# Lesson Study Tuning Protocol: Increasing Student Achievement through Teacher Collaboration

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<table>
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<th>Steps of A Lesson Study Tuning Protocol</th>
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| **Step 1:** Form a Team  
The lesson study cycle provides the opportunity for teachers to:  
• Think carefully about the goals of a particular lesson, unit, and subject area  
• Think deeply about long-term goals for students. What is the gap between who students are now and who we hope they will become?  
• Deepen their own subject-matter knowledge, by considering questions like:  
  • What knowledge and understanding are important, How is it developed? What are the gaps in student understanding and knowledge?  
• Collaboratively plan lessons  
• Anticipate student thinking  
• Carefully study student learning and behavior  
• Build powerful instructional strategies – for example, develop questioning strategies that stimulate student interest and learning |
| **Step 2:** Volunteer Teacher selects strategy for focus *(Rigor or Levels of Questioning)* as well as the date and time for the Observation. Volunteer teacher plans lesson collaboratively with peer(s) of same course or within same department whenever possible. |
| **Step 3:** Volunteer Teacher presents Lesson to PLC/Team (see attached Protocol on page 2 for sharing the Lesson with your PLC)  
Presentation includes:  
• A hard copy of lesson plan containing Essential Elements (see attached)  
• Any resources that will be used (i.e. worksheets, charts, graphs, text, articles)  
• Any background information need for observers  
• A strategy for checking of assessing whether their lesson goal was met  
PLC members decide who will be the observers. |
| **Step 4:** Observation:  
• **Option 1:** Observing Rigorous Student Assignments (page 3)  
• **Option 2:** Observing Higher Level Questioning (page 4)  
Volunteer Teacher:  
• May provide a seating Chart to Observers.  
• Determine where observers will be stationed in the room as the teacher presents the lesson.  
• Volunteer teacher my want to consider the room arrangement so observers can circulate around students as they work without disrupting their learning.  
Observers:  
• Use the Observation Form to record.  
• Have a copy of the revised lesson outline (from the planning phase) and any student handouts that will be used during the lesson segment. |
| **Step 5:** Debrief the Lesson (see Observation with all PLC Members):  
• See the Observation Handout  
• Observers make copies of their observation data/notes for all PLC members. |

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Step 3: Protocol for sharing the Lesson with your PLC

Volunteer Teacher’s Responsibilities:
1. Designate the day and time when the lesson will be taught. (at most 30 minutes for our first practices sessions)
2. Select an instructional strategy (Rigor or Questioning) for focus.
3. Design the lesson segment and provide a draft outline of the lesson plan to PLC Team Members.

PLC Team Member’s Responsibilities:
1. Research the identified strategy that will be used in the lesson segment
2. Provide constructive feedback to improve the lesson segment (both warm and cool)

Step 1. Identify a Timekeeper and Scribe.

Step 2. (5-10 minutes) The Volunteer Teacher presents to the PLC:

- A hard copy of the lesson plan to PLC members.
- Any background information needed.
- States the strategy for focus. (Rigor or Questioning)

*The Lesson Plan should include all the “Essential Elements” as determined by campus guidelines.*

Step 3. (5-10 minutes) In “Round-Robin” format, PLC members ask clarifying questions, no feedback is provided yet. (Members may pass)

Step 4. (5-10 minutes) Again in “Round-Robin format:

- Each PLC members provides volunteer teacher w/ Warm Feedback – one strength of the lesson, especially in regards to the instructional strategy.
- The Scribe documents the Feedback on the “Lesson Plan Feedback Form” (attached).
- Each member then provides Cool Feedback – one recommendation to strengthen the lesson.
- The Scribe again records the Feedback.

Note: It is possible to combine warm and cool feedback at the same time.

Volunteer Teacher retains the Feedback Form for their use.

Step 5. (3-5 Minutes) The Volunteer Teacher has an opportunity to response to the feedback and confirms with observers the date and time of observation.
**Step 4: Observing Rigorous Student Assignments (option 1)**

The purpose of this step is to analyze the level of rigor in assignments and activities students are engaged in during class.

Students should be engaged in activities that promote critical thinking beyond the basic (recall) level. 
- **A Basic Level** of rigor means that the assignments are at the *comprehension/recall* level of Bloom’s Taxonomy (Costa’s Level One).
- **Proficient Level** means that the assignments are at the *application/analysis* level and above (Costa’s Level Two).
- **Advanced Level** refers to activities that are at the *synthesis/evaluation/creation* level (Costa’s Level Three).

Before the observation, the teacher provides the observers a copy of the lesson plan for the day. Observers observe at least a 20 – 30 minute lesson students are engaged in.

**Step 1.** Familiarize yourself with the content of the Level of Rigor Rubric below.  
**Step 2.** As you observe the lesson, check any box that describes what students are being asked to do.  

<table>
<thead>
<tr>
<th><strong>Level of Rigor Rubric</strong></th>
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<tbody>
<tr>
<td><strong>Basic</strong></td>
<td><strong>Proficient</strong></td>
<td><strong>Advanced</strong></td>
</tr>
<tr>
<td>Students are asked to:</td>
<td>Students are asked to:</td>
<td>Students are asked to:</td>
</tr>
<tr>
<td>□ Remember Information</td>
<td>□ Apply and analyze information learned</td>
<td>□ Formulate generalizations, synthesize ideas, and create models through probing examples and counterexamples</td>
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<tr>
<td>□ Make simple explanations, and/or interpretations</td>
<td>□ Demonstrate ability to go beyond the text and explain, generalize, connect ideas, make predictions, inferences, draw conclusions, manipulate concepts and apply to new uses</td>
<td>□ Communicate ideas and reasoning through the use of concepts, symbolism and logical thinking</td>
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<td>□ Answer who, what, when, where</td>
<td>□ Use analytical skills, draw reasonable conclusions, or make appropriate conjectures or inferences by applying logical reasoning on the basis of partial or incomplete information</td>
<td>□ Design and apply procedures to test or solve complex, real-world problems</td>
</tr>
<tr>
<td>□ Demonstrate a rudimentary understanding of terminology, concepts, and principles</td>
<td>□ Defend ideas and to give supporting examples</td>
<td>□ Make written responses that are thorough, thoughtful and extensive</td>
</tr>
<tr>
<td>□ Recognize relationships presented in verbal, algebraic, or graphic forms</td>
<td>□ Apply principles to everyday situations</td>
<td>□ Evaluate and create work</td>
</tr>
<tr>
<td>□ Process from recall and observation</td>
<td>□ Judge and defend the reasonableness of answers or solutions to problems that routinely occur in the real world or chosen technical field</td>
<td>□ Demonstrate higher order processing: take information from one source and apply to a new task; generate hypotheses; perform complex analyses</td>
</tr>
<tr>
<td>□ Order and classify text</td>
<td>□ Formulate generalizations, synthesize ideas, and create models through probing examples and counterexamples</td>
<td>□ Explain and evaluate alternative perspectives across sources</td>
</tr>
<tr>
<td>□ Identify patterns, relationships, and main points</td>
<td>□ Construct accurate summaries</td>
<td>Simply stated, <strong>Proficient Level</strong> questions and assignments require students to apply and analyze information learned.</td>
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<tr>
<td>□ Construct accurate summaries</td>
<td><strong>Simply stated, questions and assignments that require students to remember information and make simple explanations are at the Basic Level.</strong></td>
<td><strong>Simply stated, Advanced Level</strong> questions and assignments require students to evaluate and create work.</td>
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Step 4: Observing Higher Level Questioning (option 2)

The purpose of this step is to observe a teacher-led discussion and questions and determine the Level of Questioning. (Refer to Blooms’ Taxonomy, or Costa’s Level of Questions)

**Level One** questions cause students to recall information. This level of question causes the students to input information in short-term memory, but if they don’t use it in some meaningful way, they may soon forget.

**Level Two** questions enable students to process information. They expect students to make sense of information they have gathered and retrieved from long and short-term memory.

**Level Three** questions require students to go beyond the concepts or principles they have learned and to use these in novel or hypothetical situations.

Before the observation, the teacher provides the observers a copy of the lesson plan for the day.

**Step 1.** Familiarize yourself with the content of the Rubric below.

**Step 2.** As you observe the lesson, use the table provided to record “teacher to student questions” and then apply the Level of Questioning Rubric to evaluate each question level.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Level One</strong></td>
</tr>
<tr>
<td>(complete, count, match,</td>
</tr>
<tr>
<td>recall, name, define, observer,</td>
</tr>
<tr>
<td>recite, describe, list, identify, recall)</td>
</tr>
</tbody>
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Examples:

**Level One**
- What is a gene?
- Solve, evaluate or simplify an expression or equation.
- Which amendment in the Constitution gives citizens the right to bear arms?
- In the book The Giver, what did Jonas’ mom do for a living?
- What is the definition of ______?

**Level Two**
- Compare and contrast genes and chromosomes.
- Write an equation that represents the verbal context__________.
- Compare societal conditions in the US that impacted the inclusion of the 2nd amendment in the Constitution with conditions today.
- Use examples from the book to elaborate on the theme of balancing freedom and security.

**Level Three**
- Use what you know about genes and chromosomes to predict a trait in a child.
- Given the equation__________ create a context/story that this equation represents, determine if your context is continuous of discrete and justify your thinking.
- If there were a constitutional amendment that prohibited ownership weapons by citizens, how might American society be affected?
- Speculate as to how your community would change if some of the societal controls embraced by members of Jonas’ community were embraced within your community.