Section I –

• Vision – A short (one or two sentences) statement that captures your intention as a teacher in the area of assessment.
  - Assessment will be used to guide my teaching and to cultivate students' internal locus of control. Students will use assessment as a tool to guide their learning strategies.

• Guiding Principles – A discussion of some of the principles that will guide your practice in the area of teaching and assessment
  - Students will learn to work collaboratively to guide, support and teach each other through new material. They will use a group work rubric along with group roles to self and peer evaluate each other during collaborative assignments.
  - Students will use assessments to adjust their learning strategies and continue to learn and improve. This will help them hone their internal locus of control towards mastery learning.
  - The teacher will guide students through inquiry methods to increase students' problem solving skills.
  - Assessments will be utilized to alter teaching methods, lesson plans, and content pacing.

• Goals – 4 goals written in the correct format related to what you will do as a teacher in the area of assessment.
  - Continually practice student self and peer assessment when working collaboratively as a way to maintain high standards and keep students accountable for their own learning.
  - I continually give students meaningful feedback on lab reports, presentations, and important assignments to guide them through improving their self evaluation skills and adjusting their learning strategies.
  - I provide students with timely exam results and individual item analysis in order for students to work towards mastery learning. Students are allowed to re-test in order to show mastery of specific objectives.
  - Rubrics are discussed and good/bad examples are given to students in order for them to gauge their work and meet expectations.

• Challenges – some of the practical and personal challenges that you would expect to confront as you attempt to put your goals and principles into action.
  - I expect constancy to be one of the biggest obstacles I will face as I attempt to put my goals and principals into action. I want to implement many strategies but must keep in mind that I must keep my goals and principals practical.

Section II – Psycho-Social Elements

• What affects do you want your assessment to have on your students?
  - Motivation
• I want my assessments to motivate students to self assess their learning strategies. Students should always be looking to improve themselves and master new materials. Mastery learning will also play a roll in students' motivation as students will continue to retest until they master the content. The key will be to continue to practice mastered material.

○ Engagement level
  • Informal assessments will be used to gauge students' understanding and ensure students are engaged (following the lesson). By asking students to rate their understanding using a pinch card or answer a quick quiz question, I will be checking for understanding while engaging students in an activity that will motivate them to follow the lesson closely.

○ Interest in the subject
  • Student interest in the subject will be addressed through authentic assessments which will engage students in real life situations in which they will have to apply their knowledge. This will increase student interest in the subject as students will realize how chemistry affects their everyday lives.

○ Ability to work with others
  • Many of the authentic assessments will take place in groups mimicking real life situations where students will have roles and work under specific conditions. It is important for students to learn to work with others because most of the time reality calls for group work. Students will learn to self and peer assess their efforts and those of their group members.

• Psychology of Success Elements
  ○ Locus of Control
    • Through the growth model and mastery learning assessment strategies students will cultivate their internal locust of control in order to grow in chemistry. Instead of asking for answers students will learn to question the world around them.

  ○ Acceptance and Belonging level
    • Through extensive group work during authentic assessments and inquiry learning that will force students to depend on one another to participate in their assigned roles the class will form a learning community. At the start of the school year I plan to community build in each class, in order to establish student ownership of their learning.

  ○ Growth vs. Fixed Ability orientation
    • Assessments will all be geared towards growth learning, where students will be asked to master content goals by retesting and self evaluating their learning strategies.

### Section III – Methodological Emphasis and Soundness

<table>
<thead>
<tr>
<th>Method</th>
<th>Validity</th>
<th>Reliability</th>
<th>Practicality</th>
<th>Benefits</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR tests and quizzes</td>
<td>Selected response tests and quizzes are valid to the extent of the questions and answers given. If the questions are good questions and the answers contain common misconceptions then they can be a good measure of what students understand.</td>
<td>SR tests and quizzes become less reliable as other factors such as literacy, cheating, and cultural bias come into play. It is important to always keep the factors that affect the exams and quiz results in mind.</td>
<td>Students can work on test taking strategies that will help them with high stakes exams for life. SR exams are easy to grade and students tend to feel less pressure when taking them.</td>
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<tr>
<td>Personal communication</td>
<td>By talking to students one can determine the depth of their understanding. Through personal communication we can question students and push them towards high level thinking.</td>
<td>Talking to every student incredibly difficult but it's a good way to truly understand what misconceptions students may have.</td>
<td>I personally communicating with students we can question them and increase their critical thinking skills.</td>
</tr>
<tr>
<td>Performance assessment</td>
<td>When they include real-life experiences and elements into the assessment it makes performance assessments valid for students and for testing higher-level blooms.</td>
<td>Performance assessment can be time-consuming if individually done. But it is also difficult to gauge students' knowledge in group activities.</td>
<td>Students are presented with real life situations in which they can apply, critically think, and problem solve to arrive at viable solutions.</td>
</tr>
<tr>
<td>Inquiry</td>
<td>Through inquiry students can construct their own knowledge. The assessment becomes valid when students are asked to justify their reasoning and explain their thinking.</td>
<td>Inquiry requires a lot of planning and scaffolding for students. But the benefits outweigh the cons.</td>
<td>Students become highly engaged and problem solves for life.</td>
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<tr>
<td>Direct instruction</td>
<td>When assessing direct instruction the assessment must match the instruction in order to be valid.</td>
<td>Depending the type of assessment used to assess the reliability will fluctuate. SR is normally used and it is reliable to determine what students know and don't know.</td>
<td>Direct instruction is very practical for large classes and is sometimes necessary.</td>
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<tr>
<td>Formative vs. summative</td>
<td>Both formative and summative assessments are valid forms for checking understanding and informing instruction.</td>
<td>As I found out timing is important with formative and summative assessments. If not done in the proper time frame then the assessments become less valid and reliable.</td>
<td>Formative and summative assessments are highly practical for informing instruction and making adjustments to teaching.</td>
</tr>
<tr>
<td>Communicating with parents</td>
<td>Communicating assessment scores to parents increases the validity of assessments for students. When parents are informed of student scores they can encourage their child to alter their learning strategies or reward them for good scores.</td>
<td>The reliability of communicating assessment scores with parents is dependent on parent and teacher involvement.</td>
<td>Depending on the method chosen it can be very practical to share assessment scores of parent or it can be very impractical. I plan to share an online student grade book with parents so they can always be informed of their students' scores.</td>
</tr>
</tbody>
</table>

**Section IV – Featured Techniques**
(Can include no more than one SR method)

In this section explain in detail 3 assessment strategies (OK to use one from yours or others’ presentation). For each strategy provide the following required elements:

**Selected response exam with personal item analysis**
- The context of the assessment (when would you use it?)
A selected response exam would be used to inform instruction and to attempt to gauge knowledge level information that students know.

- **An example exercise**
  - At the end of a subunit student will take a selected response exam of 10 to 20 questions.

- **Discussion of the practical use strategies.**
  - Students will receive their assessment scores after one day and along with that they would receive an item analysis page explaining what misconceptions they have and where they can study further to master the material.

- **Explanation of how students would use the assessment information generated.**
  - Students will use the item analysis to study further and retest in order to master the material. Students will also be able to evaluate their learning strategies and choose to either I just or keep their learning strategies the same.

- **Explanation of how you the teacher would use the assessment information generated.**
  - The teacher will use the assessment to inform their instruction and either plan an intervention or move on with the unit.

- **Soundness considerations (reliability, validity, practicality, effect on students).**
  - Selected response exams can be very reliable, valid, and practical for students and instructors to gauge knowledge level content.

**Error Analysis**

- **The context of the assessment (when would you use it?)**
  - Error analysis is an important part of mastery learning and students will practice discovering how they make mistakes and where they make mistakes. Students will analyze exams and quizzes in order to find their own misconceptions and adjust their problem solving skills.

- **An example exercise**
  - Students will be asked to analyze their own tests and quizzes and from there make a decision as to what needs to be adjusted to avoid making the same mistakes in the future.

- **Discussion of the practical use strategies.**
  - By having students work together to analyze their own mistakes the teacher can spot check for correctness and avoid having to review the same problems several times with individuals.

- **Explanation of how students would use the assessment information generated.**
  - Students will use the knowledge gain from their error analysis activities to adjust their learning strategies, avoid common mistakes made during calculations and to note what mistakes they tend to make when working on chemistry problems.

- **Explanation of how you the teacher would use the assessment information generated.**
  - By having students do their own error analysis and correct mistakes that they make, I will have more time to gather information on misconceptions that students may have and what needs to be reviewed as a class and what can be worked on individually with students.

- **Soundness considerations (reliability, validity, practicality, effect on students).**
Error analysis as a practical effective way that students can analyze their thinking. As long as instructors and shirt to pair students and work to catch misconceptions students may have hair analysis as a valid method of assessment.

Self and peer assessment for group work

- The context of the assessment (when would you use it?)
  - Peer and self assessment would be used during group activities keep students accountable and the quality of work up to standards. Peer and self assessment is a key component of building a classroom community where students are responsible for their own learning.

- An example exercise

<table>
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<tr>
<th>Name/Role:</th>
<th>Participation/Attitude: Always willing to help and routinely offered useful ideas. Always displays positive attitude.</th>
<th>Collaboration/Focus: Worked productively with others. Took initiative, and always stayed focused on the task.</th>
<th>Communication/Listening: Always listened to, shared with and supported the efforts of others. Asked questions throughout task.</th>
<th>Task Completion: Work is complete, on time well organized and exceeds the requirements of the task.</th>
<th>Name:</th>
<th>Period:</th>
<th>Activity:</th>
<th>Reasoning:</th>
</tr>
</thead>
</table>

- Students would fill out a collaboration exit ticket after working in groups on inquiry based activities, labs, practice problems, etc. Where students are assigned roles and are responsible for keeping the group on task and the group expectation are clearly outline and posted in the class in addition to the rubric. The group assignments and expectations are as follows.

Group Assignments:
- Timekeeper/Supply: Keeps the group on pace and ensures they will complete the task on time. Gets supplies needed to complete labs and activities.
- Facilitator/Speaker: Keep the peace in the group and facilitates conversation within the group and the class.
- Note taker/Summarizer: Takes note which can then be shared with the group. Every so often provides a summary of the discussion for other students to approve or amend.
- Elaborator: This person seeks connections between the current discussion and past topics or overall course themes.

Group Expectations:
- Participation/Attitude: Always willing to help and routinely offered useful ideas. Always displays positive attitude.
- Collaboration/Focus: Worked productively with others. Took initiative, and always stayed focused on the task.
• Communication/Listening: Always listened to, shared with and supported the efforts of others. Asked questions throughout task.
• Task Completion: Work is complete, on time well organized and exceeds the requirements of the task.

• Discussion of the practical use strategies.
  o The exit tickets can be pre-printed on a quarter of a sheet and given to students one or two minutes before the end of class. In my class students knew the location of the group collaboration tickets and simply completed them at the end of class.

• Explanation of how students would use the assessment information generated.
  o Students use the exit tickets along with the group expectations and assignments to keep themselves and each other accountable.

• Explanation of how you the teacher would use the assessment information generated.
  o I use this assessment to monitor group dynamics, engagement, and ensure students are on task.

• Soundness considerations (reliability, validity, practicality, effect on students).
  o Students are very honest with their assessments and self and peer assessments keep the accountable. When done correctly this assessment can a be very practical way to check the affect of students in the classroom.