical component of the TEKSING TOWARD STAAR Lessons. Recording in a Class Profile book by the teacher should occur on an almost daily basis. Expectation is that all STAAR-format assessments are recorded, as well as data from Spiraled Practice and other data as teachers choose. Analysis of the data should guide and direct instructional decisions.

Recording in a Student Profile book by each individual student should occur on a regular basis. Expectation is that all STAAR-format assessments are recorded, as well as data from Spiraled Practice. Analysis of this individual student data should be utilized to make decisions regarding reteach/tutorials for each student. Students should be given additional work on TEKS that indicate weakness. Students should not be expected to complete additional work on TEKS that indicate strength.

LESSON COMPONENTS

Lesson Focus

Each lesson begins with the Lesson Focus. The TEKS expectations, focus for the lesson, and STAAR expectations for the Reporting Category are stated for the teacher.

Process Standards Incorporated Into Lesson

Following the **Lesson Focus**, the teacher is provided with a list of the **Process Standards** student expectations that are incorporated into the lesson.

Materials Needed for Lesson

Following the **Process Standards Incorporated Into Lesson**, the teacher is provided with a list of **Materials Needed for Lesson** to prepare prior to beginning a lesson.

Vocabulary for Lesson

Following the **Materials Needed for Lesson**, the teacher is provided with **Vocabulary for Lesson** words and phrases students should know by the end of each part of lesson.

Math Background

Following the **Vocabulary for Lesson**, a regular print version of the **Math Background** for each part of a lesson is provided for the teacher, followed by a large print projection version for use with students. Students are given a blank **Math Notes** page prior to the beginning of each lesson. (Master for the Math Notes is found in General Information)

Students are expected to take notes during projection of Math Background - notes will be used during lesson activities (this may be the first note taking experience for students in math - the goal is for students to record important information). Students record as much information as they choose. The information should be recorded in the student's own "words," "symbols," and pictures or diagrams.

As each page is projected, the teacher should ask various students to share what they think is important information - the teacher does **NOT** read the math background to the class - and students do **NOT** read the math background to the class. Students should read the information themselves, talk about what the information says, then write their notes. Teachers should make sure the important information is brought out by students. Teachers should talk students through examples. Students should make sure they take good notes and write examples for anything that they do not already know.

SUGGESTION 1: Print out the projection version of the **Math Background** for each part of the lesson. Hole punch the pages and put them into a **Math Background** folder or small 3-ring binder. Leave this information in a certain location where students can come to take additional notes if they discover their notes are not sufficient for completing a **Student Activity**.

SUGGESTION 2: Consider printing the teacher version of the **Math Background** for students who have an IEP that requires highlighting of important information for note taking. This suggestion should NEVER be followed for all students, but could be used for students that the teacher feels would greatly benefit and do not have an IEP.

This version could also be printed to send home with students who have missed school and are completing make-up work at home.

Problem-Solving

A **Problem-Solving Model** is located in Lesson 1 for use throughout the entire school year. This model addresses the Process Standards TEKS in each grade level. This model should be discussed during this lesson and a copy should be given to each student to keep in a math notebook.

Each **Problem-Solving** activity is provided in a large print version for projection and will follow the **Math Background** projection version in each part of a lesson. A general set of **Problem-Solving Questions** should be addressed by students as they solve the problems and during class discussion of the solution process. Teachers should make a copy of the **Problem-Solving Questions** for each student and distribute prior to beginning **Problem-Solving 1** in this lesson. Teachers should discuss the questions and let students know they will be answering these questions for problem-solving activities during the entire school year. Each student should keep a copy of the questions in a math notebook.

Prior to some Problem-Solving activities a **Teacher Notes: Problem-Solving** page is included with instructions for the teacher - most often this is instructions for pages teachers need to print for students prior to beginning the Problem-Solving.

Students work in partner pairs to complete all **Problem-Solving** activities throughout the entire school year. Students record answers on notebook paper or plain white paper. The teacher projects the problem, then sets a time limit prior to students beginning their work. Partner pairs are given specific "share" questions from 1-10 on the **Problem-Solving Questions** page. The process that should be followed by students for all **Problem-Solving** activities is to answer questions 1-3, then complete the solution to the problem, and finally answer questions 4-10.

The teacher calls time and the partner pairs guide class discussion on their "share" assignments. Students who did not complete the solution to the problem prior to the time limit must complete recording in a different color.

A Problem-Solving activity is **not** designed to be recorded as a grade, but may be recorded as a holistic score. A scale of 1-5 is appropriate as follows:

- 1 = little if any attempt
- 2 = no understanding evident
- 3 = minimal understanding evident
- 4 = mostly understood or slight mathematical errors
- 5 = complete understanding evident and no mathematical errors

Student Activity

At least one **Student Activity** follows the **Problem-Solving** activity in each part of a lesson. Students work in pairs to complete a Student Activity, however, each student completes their own activity page(s). Math Notes are utilized to enable students to successfully complete the activity. If students did not take notes on material they need to complete the activity, the teacher should invite them to view the Instructional Activity and to take more detailed notes.

Various partner pairs should be assigned portions of the **Student Activity** for whole-class discussion. Before students begin the activity, the teacher should inform the class of the time allotted for completion of the activity. Time should be called even if all partner pairs have not completed the activity. Whole class discussion should begin with the partner pairs that had assignments leading the discussion. Partner pairs who did not complete the activity may complete the activity during discussion time by recording in a different color pencil or pen.

A Student Activity is **not** designed to be recorded as a grade, but may be recorded as a holistic score. The same scale listed for a Problem-Solving activity is appropriate.

Hands-On Activity

Most lessons include at least one Hands-On Activity. These activities require preparation of materials for student use during the activity. A **Teacher Notes: Hands-On Activity** page is included prior to the student pages. Students work in pairs or groups of 4 for a Hands-On Activity, however, each student completes their own recording of data during the activity and questions about the activity.

A Hands-On Activity is **not** designed to be recorded as a grade, but may be recorded as a holistic score. The same scale listed for a Problem-Solving activity is appropriate.

Skills and Concepts Homework

Following the **Student Activity** and/or **Hands-On Activity** in each part of a lesson, is a **Skills and Concepts Homework**. Each homework includes 5 open-ended questions. The teacher should choose two or three questions to be scored by the teacher. The teacher should make written feedback comments for each student and should return the homework assignments within two days. Partial credit should be given if a student's work only exhibits partial understanding, or if the student makes a mathematical error. Only $\frac{1}{2}$ credit should be given for a correct answer if student work is not shown on the homework. The score on each **Skills and Concepts Homework** may be recorded for each student. Periodically these scores may be combined and recorded as a grade.

Mini-Assessment

A **Mini-Assessment** in STAAR format is located at the end of each lesson. The **Mini-Assessment** is completed by each individual student and scored by the teacher. Only assistance allowed during the actual STAAR should be given during this time. Allow about 20 minutes for completion of a Mini-Assessment. The amount of time may vary for some assessments. Score the Mini-Assessment with a score of 1-10. Partial credit may be given for each question if the student shows evidence of understanding but did not choose the correct answer due to minor mathematical error. Only $\frac{1}{2}$ credit should be given for a correct answer if student work is **not** shown on the assessment. Periodically these scored may be combined and recorded as a grade. Record data in **Profile** books.

Six Weeks Review and Six Weeks Assessment

The **Six Weeks Review** is open-ended and will address all TEKS in lessons. The review includes a **Six Weeks Class Review** and a **Six Weeks Homework Review**.

The **Six Weeks Assessment** is designed to assess all TEKS in lessons from the six weeks. The assessment includes 20 questions. Each question should be given 5 points for a correct answer. Partial credit may be given if a student's work exhibits partial understanding, or if the student makes a minor mathematical mistake. Only $\frac{1}{2}$ credit should be given for a correct answer if student work is not shown on the assessment.

Record data in **Class Profile** book and students record in **Student Profile** book.

Parent Guide for Grades 3-5 Lessons

The **Parent Guide** was written with the goals of giving parents, guardians and other adults an overview of the mathematics lessons the students will be completing during the school year and assisting parents in helping students to understand the mathematics they are learning. The guide was designed for use by parents and other caring individuals who are interested in helping students progress in comprehension of the Texas Essential Knowledge and Skills.

The Parent Guide includes an Overview of *TEKSING TOWARD STAAR* Lessons philosophy, Parental Roles and Common Questions, Student Activity Sample, Problem-Solving Sample, Homework Sample, Mini-Assessment Sample, Problem-Solving Plan, Six Weeks Scope and Sequences, and Background Information for all lessons.

Permission will be granted to place the Parent Guide on your district Intranet with password access. A formal written request must be sent to *TEKSING TOWARD STAAR* and a formal response will be sent to the district. (Permission will not be given to place the Parent Guide on a location that can be accessed from the open Internet.)

For additional information please contact Brenda DeBorde.

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OVERVIEW

Grades 6-8 TEKS-Based Lessons

Implementation of Lessons

Implementing these lessons requires a different way of teaching. The traditional teacher roles of authority figure and information disseminator must change to learning facilitator and instructional decision maker.

Knowledge about students and how they learn mathematics can contribute to establishing an environment that is conducive for learning. The lessons are designed to meet the requirements of the Revised Texas Essential Knowledge and Skills for grade level mathematics.

The design of each lesson is consistent and includes a format for delivery of instruction, assessment, and homework. Where appropriate, the use of manipulatives and technology is included in the lesson. Cooperative learning as a learning setting is utilized in each lesson.

The Role of Assessment

Making changes in the content and methods of mathematics instruction also requires making changes in why and how students' work is assessed. Evaluation should be an integral part of instruction and not be limited to grading and testing.

There are at least four reasons for collecting evaluation information:

- to make decisions about the content and methods of mathematics instruction
- to make decisions about classroom climate
- to help in communicating what is important
- to assign grades

Assessment includes much more than marking right and wrong answers. It "must be more than testing; it must be a continuous, dynamic, and often informal process" (NCTM 1989, p. 203). The *Curriculum and Evaluation Standards* recommends that teachers use a variety of types of evaluation: (1) *observing and questioning students* (2) *using assessment data reported by students*; (3) *assessing students' written mathematics work*; and (4) *using multiple-choice or short-answer items*. Use of these methods of collecting assessment data will contribute to a thorough evaluation of students' work.

Implementing the assessment process in the TEKSING TOWARD STAAR Lessons may require significant changes in how teachers view and use assessment in the classroom. Teachers will assess frequently to monitor individual performance and guide instruction.

Intent of the TEKSING TOWARD STAAR Lessons is to provide teachers with structure for instruction and assessment for the REVISED TEKS that incorporates characteristics of a good mathematics learning environment and the role of assessment.

Data Gathering and Analysis

Recording and analysis of data is a critical component of the TEKSING TOWARD STAAR Lessons. Recording in a Class Profile book by the teacher should occur on an almost daily basis. Expectation is that all STAAR-format assessments are recorded, as well as data from Spiraled Practice and other data as teachers choose. Analysis of the data should guide and direct instructional decisions.

Recording in a Student Profile book by each individual student should occur on a regular basis. Expectation is that all STAAR-format assessments are recorded, as well as data from Spiraled Practice. Analysis of this individual student data should be utilized to make decisions regarding reteach/tutorials for each student. Students should be given additional work on TEKS that indicate weakness. Students should not be expected to complete additional work on TEKS that indicate strength.

LESSON COMPONENTS

Lesson Focus

Each lesson begins with the Lesson Focus. The TEKS expectations, focus for the lesson, and STAAR expectations for the Reporting Category are stated for the teacher. If the entire TEKS is not covered in this lesson, only the part taught will be given here.

Process Standards Incorporated Into Lesson

Following the **Lesson Focus**, the teacher is provided with a list of the **Process Standards** student expectations that are incorporated into the lesson.

Materials Needed for Lesson

Following the **Process Standards Incorporated Into Lesson**, the teacher is provided with a list of **Materials Needed for Lesson** to prepare prior to beginning a lesson.

Math Background

The Background Information contains the information that will be taught in this lesson. It will give only the information that is covered in this lesson for TEKS that have multiple pieces, and are taught in more than one lesson.

Instructional Activity

The Math Background is in enlarged print for an Instructional Activity. The Activity is named appropriately for the information contained. Each Instructional Activity is specific to a TEKS or major piece of a TEKS. Instructional Activities in each lesson provide a format for projection for whole class instruction. The teacher should project the Instructional Activity and lead an informational session designed to provide students with mathematics skills and vocabulary necessary for students to complete any Student Activity or Problem-Solving problem. Vocabulary words are bolded in the Instructional Activity.

Prior to projecting an Instructional Activity, students should be provided with grade level Math Notes pages to records the critical information from the Instructional Activity on their individual Math Notes pages. Students record as much information as they choose. The information should be recorded in the student's own "words," "symbols," and pictures or diagrams.

Only minor discussion should occur during the Instructional Activity. This portion of the lesson is designed as an information-giving time. Students should be asked to hold most questions until the Student Activity portion of the lesson so that the teacher can meet needs on a partner-pair basis. Some have open ended questions for you to ask the class to give correct answers for or thoughts about.

The teacher should leave the Instructional Activity Projection Masters in a place where students can view them later if they need to take additional notes.

Problem-Solving

A **Problem-Solving Model** is located in Lesson 1 for use throughout the entire school year. This model addresses the Process Standards TEKS in each grade level. This model should be discussed during this lesson and a copy should be given to each student to keep in a math notebook.

Each **Problem-Solving** activity is provided in a large print version for projection and will follow the **Math Background** projection version in each part of a lesson. A general set of **Problem-Solving Questions** should be addressed by students as they solve the problems and during class discussion of the solution process. Teachers should make a copy of the **Problem-Solving Questions** for each student and distribute prior to beginning **Problem-Solving 1** in this lesson. Teachers should discuss the questions and let students know they will be answering these questions for problem-solving activities during the entire school year. Each student should keep a copy of the questions in a math notebook.

Prior to some Problem-Solving activities a **Teacher Notes: Problem-Solving** page is included with instructions for the teacher - most often this is instructions for pages teachers need to print for students prior to beginning the Problem-Solving.

Students work in partner pairs to complete all **Problem-Solving** activities throughout the entire school year. Students record answers on notebook paper or plain white paper. The teacher projects the problem, then sets a time limit prior to students beginning their work. Partner pairs are given specific "share" questions from 1-10 on the **Problem-Solving Questions** page. The process that should be followed by students for all **Problem-Solving** activities is to answer questions 1-3, then complete the solution to the problem, and finally answer questions 4-10.

The teacher calls time and the partner pairs guide class discussion on their "share" assignments. Students who did not complete the solution to the problem prior to the time limit must complete recording in a different color.

A Problem-Solving activity is **not** designed to be recorded as a grade, but may be recorded as a holistic score. A scale of 1-5 is appropriate as follows:

- 1 = little if any attempt
- 2 = no understanding evident
- 3 = minimal understanding evident
- 4 = mostly understood or slight mathematical errors
- 5 = complete understanding evident and no mathematical errors

Student Activity

A Student Activity follows the Problem-Solving Activity. Students work in pairs to complete a Student Activity, however, each student completes their own activity page(s). Math Notes are utilized to enable students to successfully complete the activity. If students did not take notes on material they need to complete the activity, the teacher should invite them to view the Instructional Activity Projection Masters and to take more detailed notes.

Various Partner Pairs should be assigned portions of the Student Activity for whole-class discussion. Before students begin the activity, the teacher should inform the class of the time allotted for completion of the activity. Time should be called even if all Partner Pairs have not completed the activity. Whole class discussion should begin with the Partner Pairs that had assignments leading the discussion. Partner Pairs who did not complete the activity may complete the activity at this time by recording in a different color pencil or pen.

A Student Activity is **not** designed to be recorded as a grade, but may be recorded as a holistic score. A scale of 1-5 is appropriate as follows:

- 1 = little if any attempt
- 2 = no understanding evident
- 3 = minimal understanding evident
- 4 = mostly understood or slight mathematical errors
- 5 = complete understanding evident and no mathematical errors

Hands-On Activity/Student Activity

A variation of an Instructional Activity is included in some lessons. The Instructional Activity is labeled Teacher Notes for Activity. The information regarding preparation for the activity, as well as questions to pose before and during the activity, as well as student responses to look for and listen for during the activity. The Student Activity tied to this Instructional Activity is designed as an active, involved, hands-on activity for all students.

Homework

Homework is provided for each lesson. More than one homework is provided if a lesson is more than one instructional day in duration.

Each homework assignment includes 5 open-ended questions. The teacher should choose two or three questions to be scored by the teacher. The teacher should make written feedback comments for each student and should return the homework assignments within two days.

Partial credit should be given if a student's work exhibits partial understanding, or if the student makes a minor mathematical error. Only $\frac{1}{2}$ credit should be given for a correct answer if student work is not shown on the homework. The score on each Homework may be recorded for each student. Periodically these scores may be combined and recorded as a grade.

Mini-Assessment

The mini-assessment is completed by individual students and scored by the teacher. No assistance should be given during this time. Allow about 20 minutes for completion of the Mini-Assessment. The amount of time may vary for some assessments.

The teacher should score the Mini-Assessment with a score of 1-10. Partial credit may be given for each question if the student shows evidence of understanding but did not choose the correct answer due to minor mathematical error. Only $\frac{1}{2}$ credit should be given for a correct answer if student work is not shown on the assessment. Scores may be periodically combined and recorded as a grade.

The teacher should record class data for this assessment in the Class Profile book. Students may record individual data in their Student Profile book.

Six Weeks Review and Six Weeks Assessment

The **Six Weeks Review** is open-ended and will address all TEKS in lessons. The review includes a **Six Weeks Review** that can be used as a class activity and/or homework.

The **Six Weeks Assessment** is designed to assess all TEKS in lessons from the six weeks. The assessment includes 20 questions. Each question should be given 5 points for a correct answer. Partial credit may be given if a student's work exhibits partial understanding, or if the student makes a minor mathematical mistake. Only $\frac{1}{2}$ credit should be given for a correct answer if student work is not shown on the assessment.

Record data in **Class Profile** book and students record in **Student Profile** book.

Parent Guide for Grades 6-8 Lessons

The **Parent Guide** was written with the goals of giving parents, guardians and other adults an overview of the mathematics lessons the students will be completing during the school year and assisting parents in helping students to understand the mathematics they are learning. The guide was designed for use by parents and other caring individuals who are interested in helping students progress in comprehension of the Texas Essential Knowledge and Skills.

The Parent Guide includes an Overview of *TEKSING TOWARD STAAR* Lessons philosophy, Parental Roles and Common Questions, Student Activity Sample, Problem-Solving Sample, Homework Sample, Mini-Assessment Sample, Problem-Solving Plan, Six Weeks Scope and Sequences, and Background Information for all lessons.

Permission will be granted to place the Parent Guide on your district Intranet with password access. A formal written request must be sent to *TEKSING TOWARD STAAR* and a formal response will be sent to the district. (Permission will not be given to place the Parent Guide on a location that can be accessed from the open Internet.)

For additional information please contact Juanita Thompson.

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