Lesson 7: Watershed Research and Teaching Clues

Focusing Question: What have we discovered about this watershed? What else do we need to know to have a full picture of the watershed’s pieces, patterns and processes? Based on what we know about the watershed, what do we want to share and teach through our teaching clues?

Overview: Students conduct further research on their watershed and quest site, decide which information is important to share with visitors, and create teaching clues for the quest.

Materials:
- Previously created student work (maps, notes, etc.)
- Paper and pencil
- Field guides, resource books and other online resources

Length of time to complete: 2 hours

Procedures:

1. Divide students into groups (2–4 students per group). Each group will be responsible for creating one (or more) teaching clues about a core element of your quest.

2. Students begin by creating a list of all the things they already know about their teaching point. This list should be neat, as they will hand it in later for a grade. (10–15 minutes)

3. Students then access primary, secondary and online resources to gather more content information. They append this new
information to the list they created for No. 2 above. (30–40 minutes)
Note: This can also be done as homework

4. **Model the writing of a teaching clue. (15–20 minutes)** The general process is to: (a) list what you know; (b) choose from that list what is most important to say; (c) put the list into a wellordered sequence of talking points; (d) write that list as a series of fragments or sentences; and (e) turn the sentences into your verse. An example of the process is outlined here.
   a. Make a list of what we know about the maple tree: It is big and old. It has woodpecker holes. It grew in an open field. It is a maple tree. It has an embedded strand of barbed wire. Our class saw a porcupine there.
   b. Select the three (or so) most important facts: Old, maple, habitat for birds and animals (woodpecker and porcupine facts folded together)
   c. Put these facts into an appropriate sequence:
      Old → Maple → Habitat
   d. Write the facts as sentences or fragments:
      This old tree
      Is a maple tree
      And is both food and habitat
      For many species, including woodpeckers and porcupines.
   e. Draft a clue at the writing level you expect of your students. You might choose simple rhyme. Or you might pay greater attention to stanza form, meter and verse pattern: An ancient maple stands in the middle of this space. It offers many animals a gathering place. There are woodpecker holes all over this tree, And you might spy a porcupine if you look carefully.

5. Then students work on their own teaching clue, using the process outlined above. (30–40 minutes)

6. Report: Groups read what they have so far and give and receive peer and teacher feedback. (10 minutes)

**Assessment:**
1. Students have created an initial list of teaching points.
2. Students show results of additional research.
3. Students have created teaching clues for their assigned site(s).
**Evaluation Rubric:**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>Unacceptable</th>
<th>Beginning to progress</th>
<th>Getting closer</th>
<th>Meets standard</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of teaching points</td>
<td>Did not create list of points</td>
<td>List is both sloppy and incomplete</td>
<td>List is either sloppy or incomplete</td>
<td>List is both neat and complete</td>
<td>List is neat, organized and extensive</td>
</tr>
<tr>
<td>Additional research</td>
<td>No evidence of additional research</td>
<td>Little evidence of additional research</td>
<td>Some evidence of additional research as well as evidence of a group decision-making process</td>
<td>Ample research as well as full group participation</td>
<td>Meets standard, plus is neat, organized and extensive</td>
</tr>
<tr>
<td>Teaching clues</td>
<td>Writing neglects writing conventions, lacks clarity and does not teach</td>
<td>Writing either neglects writing conventions, lacks clarity or does not teach</td>
<td>Writing meets two of the three criteria (meets writing conventions, is clear, teaches)</td>
<td>Writing meets all three of the criteria (meets writing conventions, is clear and teaches)</td>
<td>Meets standard, plus has vivid descriptors, strong teaching content, and excellent meter and flow</td>
</tr>
</tbody>
</table>