<table>
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<tr>
<th>Phase of the Learning Cycle</th>
<th>Summary</th>
<th>Questions that Guide Instruction</th>
<th>In the Notebook</th>
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| Engage                      | • Focus question is introduced  
SL.3.1, SL.3.1.A  
SL.3.1.D  
• Important terms are discussed and annotated  
• Prior knowledge or experience is elicited  
• A plan is developed collaboratively  
• Data collection tool is designed collaboratively and constructed by students | • What terms in this question are important for us to consider?  
• If this is what we want to know, how can we use these materials to investigate?  
• What data do we need to collect?  
• How can we best organize the data?  
• What do you predict will happen when...? | • Focus Question  
• Data collection tool |
| Investigate                 | • Students engage with phenomena and work collaboratively to collect and record data, discuss findings and solve problems  
SL.3.3, W.3.8  
L.3.5.C  
• Teacher asks higher level questions to deepen students’ thinking and reasoning | • What do you notice about...?  
• Why do you think .....?  
• What would happen if...?  
• How does this compare to....? | • Data/observations collected and recorded |
| Make Meaning                | • Data is reported  
SL.3.6, RL.3.3  
L.3.6  
• Graphs/charts/diagrams are made  
• Data is analyzed  
• Meaning is made from the experience  
• Concepts are constructed and discussed  
• New terms are introduced to word bank | • What data do you have to share?  
• Did you notice any patterns or relationships?  
• How can we display this data in order to look for patterns?  
• Why do you think this happened?  
• Why do we think this makes sense? | • Averages calculated  
• Graphs and/or class charts and diagrams are made |
| Apply and Extend            | • Connections to a larger context are made  
SL.3.1.B, SL.3.1.C,  
SL.3.1.D, SL.3.3,  
SL.3.6  
• Real world applications of concepts are identified and discussed  
• Embedded informational text(s) are used to extend and apply content (shared research) | • How might this information be used?  
• Why might this information be important?  
• What new questions can we ask?  
Does the reading support or refute our thinking/evidence? | • Information and thinking from informational text(s) or discussions is added to writing as appropriate |

**ACTIVE SCIENCE SESSION - Grade 3**

**CONSIDER PLACEMENT OF FORMATIVE ASSESSMENT FOR EACH LESSON**
### COMMUNICATION SESSION - Grade 3

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<td><strong>Shared Review</strong>&lt;br&gt;SL.3.4, RI.3.1, RI.3.3, L.3.6, L.3.1.J</td>
<td>● Concept, patterns, graphs and new terms from the investigation are reviewed and discussed</td>
<td><strong>What did we do yesterday?</strong>&lt;br&gt;<strong>What did we find out?</strong>&lt;br&gt;<strong>Can you explain the pattern we observed in our data?</strong>&lt;br&gt;<strong>What evidence supported our thinking?</strong>&lt;br&gt;<strong>Why do you think this happened?</strong>&lt;br&gt;<strong>Why might these ideas be important or useful?</strong></td>
<td>● Students bring notebook to discussion and actively use data and graphs to share their understanding.</td>
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<tr>
<td><strong>Shared Writing</strong>&lt;br&gt;SL.3.6, L.3.6</td>
<td>● Teacher models the thinking and organization of the writing by choosing relevant language frames&lt;br&gt;● Students contribute ideas and data to formulate the writing piece&lt;br&gt;● Writing piece is read aloud for clarity and revision</td>
<td><strong>What information or ideas do you think we need to share with other scientists?</strong>&lt;br&gt;<strong>What words or phrases will help us describe the pattern/share data/add another idea/explain why we think this happens etc.?</strong>&lt;br&gt;<strong>How do you think this sounds?</strong>&lt;br&gt;<strong>Do you think any of these words or ideas need to be changed or moved?</strong></td>
<td>● Students use their data and graphs and class charts and diagrams to contribute the content of the writing piece</td>
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<td><strong>Scaffolding</strong>&lt;br&gt;L.3.1.J</td>
<td>● Teacher removes shared writing and provides frames and/or guides that help students organize and articulate their own ideas&lt;br&gt;● Relevant word bank words are brought to the foreground&lt;br&gt;● Students annotate their own data to use as evidence&lt;br&gt;● Student ideas are shared orally using frames</td>
<td><strong>What sentence frames or terms will help you communicate your ideas?</strong>&lt;br&gt;<strong>What data will you use in your writing?</strong>&lt;br&gt;<strong>Turn and talk to your partner to share your idea about...</strong></td>
<td>● Students highlight and/or annotate their data to identify the specific evidence they will use to support their thinking during their writing&lt;br&gt;● Students orally rehearse using the frames and terms to articulate their own ideas</td>
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<tr>
<td><strong>Independent Writing</strong>&lt;br&gt;W.3.4, W.3.10</td>
<td>● Students write about what they have learned at the level of independence that they have achieved</td>
<td><strong>Is there a word or phrase on the board that would help you share that idea?</strong>&lt;br&gt;<strong>Tell me what you want to say next.</strong>&lt;br&gt;<strong>Be sure to include the idea/connection that you shared in our discussion.</strong>&lt;br&gt;<strong>What data will you use to support that idea?</strong></td>
<td>● Students have their annotated data open and are using the scaffolding to communicate their ideas independently</td>
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