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<th>Phase of the Learning Cycle</th>
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| **Engage** SL.K.1, SL.K.1.A SL.K.1.B | - Focus question is introduced  
  - 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** SL.K.3, W.K.8 L.K.5.C | - Students engage with phenomena and work collaboratively to collect and record data, discuss findings and solve problems  
  - 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** SL.K.6, RI.K.3 L.K.6 | - Data is reported  
  - 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** SL.K.1.B, SL.K.3, SL.K.6 | - Connections to a larger context are made  
  - 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 |

**CONSIDER PLACEMENT OF FORMATIVE ASSESSMENT FOR EACH LESSON**
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<td><strong>Shared Review</strong>&lt;br&gt;SL.K.4, RI.K.1, RI.K.3, L.K.6, L.K.1</td>
<td>● Concepts, patterns, graphs and new terms from the investigation are reviewed and discussed</td>
<td>What did we do yesterday?&lt;br&gt;What did we find out?&lt;br&gt;Can you explain the pattern we observed in our data?&lt;br&gt;What evidence supported our thinking?&lt;br&gt;Why do you think this happened?&lt;br&gt;Why might these ideas be important or useful?</td>
<td>● Students bring notebook to discussion and actively use data and graphs to share their understanding.</td>
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<td><strong>Shared Writing</strong>&lt;br&gt;SL.K.6, L.K.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>What information or ideas do you think we need to share with other scientists?&lt;br&gt;What words or phrases will help us describe the pattern/share data/add another idea/explain why we think this happens etc.?&lt;br&gt;How do you think this sounds?&lt;br&gt;Do you think any of these words or ideas need to be changed or moved?</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.K.1</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>What sentence frames or terms will help you communicate your ideas?&lt;br&gt;What data will you use in your writing?&lt;br&gt;Turn and talk to your partner to share your idea about....</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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<td><strong>Independent Writing</strong></td>
<td>● Students write about what they have learned at the level of independence that they have achieved</td>
<td>Is there a word or phrase on the board that would help you share that idea?&lt;br&gt;Tell me what you want to say next.&lt;br&gt;Be sure to include the idea/connection that you shared in our discussion.&lt;br&gt;What data will you use to support that idea?</td>
<td>● Students have their annotated data open and are using the scaffolding to communicate their ideas independently</td>
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