**Spencer County Middle/High Math Feedback Document**

Teacher\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_ Time\_\_\_\_\_\_\_\_\_\_\_

Observer\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade/Course\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_ Use of District Lesson Plan** *(1E: Designing Coherent Instruction)*

**\_\_\_ Essential Question Posted, Student Friendly, Congruent with Standard** *(1C; Setting Instructional Outcomes)*

**\_\_\_ Daily Learning Target Posted, Student Friendly, Congruent with Standard** *(1C; Setting Instructional Outcomes)*

**\_\_\_ Evidence of Flashback** *(3D; Assessment)*

**\_\_\_ Evidence of Daily Learning Target Assessment** *(3D; Assessment)*

\_\_\_ **Instruction Matches Curriculum Map/Pacing Guide** *(1E; Designing Coherent Instruction)*

**\_\_\_ H.O.T (Higher Order Thinking) Questions** *(1B; Questioning and Discussion)*

|  |  |
| --- | --- |
| **Mathematical****Practices** | **Teacher:** |
| **Habits of mind of a productive math thinker** | **1. Make sense of****problems and persevere in solving****them** | Involves students in rich problem‐based tasks Provides opportunities for students to solve problems that have multiple solutionsAllows ample time for all students to struggle with taskModels making sense of the task and the proposed solution |
| **6. Attend to precision** | Consistently encourages precision in communication and in mathematical solutions Identifies incomplete responses and asks students to revise their responsesModels the use of academic languageProvides opportunities for students to clarify their thoughts |
| **Reasoning and Explaining** | **2. Reason abstractly and quantitatively** | Facilitates opportunities for students to discuss problems to make sense of quantitiesProvides opportunities for students to interpret, model and connect multiple representations in order to be flexible between allProvides opportunities for students to experience concrete, semi-concrete, abstract |
| **3. Construct viable arguments and critique the reasoning of others** | Provides opportunities for students to listen to the solution strategies of othersFacilitates opportunities for students to discuss alternative strategies and defend their own ideasAsks higher order questions which encourage students to defend their ideas or clarify their thinkingProvides prompts/questioning that encourage students to think critically about what they are learningProvides prompts/questioning that lead to valuable student mathematical discourse |
| **Modeling and Using Tools** | **4. Model with mathematics** | Uses mathematical models (variables, equations, tables, graphs, diagrams, etc.) appropriate for the lessonEncourages students to use appropriate mathematical models Reminds students that the mathematical model being used is a “work in progress” and may be revised as needed |
| **5. Use appropriate tools strategically** | Uses physical or digital tools appropriately for lessonHelps students make good decisions on use of specific tools for specific goals Provides access and opportunities for students to use a variety of tools and/or technology to solve problems |
| **Seeing structure and Generalizing** | **7. Look for and make use of structure** | Engages students in discussions where they make connections between topics and see relationships within the content or between contentsFacilitates tasks that encourage the use of patterns or structures Allows students to demonstrate different solution pathwaysProvides activities in which students demonstrate their flexibility in representing mathematics in a number of ways |
| **8. Look for and express regularity in repeated reasoning** | Connects concept to prior and future concepts to help students develop an understanding of procedural shortcutsDemonstrates connections between tasks Reminds students to consider the reasonableness of their results |
| **Mathematical (Growth) Mindset** | Encourages and validates when students struggleProvides sufficient wait time Celebrates when learning occurs from mistakesEncourages students to persist when they are stuck or wrongGives belief messages in a meaningful way: ”I know you can do this”, “I believe in you”Praises effort, ideas, specific strategiesEmphasizes thinking/depth over speed, memorization or performanceStudents’ creative work is displayed Encourages students to show/vocalize self-belief and confidenceListens closely to student thinking before prompting/assisting  |

|  |
| --- |
| **Love it!** |