## THE DIRECTED TEACHING ACTIVITY (DTA)
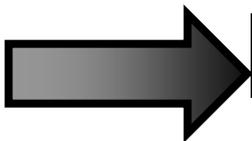
The Directed Teaching Activity (DTA) includes the following:

- *Lesson Objectives/Outcomes:* Writing your objective happens prior to lesson delivery. The objective should be written as a **learning outcome** and not an activity. In the lesson, the teacher **communicates the learning objective** to students both orally and in written format. (Clarity, Lesson and Unit Structure)

- *Value, Sequence, and Alignment/Balance:* Prior to teaching the lesson, teachers should consider how this particular lesson fits within the scope of the unit and year, as well as how this lesson connects to the previous and future lesson. There should also be a balance of instructional modes. (Lesson and Unit Structure)

- *Suitability for Diverse Learners:* Prior to teaching the lesson, the teacher should consider how all students will access the content and reach the learning outcome. (Balance, Materials and Resources)

- *Introductory and Developmental Activities:* These activities include an **anticipatory set or "warm-up"** to focus students' learning and to ensure on-task behavior by all students. During the warm-up, there is a minimum of teacher intervention. Through these teacher-directed activities, new concepts or processes are introduced and/or students are aided in constructing meaning around new concepts. The teacher **models** new processes and procedures and assists students in organizing and storing new information.

- *Guided Practice Activities:* In this phase, students have an opportunity to use their new knowledge and skills through teacher-monitored activities. Moreover, this process offers students an opportunity to begin the extension and refinement of their skills through the use of critical thinking skills.

- *Independent Practice and/or Meaningful Use Tasks:* These activities allow students an opportunity to use their new knowledge and skills in meaningful ways. These activities and tasks may contribute to students' independent or group-centered responses to an ongoing project-based task involving one or more of the following: decision-making, problem-solving, investigation, experimental inquiry, and/or invention. Independent activities may include homework. (Grouping)

- *Assessment Activities:* Through ongoing assessment, the teacher assesses student progress toward the attainment of the objective and students' understanding and proficiency of new knowledge or skills. The teacher evaluates students' accomplishment of the objective and makes necessary adjustments to instruction.

- *Closing:* These activities are designed to foster a sense of completion among student participants. It may be an essential part of the assessment process or it can function as a stand-alone activity.

**Please note that the Directed Teaching Activity Planner provides a framework for instruction utilized in many disciplines, including art, music, and physical education, among others.**

## DIRECTED TEACHING ACTIVITY LESSON PLANNER

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| **Initial Preparation Plans** *FFT Support, 1.c (Setting Instructional Outcomes)* | |
| **IDENTIFY STRATEGY(IES) or SKILL OBJECTIVE(S) FROM STANDARDS** | CCSS.1.OA.6 Represent and solve problems involving addition and subtraction<br><br>Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums. |
| **MATCH OBJECTIVE WITH TEXT**<br>Ensure material/resources is well-aligned to the chosen strategy/skill and to student needs/interests/ cultural diversity | The field trip to University of MD Xfinity Center allows students to apply Common Core Math Standards in a real world situation<br><br>Students will demonstrate their understanding of addition and subtraction using scores using basketball game scores |
| **LESSON OBJECTIVE(S)/OUTCOMES**<br>Objective(s) must be<br>• specific, doable, assessable in the allotted time<br>• measurable<br>• written with verbs for expectations of high rigor<br>• stated as a learning outcome<br>• | 1. Students will investigate the relationship between addition and subtraction.<br><br>2. Students will demonstrate their ability to determine the relationship between a set of three numbers and -, +, = |
| **VALUE, SEQUENCE, AND ALIGNMENT /BALANCE**<br>Students must be able to build their understanding of important ideas from concept to concept.<br>• How does the lesson fit in with previous and future lessons in this unit of study?<br>• How will this lesson proceed in terms of time and learning tasks?<br>• What interdisciplinary connections and/or technology will be made in this lesson? | This lesson is building upon the basic principles of subtraction number sentences and the way in which numbers relate to one another. The lesson builds upon prior knowledge and challenges students to build upon their awareness of computation by analyzing number relationships and how they are represented through mathematical symbols.<br><br>The students will be provided with a strategy to build the fluency of addition and subtraction facts.<br><br>The lesson will be followed by additional application of related facts to word problems and become an additional "tool" for mathematicians to use when responding to realistic practice forward tasks. |

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| • In what ways is this lesson rigorous and authentic?<br>• Is there a balance of instruction utilizing multiple modes of learning? | |

| **Suitability for Diverse Learners**<br>• What accommodations or differentiation of instruction/use of UDL has been provided for diverse learners (TAG, ESOL, SPED, 504, etc.)?<br>• Are the outcomes providing cultural sensitivity?<br>• Are assessments differentiated? | (<br>Student Groups:<br>Students are seated in heterogeneous (APED, AGL, OGL, BLG, and ESOL) small groups/teams<br>Student pairs reflect heterogeneous groupings.<br>Students will turn-and-talk to develop and rehearse ideas about math before sharing as well as provide an opportunity monitor the validity of their own, as well as their partners, mathematical thinking in relating greater than, less than, and equal to<br>Students will work as a team (pre-planned/heterogeneous) of math detectives to determine the relationship between a set of 3 numbers and the following symbols -, +, =<br><br>In order to meet the unique needs of all, learners require visual aids, multiple examples, repeated information, content vocabulary explained, extra time to think and process presented information, and extra reminders for focus and attention, as well as reinforcement of basic classroom routines and procedures. |

| **Lesson Component/Teaching Moves**<br>*FFT Support, 1.e (Designing coherent Instruction)* | **Lesson Notes**<br>*FFT Support, 2d (Managing Student Behavior)*<br>*FFT Support, 3.b (Questioning/Discussion Techniques)*<br>*FFT Support, 3.c (Engaging Students)* | **Essential Question(s), Differentiation/Modifications and Resources Needed** |
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| **Instructional Materials and Resources**<br>• Utilize relevant instructional materials and course texts<br>• How do the course materials enhance/further/accommodate student learning?<br><br>**Introductory & Developmental Activities-15-20 min.** | **Introductory & Developmental Activities:**<br><br>To activate mathematical thinking students will have completed a warm-up activity finding the missing pieces in subtraction equations<br>Ex: ___ - 7=0 (recalling that a whole subtracted from itself has a difference of 0)<br>9-___ =9 (recalling that the difference is equal to the whole when 0 is taken away)<br>____-3 =4 (pulls students prior knowledge of finding the difference 0-10) | **Essential Questions:**<br>1- How do you subtract numbers?<br>2- How does the relationship between addition and subtraction build fact fluency?<br>3- How do we use strategies |

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| *-Connect and Engage (I do)-5 min.*<br>• Explain/review the strategy/skill and how it is used.<br>• As appropriate, build/activate background knowledge and vocabulary necessary.<br>• Pre-assess as appropriate.<br>• Students engage with primary lesson material (set their purpose, use reading strategies, use strategic behaviors).<br>*-Modeling (I do)-10 min. A brief teacher-directed lesson*<br>• Model the skill/strategy.<br>• Record think-alouds for the students (sticky notes, anchor chart, etc.)<br>• Engage students. Insert Turn and Talk or other student response checks to monitor understanding | As students work on problem solving I will assist by redirecting their attention to previously student-created anchor charts. This will also provide a foundation of students who I know are able to justify their thinking in the event that the class is reluctant to/unable to voice their reasoning during the review.<br><br>Review answers with the whole class and invite students to reflect on the subtraction process reviewing the needed vocabulary and foundation skills:<br><br>**Learning Activity: Exploration:**<br><br>Explain that it is these types of equations that give this math detective a headache! And, it just so happens that I was presented with another math case to be solved – can you help the women's basketball team members add up their basketball scores? Remember that each basket is worth 2 points.<br><br>Display 7 cards on the board 6,4,2, -, =, +, = and build the focus problem: Just this morning these fine numbers and symbols came in distraught! "Help they cried, we've fallen out of our equation and can't get back in!"<br><br>Invite students to put on their math detective hats and explain that today they will be using math tools to help the numbers and symbols get back to their equations.<br><br>Review the expectations for using math tools<br><br>Pass out trays with materials (part-part-whole mats, cubes, cards)<br><br>Allow time for students to work together to find solutions to be problem<br><br>Expectation is that students will find both addition and subtraction number sentences.<br>Once it seems that most the class has arrived at some sort of conclusion or 5 minutes has passed bring class back together to analyze findings and create a conclusion<br><br>Invite students to the front of the room to share their cube findings and/or to arrange the cards displayed on the board<br><br>Illustrate the relation between the numbers focusing on the initial equations | |

| | and leaving out the equations in parentheses | |
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| | i.      2+4=6 (4+2=6) | |
| | ii.      6-4=2 (6-2=4) | |
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| | Ask guiding questions to invite justification: How can this be?! How can these 3 numbers show up in so many number sentences? | |
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| | Look for class to show their understanding of "whole" in addition the sum is the whole group, in subtraction the whole is what you're breaking into parts…..those parts are what makes the sum. We're using the same math tool (mat) to show both the addition and subtraction. This is a strategy that mathematicians use to help them quickly solve challenging subtraction problems. | |
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| | For example: 25-9=… 25 is the whole, 9 is a part; so then I would just need to count on from 9 (hey that's addition) in order to find the missing part | |
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| | Display 9-3= How could I use addition to help me solve this? | |
| | Send groups back to their seats to solve and rehearse their justification with their partner and then bring them back to share. | |
| **Guided Practice - 10-15 min. (We do)** <br> Identify guided practice needed before releasing students to practice on their own. <br> • Consider : <br>    o Cooperative groupings. <br>    o Conceptual difficulties that might arise. <br>    o How students can initiate discussion. <br>    o How tasks are differentiated and cognitively challenging. <br>    o How the tasks advance students' understanding and learning. <br>    o How to mentally engage students with the content and aid in constructing understanding. | **Concept Explanations:** <br><br> In order for students to further demonstrate their understanding of related facts I will share the following scenario verbally and visually on the board: <br><br> In the "family"  7, 6,1 <br> Is 8-1=7 a related fact? <br><br> Barry says yes because there's a difference of 7 and 7 is in the fact family. <br> Barry's sister Terri says no – even though there is a difference of 7 the number sentence does not use 6 so it cannot be related. <br><br> Who is correct? <br><br> Again students will think-pair-share in order to develop their understanding and explanation. As students discuss circulate the group and assist/guide as needed using connecting cubes and mats where applicable. | |

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| **Independent Task(s) - 20 min. (You do)**<br>What opportunities will students have to use the new skills/concepts in a meaningful way? How will students expand and solidify their understanding of the concept and apply it? How will students demonstrate their mastery of the essential learning outcomes? May be a continuation of the practice task. | **Flexibility and Fluidity:**<br><br>Students will be given a Basketball Detective Worksheet with simple equations and will work independently to complete questions | Essential Questions:<br>1- How does knowing the sum to addition problems help us find the difference in subtraction problems?<br>2- What other tools might we be able to use with this strategy?<br>3- How will using related facts help solve a subtraction expression? |
| **CLOSING (5-10 minutes)**<br>**Includes one or more:**<br>▪ Assessment of student learning, including student reflection on what was learned which may include:<br>  o Connections to previous and new learning.<br>  o A review of the lesson objective and if it was achieved.<br>  o An exit slip, final journal reflection, or other means of informal assessment.<br>  o Student sharing and peer feedback.<br>  o Celebrations of learning. | **Assessment and Closure:**<br><br>Students will complete learning logs about the field trip and restate answers to the essential questions. | |