

Area: MathSubskill: Skill-Specific ComputationMaterials:

Single-Skill Computation Probe: Examiner Copy  
Single-Skill Computation Probe: Student Copy  
Cover-Copy-Compare Worksheet  
CCC Intervention Log & Correct Digits Graph  
Index Card and Pencil

Description: Cover-Copy-Compare (CCC) is a self-managed intervention that can be used to enhance accuracy and fluency in skill-specific computation procedures. This intervention is helpful for students who need extra practice and immediate feedback to build computation skills.

**Intervention Preparation**

1. Create Cover-Copy-Compare (CCC) materials at the following website:  
<http://www.interventioncentral.org/tools/math-worksheet-generator>.
2. Select the operation (addition, subtraction, multiplication or division) and the problem type.
3. Click on “Single Skill Computation Probe.”
  - a. Print the **“Single-Skill Computation Probe: Examiner Copy.”** (There should be nine problems. If there are not nine problems, go back to the website and adjust the number of columns and rows in “Advanced Settings.”)
  - b. Select “Click for Student Worksheet.”
  - c. Print **“Single-Skill Computation Probe: Student Copy.”** (Again, there should be nine problems that match the examiner copy.)
  - d. After you have printed both the examiner copy and the student copy, close out those documents to get back to the website.
4. Click on “Cover-Copy-Compare Worksheet.”
  - a. Print **“Single-Skill Computation: Student Worksheet.”**
    - If you want more or fewer problems, go back to the website and adjust the number of columns and rows in “Advanced Settings.”

**Baseline and Progress Monitoring Procedure**

1. Use the “Single-Skill Computation Probe: Student Copy” and “Single-Skill Computation Probe: Examiner Copy” for progress monitoring. (See “Intervention Preparation” above.)
2. Ask the student to complete the problems on the page independently. This is not timed, but you may need to place a time limit on this based on what your time constraints may be (e.g., probably no longer than 10 minutes).
3. Correct the probe in the presence of the student if possible.  
On the “CCC Intervention Log & Correct Digits Graph,” record the number of correct digits out of possible digits (CD/PD) at the top of the graph.
4. Place a mark on the graph indicating the percentage correct, and invite the student to color in the bar graph to that point. The first time you do this, it is the baseline data; each time thereafter, it is progress monitoring data.
5. Progress monitor every 4-5 days until the skill is mastered.
  - a. Mastery is defined as 80% or more correct on three “Single-Skill Computation Probes.”
6. Repeat record keeping procedures with student on each progress monitoring day.

**Intervention Procedure:**

1. Show the student the “Cover-Copy-Compare Worksheet. (See “Intervention Preparation” above.)
2. Point out that the correct computation problems with answers are listed on the left hand side and the same problem is listed on the right hand side, unsolved.
3. Direct the student to study the first solved computation problem on the left side of the page so that the computation procedure makes sense. Ask prompting questions as needed. On more complex problems, guide students to write directly on the correct problem, showing where regrouping or computational procedures occur.
4. Give the student an index card. Instruct the student to cover the correct model on the left side of the page while computing the answer to the identical problem on the right side of the sheet. If the use of an index card is distracting, the worksheet may be folded in half lengthwise instead.
5. Finally, the student uncovers the correct answer on the left and checks his or her own work.
6. If the problem is incorrect, the student should study the problem and try again or ask for assistance.
7. If the problem is correct, repeat the procedure for the remaining problems.
8. At the end of the session, record the date/skill/observations on the “CCC Intervention Log & Correct Digits Graph.”

See the list below for single skill computation categories available at Intervention Central:

<http://www.interventioncentral.org/tools/math-worksheet-generator>.

| <b>Addition</b> |  | ✓ |
|-----------------|--|---|
| 1               | Two 1-digit numbers: sums to 10  |   |
| 2               | Two 1 digit numbers: sums to 18  |   |
| 3               | 1 to 2-digit number plus 1 to 2-digit number: no regrouping                      |   |
| 4               | Two 2-digit numbers: no regrouping   |   |
| 5               | Two 3-digit numbers: no regrouping   |   |
| 6               | Three to Five 1-digit numbers  |   |
| 7               | Three to Five 2-digit numbers: no regrouping                                     |   |
| 8               | Three to Five 3 and 4-digit numbers: no regrouping                               |   |
| 9               | 1 to 2-digit number plus 1 to 2-digit number: regrouping                         |   |
| 10              | Two 2-digit numbers: regrouping  |   |
| 11              | 2 to 3-digit number plus 2 to 3-digit number: regrouping from ones column only   |   |
| 12              | 2 to 3-digit number plus 2 to 3-digit number: regrouping from tens column only   |   |
| 13              | 2 to 3-digit number plus 2 to 3-digit number: regrouping from ones & tens column |   |
| 14              | 3-digit number plus 3-digit number: regrouping from ones column only             |   |
| 15              | 3-digit number plus 3-digit number: regrouping from tens column only             |   |
| 16              | 3-digit number plus 3-digit number: regrouping from ones and tens column         |   |
| 17              | 4-digit number plus 4-digit number: regrouping in 1-3 columns                    |   |
| 18              | 5 to 6-digit number plus 5 to 6-digit number: regrouping in any column           |   |
| 19              | Three to five 2-digit numbers: regrouping  |   |
| 20              | Three to five 3-digit numbers: regrouping  |   |

| <b>Subtraction</b> |   | ✓ |
|--------------------|---|---|
| 1                  | Two 1-digit numbers   |   |
| 2                  | 2-digit number from a 2-digit number: no regrouping                           |   |
| 3                  | 3-digit number from a 3-digit number: no regrouping                           |   |
| 4                  | Two 4-digit numbers: no regrouping  |   |
| 5                  | 2-digit number from a 2-digit number: regrouping                              |   |
| 6                  | 3-digit number from a 3-digit number: regrouping from ones column only        |   |
| 7                  | 3-digit number from a 3-digit number: regrouping from tens column only        |   |
| 8                  | 3-digit number from a 3-digit number: regrouping from ones and tens column    |   |
| 9                  | 4-digit number from a 4-digit number: regrouping from ones column only        |   |
| 10                 | 4-digit number from a 4-digit number: regrouping from tens column only        |   |
| 11                 | 4-digit number from a 4-digit number: regrouping from ones and tens column    |   |
| 12                 | 4-digit number from a 4-digit number: regrouping from ones, tens and hundreds |   |
| 13                 | 5-digit number from a 5-digit number: regrouping from ones column only        |   |
| 14                 | 5-digit number from a 5-digit number: regrouping from tens column only        |   |
| 15                 | 5-digit number from a 5-digit number: regrouping from ones and tens column    |   |
| 16                 | 5-digit number from a 5-digit number: regrouping from ones, tens and hundreds |   |
| 17                 | 5-digit number from a 5-digit number: regrouping in any column                |   |
| 18                 | 6-digit number from a 6-digit number: regrouping in any column                |   |

| <b>Multiplication</b> |  | ✓ |
|-----------------------|--|---|
| 1                     | Multiplication facts: 0 - 9                        |   |
| 2                     | 2-digit number times 1-digit number: no regrouping |   |
| 3                     | 2-digit number times 1-digit number: regrouping    |   |
| 4                     | 3-digit number times 1-digit number: no regrouping |   |
| 5                     | 3-digit number times 1-digit number: regrouping    |   |
| 6                     | 4-digit number times 1-digit number: no regrouping |   |
| 7                     | 4-digit number times 1-digit number: regrouping    |   |
| 8                     | 2-digit number times 2-digit number: no regrouping |   |
| 9                     | 2-digit number times 2-digit number: regrouping    |   |
| 10                    | 3-digit number times 2-digit number: no regrouping |   |
| 11                    | 3-digit number times 2-digit number: regrouping    |   |
| 12                    | 4-digit number times 2-digit number: no regrouping |   |
| 13                    | 4-digit number times 2-digit number: regrouping    |   |
| 14                    | 3-digit number times 3-digit number: no regrouping |   |
| 15                    | 3-digit number times 3-digit number: regrouping    |   |
| 16                    | 4-digit number times 3-digit number: no regrouping |   |
| 17                    | 4-digit number times 3-digit number: regrouping    |   |
| 18                    | 5-digit number times 3-digit number: no regrouping |   |
| 19                    | 5-digit number times 3-digit number: regrouping    |   |

| <b>Division</b> |  | ✓ |
|-----------------|--|---|
| 1               | Division facts: 0 - 9                                  |   |
| 2               | 2-digit number divided by 1-digit number: no remainder |   |
| 3               | 2-digit number divided by 1-digit number: remainder    |   |
| 4               | 3-digit number divided by 1-digit number: no remainder |   |
| 5               | 3-digit number divided by 1-digit number: remainder    |   |
| 6               | 4-digit number divided by 1-digit number: no remainder |   |
| 7               | 4-digit number divided by 1-digit number: remainder    |   |
| 8               | 3-digit number divided by 2-digit number: no remainder |   |
| 9               | 3-digit number divided by 2-digit number: remainder    |   |
| 10              | 4-digit number divided by 2-digit number: no remainder |   |
| 11              | 4-digit number divided by 2-digit number: remainder    |   |
| 12              | 5-digit number divided by 2-digit number: no remainder |   |
| 13              | 5-digit number divided by 2-digit number: remainder    |   |
| 14              | 4-digit number divided by 3-digit number: no remainder |   |
| 15              | 4-digit number divided by 3-digit number: remainder    |   |
| 16              | 5-digit number divided by 3-digit number: no remainder |   |
| 17              | 5-digit number divided by 3-digit number: remainder    |   |
| 18              | 6-digit number divided by 3-digit number: no remainder |   |
| 19              | 6-digit number divided by 3-digit number: remainder    |   |