Exemplary Planning Commentary: Special Education

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1. Alignment of the Learning Target, Standard, Lesson Objectives, and Planned Supports

a. Complete the table below to identify the learning target, academic content standard, lesson objective for each lesson, and planned supports.

Learning Target

[ The learner will use manipulatives to break apart groups of tens and demonstrate a strategy for solving double digit subtraction problems. ]

Relevant Academic, Alternate, or Early Childhood Standard:

[ CCSS.MATH.CONTENT.2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.]

Lesson Objectives and Specific Planned Supports to Address Learning Targets

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Lesson Objectives</th>
<th>Specific Planned Supports to Address the Learning Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
<td>[ The focus learner will follow teacher prompts and modeling to demonstrate the process of ungrouping tens in 3/3 double digit subtraction problems using manipulatives. ]</td>
<td>[ Visuals, Explicit instruction, Total task chaining, Task Analysis, Modeling, Manipulatives, Graphic organizer, Guided practice, Prompting, Pacing, Gradual release, immediate reinforcement, Scaffolding ]</td>
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<tr>
<td>Lesson 2</td>
<td>[The focus learner will use manipulatives to accurately demonstrate ungrouping and a problem solving strategy in 1/3 double-digit subtraction problems, with no more than 10 teacher prompts per problem. ]</td>
<td>[ Visuals, Explicit instruction, Total task chaining, Task Analysis, Modeling, Manipulatives, Graphic organizer, Guided practice, Prompting, Pacing, Gradual release, immediate reinforcement, scaffolding]</td>
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<tr>
<td>Lesson 3</td>
<td>[ The focus learner will use manipulatives to accurately demonstrate ungrouping and a problem solving strategy in 2/3 double digit subtraction ]</td>
<td>[ Visuals, Explicit instruction, Total task chaining, Task Analysis, Modeling, Manipulatives, Graphic organizer, Guided practice, ]</td>
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</table>
Based on the learning target and the focus learner’s IEP goals, respond to ONE of the prompts below.

The learning target, “the learner will break apart groups of tens and demonstrate a strategy to solve double digit subtraction problems” aligns to the IEP goal, “when given two digit addition and subtraction problems that involve regrouping, focal learner will solve the problems accurately, improving math computational skills from 0% accuracy to 70% accuracy as measured by curriculum based materials, weekly teacher data, and monthly teacher assessments.” Meeting the learning target will directly move the learner toward the IEP goal by strengthening skills he has yet to master pertaining to the subtraction portion of the IEP goal. Baseline data showed that the learner has mastered the skill of solving two digit addition problems with regrouping, however, he has yet to master the skill of ungrouping tens in the process of solving double digit subtraction problems. The IEP goal requires the focal learner to solve double-digit subtraction problems that require regrouping with 70% accuracy. In order to meet this goal the focal learner must increase his understanding and skill, ungrouping tens and using a problem solving strategy to find the difference in subtraction facts that require regrouping. For this reason I included, “the learner will break apart groups of tens,” within the learning target. Planned supports include visuals, a graphic organizer, and manipulatives that align to the learning target by visually and concretely demonstrate the concept of ungrouping to the focus learner. Baseline data also demonstrates that the use of a problem solving strategy is essential for the focus learner to make progress solving subtraction problems. This is why I included “demonstrate a strategy to solve double digit subtraction problems” in the learning target. One of the planned supports in this lesson segment is total-task-chaining, this support aligns with the IEP goal, being the problem solving strategy the learner will use to break down the task of solving subtraction facts into smaller, more manageable chunks. These task-analyzed chunks can then be explicitly (I do, we do, you do) taught to the focus learner, scaffolding instruction in a structured format that supports the focus learner’s progress towards the learning target and IEP goal. More planned supports include teacher modeling and prompting. These supports scaffold learning to the focus learner’s abilities, increasing his success rate solving subtraction problems, and mitigating the antecedent conditions in which the learner tends to become overly frustrated, anxious, or overwhelmed. Modeling and prompting, in concert with appropriate lesson pacing and immediate reinforcement are supports that align to the learning target by increasing the amount of engaged time the learner spends building skills and deepening his understanding of concepts that will enable him to ungroup tens and accurately solve subtraction problems.

c. List any special accommodations or modifications in the learning environment, instruction, or assessment required by the IEP and relevant to the learning target.

[ Allow extra time to respond, break material into manageable parts, give extra time to process information, give short concise directions, access to sensory objects and activities, provide an area for sensory breaks to calm down and become refocused, give tests in small group or 1:1 setting, repeat / paraphrase / clarify / simplify / directions, visual supports, Visual examples of finished product, prompting, and cues ]

d. Explain how the lesson objectives, learning tasks, materials, and planned supports are sequenced to move the focus learner toward achievement of the IEP goals, standards (as appropriate), and the learning target and build connections between the focus learner’s prior learning and experiences and new learning for the learning target.

[ Lesson 1: The first task (we do) of lesson one begins by building on the learner’s strength using counting strategies to find specific amounts. Baseline data demonstrated the learner’s need for a conceptual understanding of ungrouping tens to solve subtraction problems. The learner will have a set amount of unifix cubes; he will have to model numbers and count up to the number his teacher asks for, ungrouping tens in order to give away specific amounts. This task will be supported by the use of manipulatives and a graphic organizer to concretely and visually separate ones cubes (ones column) from tens sticks (tens column). During this activity the focus learner will have to repeatedly practice breaking up tens sticks, thereby aligning learning to the objective, “demonstrate the process of ungrouping tens,” which in turn aligns to the learning target, “break apart groups of tens,” signifying achievement of the IEP goal by, “regrouping.” The
skills also align to the standard as the focus learner demonstrates, “it is sometimes necessary to compose or decompose tens.” In task two (we do), the learner is introduced to the total task chain. The problem-solving component provided by learning and applying this task chain is based on the focus learner’s need of a step-by-step sequential problem solving strategy to accurately work through subtraction problems. This need was evident in the analysis of baseline data. This task is repeated through all three lessons in the segment developing the focus learner’s ability to solve subtraction problems using a strategy. In lesson’s two and three this task is repeated as a support; explicitly teaching the “I do” portion of the “I do, we do, you do” explicit instructional strategy. I will support my learner using visual displays of five sentence stems and five problem solving steps (total-task-chain) building on the focus learner’s strength of visual learning. Instruction during this task builds upon the focus learner’s prior knowledge and strength of using a strategy to solve two digit addition problems that require regrouping. Knowledge of the task chain will prepare the learner for Lesson two and three, where the task chain will serve as the problem solving strategy used to practice solving subtraction problems. This supports the learner by increasing problem solving skills needed to achieve his IEP goal, solving double-digit subtraction problems that require regrouping. Task three (we do) continues to leverage the focus learner’s prior knowledge of counting strategies and knowledge of subtraction without regrouping. Within the role-play setting of a story problem, incorporating elements drawn from the focus learner’s home life, the focus learner will break apart groups of Legos to give to his brother (solving subtraction problems), practicing the process of ungrouping while learning to self-prompt through the total task chain and sentence stems. Throughout this task unifix cubes will be replaced with Legos as manipulative supports used to concretely ground concepts and increase the learner’s engagement. I will use pictures to visually demonstrate key points of the story problem, leveraging my student’s strength of understanding stories and concepts through visual modalities. During baseline data collection, the focus learner demonstrated mastery of solving subtraction problems that do not require ungrouping. This knowledge is leveraged using subtraction problems that do not require regrouping at the beginning of the task, transitioning to problems that require ungrouping, when the focus learner has demonstrated increased control over the strategy and use of materials. This task’s intent is to promote the generalization of concepts and skills by incorporating situations and materials found in the learner’s home context. At the same time, this task targets the skills of ungrouping and the acquisition of a problem solving strategy, aligning the task’s learning to the lesson objective, and learning target. During task 4 (we do), the learner, following teacher prompts and modeling (to facilitate a high success rate), will continue to build confidence working through the problem solving strategy and sentence stems; he will increase his application of the problem solving strategy working on three subtraction problems and practice ungrouping tens using manipulatives and a graphic organizer. These supports enable the focus learner to physically demonstrate what is happening conceptually during the process of ungrouping while supporting his concrete, visual learning style. Solving three problems with these supports will increase the focus learner’s ability to ungroup and solve subtraction facts, thereby moving him closer to the lesson’s objectives, learning targets, IEP goal, and state standard. In this task the focus learner will begin memorizing the task chain, and continue to practice ungrouping tens. Increasing these skills are necessary for the focal learner to achieve the goals of lesson two and three wherein he will apply the problem solving strategy and utilize his ungrouping skills to solve subtraction problems without a teacher model to follow and with fewer teacher prompts to guide him. In this task I will use, the “we do” portion of explicit instructional strategies (guided practice) to support my learner and scaffold instruction to his needs, while positioning him for success during the guided release strategy incorporated into lessons two and three. Lesson 2: Task one (I do) begins with a review of the subtraction-problem strategy (total task chain) introduced in lesson one, task two. The focus learner responds well to explicit instruction; this lesson leverages that strength to support the learner’s memorization of the solving sequence and sentence stems. The learner will follow sequential teacher prompts, orally reciting sentence stems and the corresponding steps of the solving sequence until firm. The focus learner will also observe teacher modeling (I do) as they visually demonstrate the process of ungrouping tens while applying a strategy to solve subtraction problems. This review builds on the learning in lesson one, increasing the focus learner’s ability to recall and apply the solving sequence in alignment with lesson objective two wherein the learner will, “demonstrate ungrouping and a problem solving strategy,” solving 2/3 subtraction problems with no more than 10 teacher prompts per problem. An increased ability to recall and apply the problem solving strategy will enable the focus learner to work through each problem without following teacher modeling, while receiving only 10 prompts. In task two (we do) the learner will build on his prior knowledge of greater than, less than, or equal to in order to decide if regrouping is necessary in subtraction problems. In addition to the ongoing support of manipulatives, a graphic organizer, and the printed task chain and sentence stems, I will support my learner in this activity using a number line. In this task the learner will compare minuends and subtrahends, decide which number is greater (supported by a number line as needed), and then initiate the process of
ungrouping if necessary. In lesson one, steps 1, 2, and 3 (4 and 5 are also introduced, though not made the focus) of the problem solving sequence are introduced, lesson two and particularly this task, build upon the learning of lesson one, focusing the learner’s attention on the specific skills necessary to successfully navigate steps 2 and 3 of the solving sequence. Focusing on the task chain prompts, “do I have enough?” and “get some more, or skip to step four” also directly builds on lesson one’s regrouping strategies, moving the learner further towards achievement of his lesson two objective, the learning target, IEP goal and state standard. Task 3 (we do) continues to leverage the focus learner’s understanding of greater than, less than, or equal to, but shifts contexts and materials from the classroom to a pretend store setting, and manipulatives, from unifix cubes to Legos. Changing types of manipulatives is a support drawn from the focus learner’s enjoyment of working with Legos; this change will increase his engagement in the lesson. Within the role-play setting of a Lego store, the learner will engage in supported practice (we do), deciding if minuends are greater or less than subtrahends with the support of a number line. This task increases my learner’s skill of regrouping and promotes his comfort working through the steps of the total task chain using manipulatives and a graphic organizer. The skills and learning in task three align with lesson two’s objective, learning target, IEP goal and state standard by honing the learner’s regrouping skills and his application of a problem solving strategy (focused on steps 2 and 3) to subtraction problems. This change in perceived context, from the classroom to a pretend store will also increase the likelihood of the focus learner’s subtraction skills generalizing to locations other than a school setting. During task 4 (you do, with support) the learner, following ten teacher prompts per problem and without the support of teacher modeling, will continue to build on knowledge and skills gained in lesson one. He will work through three subtraction problems supported by the total task chain/sentence stems (printed on paper), a number line, a graphic organizer, and manipulatives to develop his application of the problem solving strategy, while continuing to practice ungrouping tens. In this task the focus learner will solve three subtraction problems that require regrouping, increasing his ability to recall the task chain and ungroup tens. Building these skills are necessary for the focal learner to achieve the goals of lesson three, wherein he will apply the problem solving strategy and utilize his ungrouping skills to solve subtraction problems, with fewer teacher prompts to guide him. Lesson 3: Task one (I do) begins with a review of the subtraction-problem strategy. The learner will follow sequential teacher prompts, orally reciting sentence stems and the corresponding steps of the solving sequence until firm. The focus learner will also observe teacher modeling as they visually demonstrate the process of ungrouping tens, while applying a strategy to solve subtraction problems (I do). This review builds on the learning in lesson one and two increasing the focus learner’s ability to recall and apply the solving sequence in alignment with lesson objective three wherein the learner will, “demonstrate ungrouping and a problem solving strategy,” solving 2/3 subtraction problems with no more than 5 teacher prompts per problem. An increased ability to recall and apply the problem solving strategy will enable the focus learner to work through problems without following teacher modeling, and receiving only 5 prompts. I will continue to leverage my learner’s visual learning strength supporting his attempts to solve subtraction problems with a printed problem solving strategy/sentence stem sheet, manipulatives, a graphic organizer, and a number line. Task two (we do) is structured to build on my learner’s prior knowledge and strength of applying the concepts of place value to solve subtraction problems. During this task the focus learner will deepen his concept of place value to understand that the ones column can temporarily hold more that 9 ones cubes, and we have to take one ten away from the tens digit when we ungroup. He will practice ungrouping tens in order to have sums that are able to be subtracted in the ones column (strategy step 4), while remembering that in step 5, there will be one less tens group to subtract from the tens digit in the minuend. In lesson one, the learner is introduced to steps one, two, and three of the solving sequence. In lesson two, steps two and three of the solving sequence are the learner’s instructional focus. This lesson builds on skills learned in lesson one and two by emphasizing instruction on steps four and five of the solving sequence, while maintaining skills that apply to steps one, two and three. Lesson three’s emphasis on steps four and five of the problem solving strategy/sentence stems will further increase my learner’s ability demonstrate ungrouping and use a problem solving strategy to solve subtraction problems, this aligns with my learning target; completing the process with fewer gestural or verbal teacher prompts will move the learner towards this lesson’s objective. During the collection of baseline data, analysis showed that the focus learner accurately maintained place value position when subtracting facts that did not require regrouping. Baseline data also indicated the learner’s misunderstanding of place value; while subtracting the one’s column he had a tendency to invert the subtrahend and minuend, rather than use ungrouping to get sums sufficient for subtracting the one’s column. In this task, the learner will be supported by the use of a graphic organizer and manipulatives to develop his skill accurately subtracting single digit numbers from two digit numbers while remaining within the one’s column. Baseline data also indicated that the focus learner struggled to recognize that, in the process of ungrouping, a group of ten is taken out of the tens digit in the minuend, for use in subtracting the subtrahend from the minuend in the one’s column.
organizer and manipulatives again, will visually and concretely support the focus learner by demonstrating this concept; facilitating his accurate subtraction of digits in the ten’s column. Increased accuracy subtracting the one’s and ten’s column’s in subtraction facts that require ungrouping will further move the focus learner closer to the learning target and IEP goal. In task 3 (you do, with supports) the focus learner will utilize the prior learning from lessons one and two, including tasks one and two of this lesson, to build speed, fluency and independence ungrouping tens and using a problem solving strategy to solve subtraction facts. I will use immediate reinforcement (stars on a whiteboard) to support the learner by providing motivation for him to solve as many problems as possible accurately. The focus learner learns best when 1) he has a larger task broken down into steps, 2) he learns the skills and strategies to successfully complete those steps, and 3) he has ample opportunity to practice and commit the process to memory. The intention of task three is for the focus learner to apply his knowledge of ungrouping tens while using a problem solving sequence to solve as many subtraction facts as possible in a reinforcement rich activity. This activity aligns learning to this lessons objective by providing practice opportunities that will in turn fortify the skills necessary for the focus learner to more independently solve problems. The learner will come to rely less on teacher prompting and more on his skills and knowledge, while prompts are systematically faded to increase independence. Through this activity, the learner will continue to use manipulatives, a graphic organizer, a number line, and the total task chain/sentence stems to support him in solving subtraction facts. During task 4 (you do, with supports) the learner, following 5 teacher prompts per problem, will continue to build on confidence gained in lesson one, two, and three, working through the total task chain to develop his application of the problem solving strategy, while continuing to practice ungrouping tens using manipulatives on a graphic organizer. In this task the focus learner will solve three subtraction problems that require regrouping, increasing his ability to recall the task chain and ungroup tens. Building these skills are necessary for the focal learner to achieve the goals of lesson three, wherein he will apply the problem solving strategy and utilize his ungrouping skills to solve subtraction problems, with five or fewer teacher prompts to guide him. ]

2. Knowledge of Focus Learner to Inform Teaching of the Learning Segment

a. Prior learning and experiences, including prerequisite knowledge and skills related to the lesson objectives

[The learner, in prior learning experiences, has demonstrated in 4/4 problems, an ability to apply a problem solving strategy in the abstract (using the standard algorithm), when adding double digit numbers that require regrouping. The learner’s “ability to demonstrate a problem solving strategy” (included in my objectives and learning target) during math problems is information derived from observational data of my own and supported by observations of the learner’s general education teacher. This piece of baseline data is important because it is a prerequisite skill that I included as a key component to the development of this lesson segment’s objectives and learning target. Previous experience solving problems via a sequential strategy is a learner strength this lesson segment intends to extend to the focus learner’s solving of subtraction problems in which ungrouping is required; analysis of baseline data revealed that the learner is currently not using a strategy to approach subtraction problems that require regrouping. This was demonstrated by his struggle to demonstrate, at baseline, either, 1) the process of ungrouping tens, or 2) a problem solving strategy, when provided with manipulatives and a teacher demonstration, in 10/10 subtraction problems. The learner was able to accurately solve 10/10 subtraction problems without ungrouping (using his fingers as manipulatives), but 0/10 problems where ungrouping was necessary. These data pieces define an area of strength and need in the focal learner, accurate subtraction (strength) using manipulatives (strength) and the ability to ungroup tens (need). The ability to solve subtraction problems without regrouping is a prerequisite skill to this lesson segment, while the focus learner’s demonstrated difficulties of ungrouping, is used as the basis for including ungrouping skills within the lesson segment’s objectives and learning target. Baseline data revealed several additional strengths the focal learner has mastered that can be built upon to increase his learning in areas where he struggles. These strengths include 1) the ability to use counting strategies and manipulatives to solve subtraction problems, 2) the ability to determine a digit’s value as greater than, less than or equal to, and 3) knowledge of place value in column problems. These strengths are confirmed by my observational data, in addition to the observations of the focus learner’s general education teacher. ]

b. Social and emotional development (e.g., impulse control, ability to interact and express him/herself and his/her feelings in constructive ways, ability to engage and persist in individual and collaborative learning, social connectedness)
The focus learner demonstrates very positive interactions with his peers and is considered a friend by several students in his class. He spends the bulk of his school time in the “green zone”, ready to learn, and responds well to positive reinforcement. The learner’s focus and persistence accomplishing learning tasks is an area of need that can be supported by cues, prompts and redirection. Often, the focus learner can become overwhelmed, frustrated, or confused by a task. During these times the learner becomes visibly anxious and emotional. On rare occasions the focal learn may pound a nearby object with a clenched fist, though, his aggression has never been directed towards staff or peers. When this happens the focal learner is prompted to take a break and directed to use a calming strategy; theraputty is often a de-escalation tool of choice. My lesson sequence is sensitive to the focus learner’s social emotional needs by reducing the antecedent conditions in which he has a tendency to become overwhelmed, frustrated, or confused. This includes the use of briskly paced explicit instructional techniques to increase the learner’s attention, engagement, and understanding of expectations. Total-task-chaining supports the learner by simplifying large complex tasks that otherwise would be overwhelming. Modeling, visual supports (graphic organizer, number line, pictures), and manipulatives support my learner by concretely demonstrating concepts, scenarios, and instructions, leveraging his visual leaning strength to limit the impacts of confusion and frustration. Additionally, guided practice, scaffolding, and prompting are all supports intended to prevent frustration, by increasing the learner’s success rates while attempting to solve problems. These supports contribute to the focus learner’s achievement of his goals and objectives by enabling him to remain engaged in instructional tasks for long enough periods of time to build skills and understanding.

c. Personal, family, community, and cultural assets (e.g., the focus learner’s interests and strengths, relevant lived experiences, and self-management skills; family supports or resources; cultural expectations; community supports or resources)

The focus learner loves anything having to do with Legos. Additionally, the learner has a very supportive family, in particular a close relationship with his younger brother. Frequently on Monday’s when I discuss with the focus learner what he did over the weekend he mentions a highlight as having played Legos with his younger brother. I incorporate both of these assets within my lesson segment; specifically, in lesson one, task three the student and I will role play a scene between an older and younger brother, where the focus learner is the older brother (mirroring the focal learner’s sibling relationship) and I play the role of the younger brother who needs to borrow some of his Legos. Setting this role-play within the context of a sibling relationship while playing with Legos is intended to facilitate the generalization of the focus learner’s subtraction skills to the home environment, in addition to, engaging the focus learner in the learning activities (by using his preferred tangible). Legos, in place of unifix cubes, are used in lesson one, task three, then again in lesson two, task three to foster the learner’s engagement in the learning tasks. In lesson two, task three, a role-play is set within the context of a community store, intended to facilitate the generalization of the focus learner’s subtraction skills to his community environment. In both lesson tasks Legos are used as a tangible manipulative that, visually and concretely support the learner’s acquisition of the process of ungrouping in the process of solving subtraction problems using a strategy.

d. If relevant, any other information about the focus learner that will influence your instructional planning (e.g., other needs and strengths in areas such as motor skills or communication)

3. Supporting Learning

a. Describe how the learning tasks, materials, and planned supports address your focus learner’s needs and capitalize on his/her strengths and interests.

My learner learns best when new information and concepts are presented to him concretely. If he can touch and see how a concept works, he is often soon able to process that concept and later (with supports) demonstrate it via other reasoning modalities (representational, then abstract). I think this is one reason why he loves Legos so much. Using Legos he is able to be creative and expressive in a concrete way that is not as taxing on him as other modalities of expression. Legos, and manipulatives in general, have the additional benefit of providing a tangible sensory experience that has a calming effect on the learner. My learner also learns best when tasks are broken down for him into relatively
small manageable chunks. Large tasks tend to overwhelm or frustrate my learner in ways that trigger avoidance behaviors. These behaviors can obstruct my learner’s ability to engage in learning, however, I can use many supports to proactively direct my learner in ways that either reduce the frequency of these triggers or prevent them altogether. My planned supports are, for the most part, generalized into three categories. 1) Supports that convey information concretely through the use of visuals like a graphic organizer, a printed problem solving/sentence stem cheat sheet, or a number line; in addition to, the use of tangible manipulatives, like unifix cubes or Legos. I selected these supports in order to make the most of my focus learner’s strength, leaning via visual/concrete modalities and for their efficacy in demonstrating the process of ungrouping concretely to my focus learner. 2) My second category of supports provides step-by-step structure (routine) to both tasks and lessons. I use the explicit instruction format of presenting new material and concepts in my lessons by first, connecting new learning to old knowledge and second, using the I do, we do, you do - gradual release instructional technique to explicitly model, guide, and then release my focal learner to apply his learning. I am planning a more gradual release than is perhaps typical, release that occurs over the course of my lesson segment (and to a lesser extent within individual lessons) to account for my learner’s social emotional needs. What I call a “supported release”, where I am there to prompt if needed, but promoting my learner’s independence promoting only when truly necessary to avoid frustration and the loss of instructional time. Explicit instructional techniques give a high level of structure to my lessons whereas; my task-analyzed total-taskchain and corresponding sentence stems provide step-by-step structure (routine) to each of my learning tasks. In each task we are solving subtraction problems with regrouping, I analyzed this task and broke it down into five chunks corresponding to my focus learner’s need to – not - become overwhelmed by complex tasks. I gave each of the five steps a name and then made a sentence stem the learner will use to explain his process as he reads aloud first a sentence stem, next the corresponding task chain step then completes a step in the problem solving process physically modeling with manipulatives on a graphic organizer (that visually represents the ones and tens columns). This support is the problem solving strategy the focus learner will demonstrate as he progresses towards his lesson objectives and learning target. The total task chain and sentence stems also provides clear, concise cues that guide the focus learner’s use of manipulatives and visuals mentioned above; these supports work in tandem to support my learner utilizing his strengths to compensate for his areas of struggle. 3) My third group of planned supports addresses my learner’s social emotional needs (reducing confusion/frustration) in addition to helping him maintain his focus on academic tasks. Teacher modeling and prompting will increase the focus learner’s success rates as he attempts to ungroup tens and use a strategy to solve subtraction problems. Higher success rates serve to reduce the amount of frustration by preventing my learner becoming confused on what to do now, or what to do next. These supports will help my focus learner meet expectations while maintaining emotional stability. To support the learner’s need of focus, I have planned to pace lessons briskly facilitating his continual engagement in lesson tasks, additionally, I will use immediate reinforcement to promote his engagement in learning activities.

b. Explain how the learning tasks, materials, and/or planned supports will provide challenge to your focus learner.

[ Throughout my lesson segment, the way my supports are configured, I can at anytime assess my learner, and decide if his emotional state would be receptive to a challenge. I can scale this challenge to my learner’s frustration level by either increasing or decreasing my prompting frequency. By decreasing my prompting frequency, my learner will be challenged to take increasing levels of responsibility working through the problem solving strategy to ungroup tens and solve subtraction problems. I can also vary challenge throughout my lessons by presenting increasingly difficult problems to solve, leveraging the difference in challenge between solving either 17-8=, or the more difficult 63-48=, Other challenges I have planned are, switching between problems that require ungrouping and those that do not and presenting an addition problem intermittently, to maintain addition skills, while challenging the learner to switch between operations. I also plan to have coins available to challenge my learner on a few problems. I can do this by directing the focus learner to use pennies and dimes as manipulatives instead of unifix cubes or Legos. In lesson two, task three I have a planned challenge problem; I will use the context of this tasks story problem (a Lego store) to buy Legos from my focus leaner, with each Lego being worth one cent. ]

c. Justify your choices of learning tasks, materials, and planned supports based on the focus learner’s strengths and needs and principles of research and/or theory.
I have chosen my instructional strategies, learning tasks, materials, and supports based on each tool’s efficacy supporting learners in contexts similar to that of my focus learner. HighFunctioning Autism Spectrum Disorder (HFASD) impacts my learner; it is important to note that there are not a lot of evidence-based instructional strategies that have been proven effective when teaching math to students impacted by HFASD (Lord & Mcgee, 2001). However, we can still choose evidence-based strategies that best fit these learners and adjust our instructional programming after analysis of progress monitoring data. According to Peggy Schaefer Whitby, the explicit instructional model working in tandem with the evidence-based model of concrete-representational-abstract, supports learners with HFASD. Explicit instruction has, “consistently shown positive effects on the math performance of students with mathematical difficulties, in the areas of both computation and problem solving” (Archer & Hughes, 2011, p. 17). Furthermore, “conclusions were clear: Explicit instruction should be a consistent mainstay of working with students both with and without learning difficulties” (Archer & Hughes, 2011,p. 17). The concrete-representational-abstract model is both an evidence-based methodology and a strategy (when combined with explicit instruction and strategy instruction) that can be used to increase conceptual understanding in students impacted by HFASD (Schaefer Whitby, 2013). While Explicit instruction limits the effects of the compromised executive functioning skills of learners impacted by HFASD; the concrete, representational, abstract model supports these same students, who struggle to develop conceptual understandings, in spite of their cognitive deficits (Schaefer Whitby, 2013). Evidence of explicit instruction can be found throughout my lesson segment by the use of my task-analyzed total-task-chain that is used to break, “complex skills and strategies down into smaller instructional units” (Archer & Hughes, 2011, p. 2). Task chaining is an instructional method with research to support its ability to support students who experience “extensive disabilities” (Brown, Mdonnell, and Snell, 2016, p.150). Further, evidence of explicit instruction in my lessons includes, connecting new material to prior learning (something I do just typically just after reviewing the task chain in my lesson segment), the routine of I do-we do-you do, briskly paced lessons (used in concert with prompting to promote engagement), and requiring frequent responses (to promote engagement). These characteristics of explicit instruction meet both my learner’s social emotional and cognitive needs enabling him to make progress towards lesson objectives and the learning target. “Visual symbols such as objects and pictures have the quality of being concrete and permanent” (Brown, et al., 2016, p.151). For this reason I have included manipulatives, a printed graphic organizer, a number line, and pictures as materials to support my learner. Visuals, in addition to being concrete, have evidence supporting their effectiveness when used among student populations impacted by Autism Spectrum Disorder (ASD)(Brown et al., 2016; Schaefer Whitby, 2013). One of my learner’s greatest assets is the ability to learn through visual modalities; for this reason, throughout my learning segment, both my learner and I will rely heavily on visual supports to make progress towards lesson objectives and the learning target.

References


d. Focus Learner Understanding of the Learning Target: If not in your lesson plans, provide the learning target and/or lesson objectives exactly as presented to the focus learner (either individually or as part of a group/class). How and when will you give the focus learner opportunities to express his/her understanding of the learning target and/or lesson objectives and why they are important to learn? What tools or strategies will the focus learner use?

[ At the beginning of each lesson, the focus learner and I will review our learning target and that day’s lesson objective. I will make the learning target student friendly changing it to: I can ungroup tens and use a strategy to solve subtraction problems. My lesson objectives will be changed to: I can show how to ungroup tens and use a strategy in subtraction problems. After our brief review I will give my learner an tool that he can use to put a plus sign on the step he feel
most confident performing in the task chain, and a question mark on the step he feels the least confident. With those marks he will have expressed his understanding of the learning target, as they reflect his understanding of ungrouping and using a strategy to solve subtraction problems. We will then talk about the learning target, and how those steps of confidence and confusion are important, as parts of the learning target he is performing well or areas we are going to work hard to demonstrate growth in. I will also ask my learner reflect and then circle how he thinks he is performing towards the learning target by circling either, I can do it most of the time, I can do it sometimes, or I am confused. This will promote his reflection on the combined skills he is learning in pursuit of the learning target.

e. How will the focus learner identify tools and/or strategies to support his/her progress toward the learning target and/or lesson objectives?

[ I refer to, model the use of, and prompt my learner to use manipulatives, a graphic organizer, a number line, a sentence stem/strategy cheat sheet, and other visuals. I will also model several self-reflection tools and progress monitoring tools. In this way my learner will identify the tools he can use to support his progress in pursuit of lesson objectives and the learning target. ]

f. Explain how, throughout the learning segment, you will help the focus learner to generalize, maintain, or self-manage the knowledge, skills, and planned supports related to the learning target.

[ In lesson one, task three and lesson two, task three I have two role plays planned to help my learner understand that the skills of the learning target and lesson objectives, are meaningful, not only at school in room 22, but also at home (home setting in lesson 2) and out in his community (store setting in lesson three). I also want my learner’s abilities to generalize to his general education classroom. This is another reason why explicit instructional strategies are used, as these are techniques he is likely to see in his general education environment; this will facilitate generalization of learning routines between both the nesting autism room and my learner’s general education room. The learning this lesson segment is designed to support my learner with a problem solving strategy that he can use both independently and in multiple environments. This is why I have placed so much emphasis throughout the segment on my learner’s use of the task chain and sentence stems to initiate and complete the process of ungrouping and solving subtraction problems. When combined these elements form a problem solving strategy to support my learner. As my learner internalizes (memorization, with conceptual understanding) these steps, he can use them to self-prompt through the process whenever and wherever the occasion demands it. As he works through the acquisition stage of learning, he will be supported by a visual print out (taped to his desk in his gen-ed room) of the steps and teacher prompting to engage in the steps. As he grows more comfortable with the process these supports will be faded transferring responsibility of the task chain’s execution from the teacher to the learner. While not the goal of this segment, later segments will focus on the generalization of conceptual knowledge. Having started the process concretely (using visuals and manipulatives), the next step is for my learner’s new skills and understanding to generalize from concrete to representational demonstrations of understanding (drawing the models of problems instead of using manipulatives) and finally abstract demonstrations of his knowledge (using only numbers and algorithms). This progression of conceptual demonstration is based on the concrete representational-abstract instructional technique. ]

4. Supporting the Focus Learner’s Use of Expressive/Receptive Communication

a. Communication Skill. Identify and describe one communication skill related to the learning target that the focus learner will need to use to participate in the learning tasks and/or demonstrate learning.

[ Explain: My learner will develop his communication skills by explaining his problem solving process facilitating progress towards lesson objectives and the learning target by reflecting his understanding of the process of ungrouping tens, and his ability to recall the problem solving strategy. ]

b. Explain how you plan to support the focus learner’s use of the communication skill (planned supports for communication can include instructional strategies such as vocabulary development, modeling, guided practice; materials such as graphic organizers, dictionaries, spell-check; or accommodations such as assistive technology).
Describe how the supports assist the focus learner in acquiring, maintaining, and/or generalizing the communication skill. Provide an example from your lesson plans of this planned support.

[ My learner’s communication skill is a central component to his learning, generalizing, and self managing of a problem solving strategy; this is a key aspect of my lesson objectives and the learning target. I plan to support my focus learner to explain (and eventually memorize) each step of the total task chain using sentence stems (printed on a sheet for visual reference) to facilitate his explanations. These stems and task-chain steps combine to form the basis of a problem solving routine the learner will use to verbally explain a step in the process, execute the step, and then initiate followings steps with the next oral explanation. This process is repeated from steps one through five of the problem solving process several times throughout each of my lesson segments tasks. I will also support my learner’s explanations using verbal and gestural prompts, directing his attention to a printed cheat sheet if he needs support initiating a step or remembering how to execute the step using manipulatives and a graphic organizer. Through his explanations my learner will move closer to this lesson segments learning target by memorizing these stems/steps and using them demonstrate his conceptual knowledge of ungrouping and a strategy for solving subtraction problems. Over time, as my learner becomes proficient recalling and explaining the stems/steps of the problem solving sequence, he will in turn become more independent, as I will have reduced my prompting frequency. Additionally, his increased ability to recall the strategy will enable him to apply it in other contexts and environments as the situation demands. The learner is introduced to the skill of explaining in lesson one, task two, and at the beginning of lesson’s two and three, during the “I do” task of the lesson where I will support my leaners acquisition of the communication skill verbally and physically modeling use of the sentence stems in the problem solving process.  ]

5. Monitoring Learning

a. Explain how the assessments and the daily assessment record (including baseline data) will provide evidence for you and your learner to monitor the focus learner’s progress toward the learning target through the lesson objectives the level of support and challenge appropriate for the focus learner’s needs

[ Baseline data indicated my learner’s need for 1) a conceptual understanding and procedure for ungrouping tens in subtraction problems and 2) a sequential strategy to facilitate the solving of subtraction problems. I have a tool (teacher data form, document submitted) I designed to record data each day to track my focus learner’s progress towards daily objectives and the segments learning target. This chart will be a five box across and seven boxes down grid with the following labels horizontally across the top of the grid: 1) step/stem, 2) problem 1, 3) problem 2, 4) problem 3, 5) # of prompts. In the left hand column progressing vertically down I will have the headings: 1) steps/stems, 2) step 1, 3) step 2, 4) step 3, 5) step 4, 6) step 5, 7) correct or incorrect. In column 2, 3, and 4, I will mark with a + or – whether or not my student was successfully able to verbally explain and execute the corresponding task-chain step for each of the three problems he will solve in task 4, in each lesson. In column 5 I will keep a tally of teacher prompts used to support the focal learner through that corresponding step. This assessment aligns with my daily objectives by tracking 1) how successful my learner is performing the process of ungrouping tens across three problems (indicated by +’s or –’s in columns for collecting data on steps two and three of the task chain. 2) By collecting data regarding how well, + or –, my student is explaining and applying the problem solving strategy (indicated by + or – symbols pertaining to the five steps of the problem solving process over the three problems in task four of each day lesson). I will adjust my plans across this segment based on my learner’s needs, after analyzing data collected at the end of each lesson. My learner will use a student data sheet (document submitted) to chart his progress towards daily lesson objectives. This chart will be four boxes across and seven boxes down. The column labels going horizontally across the top row of the table will read: 1) problem solving step, 2) problem 1, 3) problem 2, 4) problem 3. The row labels going down the left hand column of the table will read: 1) problem solving step, 2) step 1, 3) step 2, 4) step 3, 5) step 4, 6) step 5, 7) problem solved correctly? At the end of task four in each days lesson, I will have my learner put between one and three stars based on my data sheet, whether or not he was able to explain and execute that step of the problem solving process. Three stars means he was successful in that step across all three problems, zero stars means he us unsuccessful in each attempt of that step. This will help my learner visualize 1) how well he is ungrouping tens (steps two and three of the problem solving strategy) and 2) how well he is executing the strategy to solve subtraction problems (# of stars on the whole chart). In addition, he will be able to see how many problems he is solving correctly (I will have him put a star on row seven for each problem he accurately solved). This knowledge will enable my learner understand why instruction is targeting specific
steps, steps we are trying to demonstrate growth in, and progress towards daily objectives in light of the learning target.

b. Describe when and where you and the focus learner (either individually or part of a group/class) will use tools and/or strategies to identify what s/he is doing well and what s/he needs to improve to reach the learning target through a process of reflection, revision, and goal setting.

At the end of each lesson in task four, I will have my data sheet completed. I will know how my learner performed in each step of the task chain across three problems. My data sheet collects data detailing whether or not my focus learner verbally stated the sentence stem and strategy step for each part of the task chain, and whether or not my student was able to execute the task of each step of the task chain. This gives me enough information to evaluate my student’s performance in relation to lesson objectives and the segment’s learning target. I will indicate my student’s performance using plus signs and minus signs on my data sheet for each step of each problem. My data sheet also has a column in it that I will record the number of prompts I gave to support my focus learner, corresponding to each sentence-stem and task-chain step. My focus learner will have a student data sheet that we will fill out together. Using information from my teacher data sheet, to place between one and three stars on his sheet to show him what steps of the task chain he is performing well, and what steps he needs to improve. For each step of the task chain, I will give the focus learner a star (one per step of each problem) if he both 1) orally recited the sentence stem and task-chain step and 2) performed that step using manipulatives and a graphic organizer (and only non-instructional prompts). We will then talk about rows full of stars, noting that these are the steps he is performing well, and we will discuss the rows with fewer stars, noting these steps as areas we are working hard to demonstrate growth. We will also review the segment learning target and talk about how showing growth in rows with few stars will help us reach our goal of tomorrow’s lesson objectives and the segment learning target.