

Subtraction Running Record Protocol

For subtraction, there are various “tools in the toolbox” to help our students think most efficiently about their math facts. First of all, the student can count back the subtrahend. So, for $7 - 2$, the student would think $7 - 6 - 5$ with 5 being the answer. Secondly, students can determine the distance between the minuend and the subtrahend either by counting up to the minuend or by counting back until they reach the subtrahend. So for $8 - 5$, students can think 6-7-8 (or 7- 6- 5) so the difference is 3. Additionally, if they know the addition fact, then they will know the answer without having to count up or back. For example, when asked $8 - 6$, some students will say 2 automatically. When you ask them how they knew, they will tell you that they know that $6 + 2 = 8$. When the students progress to the higher math facts, they will count down or up but in chunks using 10 as a bridge. For example, when asked $15 - 9$, students who like to count down could think $15 - 5$ is 10, we need to take away 4 more, and $10 - 4 = 6$ so the answer must be 6. For those students who like counting up, they can think $9 + 1$ is 10 and plus 5 more to get to 15...so $1 + 5 = 6$. Of course, any students who know $9 + 6 = 15$ are already set if they understand the relationship between addition and subtraction. These are the thinking strategies we want to encourage with the subtraction math facts and these same strategies will be applied with larger numbers and with decimals and fractions down the road.

I have found the subtraction strategy progression to be really different from the addition progression in that the addition strategies build on one another in a very logical, linear way. For subtraction, though, I have found the first stumbling block is the subtract within 10 because students need to know to count up OR back depending on the numbers given. Then, half facts stumps them...and finally the higher math facts using 10 as a bridge. Found that really interesting. I wonder if you will notice the same thing!

Administering the Running Record:

Fill out student’s full name, date, teacher’s name and then tell the student the following:

Hi _____. Today we are going to do a subtraction running record. In the first part, you are going to answer some of these problems. (Point to the sheet of questions.) We may not do all of them. In the second part, we are going to go back to the beginning and talk about your thinking. While you are telling me your thinking I’m going to be taking notes so that I can figure out how to help you be even better at math. Is that OK with you? We’re going to start right here at the top. What is 2 minus 0?...and so on.

Part One

Have the student look at the student page and answer the questions going down the first column and then the second column. In your head, count to see about how long it takes the student to come up with an answer for each one. Circle the appropriate code (a - automatic within 3 seconds, 5s - 5 seconds, pth - prolonged thinking time over 5 seconds). If the child tells you the correct answer, please write a checkmark next to the problem. If they answered it wrong, please write an “x” and the number they said. If the student is doing anything obvious with their fingers or talking out loud

counting up or even using a strategy, please take note of that in the box next to that problem using the codes at the bottom of the sheet. If the student self-corrects, please write a “sc” and that mistake will not count against them. Feel free to stop this section when you find a lot of slowdown or inaccuracies.

Part Two

Tell the student: “Now we are going to go back to the first one and talk about your thinking.” Proceed to ask the question written in that box on the back side of the running record. We want to see if the student knows the rule or uses a strategy AND can apply it to some additional questions. (If you feel the child has a good handle on the -0 and -1 strategies feel free to skip the additional problems.) Please mark these additional problems as you did on the front - with checkmark if correct, an “x” with the number said if answered incorrectly, and the speed code and any behavior codes such as cbh or cuh. You can ask the students exactly how they figured out the problems in this part of the protocol. We also want to check off the articulation of the strategies as well. I don’t hold students back in a strategy if they can’t articulate the strategy. I just make a note for myself to be sure I am having students explain their thinking during our instruction time. Once you have asked some extra questions, circle down below whether you think they are good with those sets of math facts by choosing No, Emerging, or Yes. If you circle No or Emerging, then the student would begin working on this strategy and you can feel free to stop this section and go on to Part 3. One additional piece of information is the level the student is currently working on. These codes are on the bottom right of the Part 2 of the running record. They are a progression from no strategy (0) to 4 for automatized with understanding. So, for the facts in this particular strategy, what was the lowest level the student showed? This is important information for the educator who will be responding instructionally.

Special note, for “Sub from 10”, “Half facts”, and Bridge 10, please be sure to ask all the additional problems so we know if the student can move on in the progression. They must get them all right to move on. “Emerg” is for those students who have begun to apply strategies but don’t get an accurate answer consistently. You may certainly ask as many questions as you wish, but feel free to stop when you get to a strategy you know the student will need to work on.

Part Three

Please ask the student if they like math and what they do when they are stuck. This is important information about the student’s disposition about math and their perseverance.

Finally, please go back to the front of the page and fill in the General Observations box for the strategy and current level the student is using in that chosen strategy. There is also a place for additional notes for the teacher/interventionist.