Post-Unit Assessment

Part 1: Subject-Matter Questions
The following free-response questions cover topics you will be learning this semester. Answer all of the questions to the best of your ability.
1. What is engineering?

2. Name some types of engineering.

3. What skills do you think engineers have? From the list below, check the top five characteristics that best describe engineers:
   ___welding skills
   ___math skills
   ___creativity
   ___teamwork skills
   ___technology skills
   ___curiosity
   ___really good at recalling facts
   ___really good at science
   ___really good at communication
   ___really good at school
   ___really good at research
   ___really good at running a business
   ___really good at solving problems
   ___really good at working with tools
   ___know how to drive a train

4. What is environmental engineering?

5. What types of problems do environmental engineers solve?
6. What is contamination? Give some examples of contaminants.

7. What is remediation? Give some examples of ways to remediate.

8. Why are chemical properties important for separating chemicals? List some chemical properties.
### Part 2: General Survey

Please circle the number that best represents how you feel about each of the following statements.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>You must work hard to become an engineer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I think I could be an engineer if I tried hard enough.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I think I can learn the skills necessary to become an engineer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I like working on teams to solve problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>There is usually only one correct way to solve a science or math problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I usually memorize equations and principles rather than make sense of what I'm learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I don't spend more than five minutes on a problem before giving up or asking for help.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I am not satisfied until I understand why something works the way it does.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I think science and math are disconnected.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I think about science and math in my everyday life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Skills used to understand science or math can be helpful in my everyday life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Part 3: Activity Evaluation

Answer the questions below. Please be honest and give constructive feedback to help me improve my lesson plan.

Here are some of the things we did this year:

- Thinking Green! Lab (designing solutions to an environmental issue)
- Chromatography Lab (separating inks)
- Red Cabbage Chemistry (acids and bases with cabbage indicator)
- Water Remediation Lab (water filtration and purification)
- Density Column Labs (calculating densities of items and liquids)

1. Which labs/activities did you enjoy the most? Why did you enjoy them?

2. Which labs/activities did you enjoy the least? Why didn’t you enjoy them?

3. Hopefully you learned a lot about engineering. Do you think you are more likely to study engineering in the future? Why or why not?