

Pacing Guide

The Scope and Sequence of Equals Math is included for your information in this Overview. The lesson objectives in the Scope and Sequence are organized into the five Math Content areas: Algebra, Data Analysis and Probability, Geometry, Measurement, and Numbers and Operations. The purpose for organizing them in this manner is to provide you with a clear path from start to finish in each area so you can see the exact set of math skills you will cover in each math content area.

The Equals teacher guides are built in a hierarchical fashion beginning with the earliest math skills to the most complex math skills and provide an integrated structure of lessons from each math content area. The lesson hierarchy reflects the interconnectedness of math in which learning skills in one content area support learning skills in another content area. For example, students learn to skip count by tens before they learn about place value in Numbers and Operations, counting dimes in Measurement, and number patterns in Algebra. The content areas are interspersed throughout each teacher's guide with lessons that are taught in sequential order. In this way, students learn continuously in all five areas.

It is recommended that students in Level 1 spend approximately 1 1/2 to 2 weeks on one lesson. Students in Level 2 take about 1 week per lesson, and typically students in Level 3 can complete two lessons in 1 to 1 1/2 weeks. These recommendations are approximate and based on each of the 4 lesson plan pages being completed. Variances in individual student needs will dictate the pace as you, the teacher, see fit. As noted earlier, you may need to return to lessons in which mastery was not achieved.

Instructional Level	Time/Day	Time/Lesson (including Getting Ready, Lesson pg 1, Lesson pg 2, & Follow Up)
Level 1-severe disabilities	30 minutes	1 - 2 weeks
Level 2-moderate disabilities	40 minutes	1 week
Level 3-mild disabilities	60 minutes	2-3 days

Lesson How To Diagrams

Getting Ready - Is a page with each lesson that reviews skills students have been previously taught. These are skills that will be used to teach the lesson's objective. This page is optional and should be used as appropriate to the needs of the students.

Lesson Indicator

The first number represents the chapter. The letter represents the section. The circled number represents the number lesson for that chapter and section.

Materials

Materials are called out in each lesson and may be found in the cards, posters, manipulative kit, and CD. Teachers may also substitute their own manipulatives as fits the needs of their students.

Objective

This objective refers to the lesson outcome.

Vocabulary Review

With the exception of the very first lesson, vocabulary presented in this section has been previously taught. All vocabulary cards are included in the program. Concrete Connections are based on vocabulary.

Poster

This is an opportunity to see what your students know about math in the context of a theme, environment, or math chart. Discussions use objects, pic-symbols, gestures, or words to convey information the student has from home, school, or their community.

Fun and Games

Use these activities for your students as needed to review a past skill in preparation for the new lesson objective.

Tools and Manipulatives


Do a simple demonstration then allow students to handle, try, manipulate, and generally explore the materials.

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Getting Ready

OBJECTIVE: Student will able count to 5.



Materials

Warm Up

- Vocabulary card (*how many?*)
- plastic numbers 1 and 2
- 3 cubes
- 9 plastic bags

- large paper bag
- butterflies

Explore

- food models (egg)
- butterflies
- insects
- poster (Woods)

Warm Up

A. VOCABULARY REVIEW: *how many?*

Show/give Concrete Connection: Place one cube and plastic "1" in one bag and two cubes and plastic "2" in second bag. Label each "*how many?*"

Show "*how many?*" Vocabulary card.

Say, "Read it."

Students locate and show examples of "*how many?*" using past work, pictures from home, or books.

B. FUN & GAMES: Counting 1 and 2

PREPARATION

Count butterflies in four sets of 1 and three sets of 2 and place in plastic bags. Put in paper bag. Split into teams. Make a T-chart on board and label with team names.

DIRECTIONS

Player takes a butterfly bag from paper bag and identifies amount. Teacher asks, "*How many?*" Team repeats last number counted. Tape bag to T-chart column for points. Continue play. When butterflies run out, count each team's points. Ask, "*How many?*" Players answer with last number counted.

Explore

A. POSTER: Woods

Point out amounts of animals, eggs, and pine cones.


Count sets of five in poster or with items in classroom.

B. TOOLS & MANIPULATIVES

Say, "Let's explore insects, egg, and butterflies."

Model counting of insects, egg, and butterflies.

Students hold and explore insects, egg, and butterflies.



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How To Diagrams

Lesson, page 1 - There are two pages to the math lesson, specific to the objective noted at the top of the page. Page 1 identifies the materials that will be needed in the lesson and introduces the objective and math vocabulary. In addition, a brief section on sensing math can be found on this page. Sensing math provides a manner for students to connect to math through their senses. This section can be done at anytime throughout the lesson.

Materials

Materials are specifically listed for both pages of the lesson according to two broad areas, Introduce and Teach.

Objective

This objective refers to the lesson outcome.

Show and Tell

Teacher leads a discussion about what the students know about the new topic so far.

Vocabulary

Concrete Connections identify the use of objects to provide added understanding of the vocabulary. The teacher shows the word and defines it. Students practice saying the word and/or definition. Students will have repeated experience with each vocabulary word throughout the lesson to provide the repetition to provide the reinforcement with variety they require.

Explore Poster

The poster is used to introduce and reinforce math concepts. Displaying the poster in the classroom also provides a means to learn/use math throughout the day.

Sensing Math

These optional activities help students practice a support skill and connect to the lesson objective through the 5 senses.

The poster is titled "Lesson 4" and includes the following sections:

- OBJECTIVE:** Student will total count to 5.
- Materials:**
 - Introduce:** Vocabulary card (*count*), number line (CD)
 - Teach:** MathLine, worksheet 17, insects, Step-by-Step
- Introduce and Connect:**
 - A, EXPLORE POSTER: Woods**
Show/give student(s) Concrete Connections: Label number line "count."
Model pointing to and counting items on poster up to 5.
Direct students to point to sets to count.
Students find and point to requested items as group counts.
 - B, SHOW & TELL**
Ask, "What do you know about counting?"
Students tell what they see on the poster and what they know. Write comments on Number Notes poster with words, pic-symbols, objects, etc.
Use past student work or items from home when possible.
Note: Objects or pictures can be fastened to the Number Notes poster.
 - C, VOCABULARY: count**
Show "count" Vocabulary card.
Say, "This says count. Read it." Students Say, "count" three times.
Count means naming things with numbers. Counting tells you how many.
- Sensing Math:**
Count and clap: 1, clap. 1, 2, clap, clap. 1, 2, 3, clap, clap, clap. 1, 2, 3, 4, clap, clap, clap, clap. 1, 2, 3, 4, 5, clap, clap, clap, clap, clap. Students repeat as you clap along.
- Level Guide:** 1 = Severe, 2 = Moderate, 3 = Mild
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Level Guide

This is a general guide for interpreting Levels 1, 2, and 3 and which fits your individual students. These level indicators will be used throughout the lesson. Start with your best estimate and change levels if needed. *See a description of levels in the Equals overview.

Lesson How To Diagrams

Lesson, page 2 - Page two describes the teaching method of CSA (Concrete, Semi-concrete, Abstract) used in each lesson. Next is a skill drill practice time, and then problem solving activities, which can be done individually or in a group. The close section of the lesson identifies multiple ways for the student to demonstrate what they have learned.

Visible Thinking

Demonstrate the lesson objective in 3 ways (CSA) for all students. Show what you are thinking with each step. Concrete uses objects and manipulatives, Semi-concrete uses pic-symbols or representations of the objects. Abstract uses numbers and operations. *see equals overview for more detailed information

Try It

In Levels 1, 2, and 3 students try out the new skill before they see it applied in a word problem. Skill Drill can be completed individually or in groups.

Demo

The lesson objective is presented in word problem format and demonstrated by the teacher with welcomed student input. Problem Solving Steps are used as appropriate, but are introduced gradually to ensure understanding in the beginning of the program.

Solve It

Students get a chance to work on their own word problem with the support of the teacher and/or peers using hands-on materials. Workmats are sometimes used to support or organize the task.

Try More

These level-specific worksheets have word problems for students to solve.

Lesson 4

Teach

A. VISIBLE THINKING

Use MathLine, insects, workmat 17, and pic-symbols to show what you are thinking. Demonstrate each CSA level twice.

B. FASTEN IT

Fasten five insects to MathLine. Place MathLine with insects attached 1-5. Say, "Count to 3, 1, 2, 3" and move tabs to count 3 insects. Repeat with counting to 4 and 5.

C. PLACE IT

Place MathLine on table. Say, "Count to 3, 1, 2, 3" and move tabs. Repeat, counting to 4 and 5.

D. POINT IT

Place workmat 17 on table. Say, "Count to 3, 1, 2, 3" and point to numbers. Repeat, counting to 4 and 5.

B. TRY IT: Skill Drill Worksheet

Count number lines and pictures of people and animals lined up to 2, 3, 4, and 5.

Problem Solving

A. DEMO: Model solving problem.

Daria is helping at the Nature Center Fun Run. She must count to 5 before the runners can go. How can Daria count? Place MathLine, number line, and Step-by-Step on table. Record 1-5 on Step-by-Step.

B. SOLVE IT

Kiley and Sacha are putting numbers in order. Kiley moves the numbers while Sacha counts. Help them count. Place MathLine with Insects, number line, and Step-by-Step on table. Record 1-5 on Step-by-Step.

1. Students count to 1 using Step-by-Step. Count while student moves insects on MathLine. Repeat for 2-5.

2. Students choose a tool to count to 1, 2, 3, 4, and 5. After practicing, count 1 and students count 2, every other number to 5. Change order with student starting with 1.

3. Students choose a different tool for counting to 1, 2, 3, 4, and 5. Challenge: Students count without a tool.

C. TRY MORE: Problem Solving Worksheet

Students count objects and animals lined up above number line from 0-5.


Close

A. SHOW ME, SHOW OTHERS: I Learned...

Review what students have learned. Ask students to demonstrate skill, share their worksheets, or read their Number Notes. It is essential that students have a meaningful way to communicate what they have learned.

B. NUMBER NOTES

Model writing vocabulary "count" on Teacher Number Notes. Students write "count" in Number Notes using numbers, math symbols, words, pic-symbols, or objects, and describe what they have learned. Option: Place math pics on Number Notes page and circle or stamp the pic-symbols that represent what you have learned.

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Close

Students show their teacher and peers what they know by showing a worksheet, using the materials in demonstration, or through a verbal explanation. A good opportunity for informal assessment when making decisions about Follow Up activities.

Students have a second opportunity to communicate about math by writing in Number Notes. All types of writing are honored here, from scribbling to stamping, shapes to picture symbols or words and sentences, it is all writing which demonstrates what they have learned.

Lesson How To Diagrams

Follow Up - Is a page with each math lesson that provides students the opportunity to apply math skills in everyday activities. In addition, Follow Up provides other math activities for added practice and enrichment of math skills.

Classroom

Students practice and apply their math skill with classroom tasks, recipes, art, and other activities. Materials are common to the classroom or can be easily obtained.

Calendar


Calendar connects math to classrooms with regular calendar or meeting time activities.

Workstations

Workstations provide independent practice or enrichment opportunities for individual or small groups of students. Each workstation is provided at Levels 1, 2, and 3 to meet all of your students' needs.

Skill Game

The skill game provides additional interactive and engaging activities for students to work on their newly learned math skill. Carry over the adaptations you have been using in the lesson(s) for your students. *See the Math Action Dictionary.



2-A

Follow Up

OBJECTIVE: Student will rote count to 5.

Real Life Problem Solving

CLASSROOM: Make smoothies! Place $\frac{1}{2}$ cup milk and $\frac{1}{4}$ cup vanilla yogurt in blender. Students *count* 5 slices of banana in blender. Students turn on blender, *count* to 5, and pour. Option: Add 5 strawberries. Students help place recipe ingredients on the recipe with pic-symbols of milk, vanilla yogurt, 5 banana slices, and 5 strawberries.

CALENDAR: Students *count* calendar numbers 1, 1-2, 1-3, 1-4, and 1-5. Count number of holidays or special events up to 5.

COMMON: Line up students. Students *count* off in order 1-3. Option: Repeat with 4 and/or 5. Write recipe for smoothies for students to take home. Students place recipe ingredients on the recipe with pic-symbols of milk, vanilla yogurt, 5 banana slices, and 5 strawberries.

Workstations

MATERIALS / PREPARATION
Place MathLine with butterflies, MathLine, and number line in workstation. Record "Count to 3," "Count to 4," and "Count to 5" on Step-by-Step.

1 Fasten 5 butterflies to MathLine and place on table. Students *activate* Step-by-Step and count to 3, 4, and 5 with MathLine as directed. Option: Record number sequence on Step-by-Step. Students *activate* to count.

2 Place MathLine on table. Students *activate* Step-by-Step and count to 3, 4, and 5 with MathLine as directed. Option: Mix order of numbers given on Step-by-Step.

3 Place number line on table. Students count to 3, 4, and 5 using number line.

Games

A. VOCABULARY: Spinning for Count

MATERIALS / PREPARATION
Place Woods game board and math tools (MathLine, MathLine with eggs, number line, counting tray) on table. Place pic-symbols (count, blanks) on All-Turn-It spinner.

GAME DIRECTIONS
Player spins and reads word. He/she *counts* to 3, 4, or 5 and moves pawn to next space. Spinning a foil means skip a turn.


B. SKILL: All In a Row

MATERIALS / PREPARATION
Place attribute blocks, butterflies, insects, and food models in large paper bag. Place workmat 11 on table. Place T-chart on board and divide group into two teams. Place math tools on table.

GAME DIRECTIONS
Team 2 turns around, says go, and *counts* slowly to 5. Team 1 takes item from bag without looking. If it is a woods animal, team places on workmat. Team 1 continues until Team 2 reaches 5. Team 2 turns around and checks. If correct, team earns 1 point per animal. Tally points as group counts. Continue play, taking turns.

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Common

Common connects the math objective students are learning to environments in the community, home or common areas of the school, such as walking in the hallway, waiting for lunch, trip to the store or library, a job experience, etc. Students use common areas, objects, or activities to observe and practice their math skills.

Vocabulary Game

The vocabulary game can be played throughout the week. It provides a fun and engaging activity for paraprofessionals to use as well. A game board for each theme is included on the CD for students to practice vocabulary. Find a game board adaptation in the Action Dictionary ("play game").