

Test Analysis Assignment

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Civil War Assessment Reflection

Initial Steps

The Civil War unit was begun on March 4th. We administered the summative unit test from 8:45 until 9:35 on Wednesday, March 20th. This test was administered simultaneously to three different fourth grade classes by three different student teachers. A fourth class was also given the test, but their scores are not included in this reflection. This test was designed to gauge student mastery of information taught from March 4th until March 20th on the Civil War, as aligned with Virginia Studies Standard VS.7 A, B, and C. Because of a lack of paraprofessional availability due to the third grade benchmark test, Ms. Ackerman read her test aloud to five students whose Individualized Education Plans (IEPs) specify that assessments must be read aloud. Her cooperating teacher stayed with the rest of the class to administer the test to students who did not need extra support. Mrs. Massengill's co-operating teacher read the test aloud to three students for whom it is also required according to each student's IEPs while Mrs. Massengill remained with the rest of her class. No students required the test read aloud in Mr. Hendrix's class. The test was administered under typical classroom conditions.

The table of specification with the student results can be found in Appendix A.

Prompt 1: Inferences about Student Learning: Students in the Aggregate

The test was scored out of 27 points. While we had 20 questions on the test, we did not want to excessively penalize students for getting one part of a sequencing or matching set wrong. To avoid doing this, we counted each piece of the sequencing and matching questions separately. We found that across the three classes, the mean was 72.7%, the median was 70%, and the mode was 85%, 67%, and 62%. Because our students were not accustomed to writing essays on tests, our cooperating teachers suggested that we use the short answer question as a bonus. This bonus

added points to their percentage grades which increased the mean to 75%, the median to 80%, and the mode to 96%. We found differences between the classes as well. Ms. Ackerman had a mean of 20.5 (75%) without the bonus and a mean of 21 (78%) with the bonus. She had a median of 22 (81%) without the bonus and a median of 22 (81%) with the bonus. Finally, she had a mode of 24, 23, and 22 (88%, 85%, and 81% respectively) without the bonus and 24.75 (91%), 22.75 (84%), 21.25 (79%), and 18.25 (68%) with the bonus. In Mrs. Massengill's class, without the bonus the mean score was 19 (70%) and the median was 19 (70%). The mode, with only two of any score each, was 11 (41%), 19 (70%), 20 (74%), 23(85%), 24 (89%), and 26 (96%). Once the bonus is figured into the final grade, the mean becomes 21 (78%), the median 20.5 (76%) and the mode, again with two scores each, is 21 (78%), 22 (81%), and 28 (100+%). Mr. Hendrix found that the bonus question improved the scores of the students that got a B or above but did little to improve the students that achieved lower

The table with a breakdown of the students by class can be found in Appendix B. Our scores show that the students certainly struggled with this test. Further analysis was done to try to determine whether the struggle was with the content or with the structure of the test. In comparing the format of this test to that of other assessments the students have taken this year, we believe that our test was slightly more difficult than the past tests. There are two reasons for this conclusion. One is that our assessment included some supply-response questions, a format which is generally unfamiliar to the students. The other is that in keeping with the table of specifications, some of the questions assessed the students at cognitive levels beyond knowledge and understanding, which is also unfamiliar to the students. Therefore, it could be inferred that the students may have understood and learned the content, but struggled with the actual test questions that asked them to make connections and synthesize information. It also could be

inferred that the students did not learn the content as well as we had hoped because there were answers that were presented in the customary format and on the knowledge and understanding level, yet some students still answered incorrectly.

Word Study Analysis

We disaggregated the scores by word study group to assess whether the students who struggled on the test were a part of the lower Word Study group. We took this route because we wanted to see if there was a likely link between students struggling with this test and a possible challenge with reading comprehension of the test itself. Between the three classes, we have four Word Study groups. Ms. Ackerman's class is the only class that has students in the Letter Names groups, which is the lowest of the groups. All three teachers have Within Words, Syllables and Affixes, and Derivational Consonants groups. Therefore, we decided that the best way to analyze these groups was to separate Letter Names (LN) and Within Words (WW) into one group, and to place Syllables and Affixes (SA) and Derivational Consonants (DC) into another group. We found that the mean for the LN and WW combined was 68%, the median was 65%, and the mode was 60%. We found that the mean for the SA and DC combined was 78%, the median was 70% and the mode was 80%. We decided to break down this group even further and assess which questions the separate groups struggled with the most. A table break down can be found in Appendix C. We found that overall, the mean of the students who are in the higher reading levels is higher than that of the total mean, and the mean of the students in the lower reading levels is lower than the total mean. We found that the median was consistent between the group as a whole and the disaggregated higher reading group, but was lower in the lower reading group. Finally, we found that the mode was slightly higher for the disaggregated higher reading group than the group as a whole, but was significantly lower for the disaggregated lower reading group.

This may indicate that there is some correlation between reading and spelling level and performance on the assessment, thus indicating that ability to read and decode unfamiliar words influenced the students' grades. This would be further supported by the findings for the students who were in Mrs. Massengill's room, who were in lower reading groups but had the test read to them and generally did well in relation to their regular academic performance. The findings in Mrs. Massengill's class aside, we must also remember that the students who are in higher level reading groups are often (not always) stronger students overall, so there is a possibility that that could have also be the explanation for the higher grades.

Ms. Ackerman's Word Study Analysis. Specifically, Ms. Ackerman found that her SJ/DC students did slightly better overall. Most questions were answered correctly by eight or nine students. She inferred that these students struggled less with the actual question stem. Because they have higher spelling skills and can understand more complex patterns within words, they probably spent less time decoding the words within the question and more time decoding the meaning of the question.

In regards to her LN/WW group, she found that overall there was a larger spread of correctly answered questions. Most questions were correctly answered by at least eight to ten students. However, there were some questions where student did not do well at all. Again she believes that these students may have not done well because they were decoding specific words in the question instead of focusing on what the question was asking. However, she realizes that these students may struggle with certain terms like "abolitionists" and "Emancipation Proclamation" because they are complex terms not commonly used. Finally, she noticed that the LN/WW students had difficulty answering question number 20 while the SA/DC group did not have difficulty answering this question. Ms. Ackerman looked at the question after the test and

realized that these students probably answering with John Brown instead of Nat Turner because of the fact that they knew that John Brown was hanged. However, they were frequently told that Nat Turner led a revolt and that John Brown led a raid. She believes that these students did not notice the word 'revolt' and simply saw that a person was hanged.

In addition, when she looked at the question breakdown between the two groups, Ms. Ackerman noticed that there were some questions that each group missed or rather did poorly on. For instance, only six students, three students in each group answered question number one correctly. She believes that the students did not understand what the word 'opposed' meant and therefore did not choose that as the correct answer. Another set of questions that the students struggled with was numbers two and three in question set 16. Students seemed to confuse the two generals. Ms. Ackerman believes that she drilled the students on which general led which army. She gave the students multiple resources that explained who the generals of the two armies were. However, they still confused the two students. She believes that by the time the students answered these questions that they may have been experiencing some fatigue. Another possible reason why students may have answered these questions incorrectly could have been due to the fact that they did not read the question completely.

Mr. Hendrix's Word Study Analysis.

Mr. Hendrix's Class saw the largest disparity between aggregate scores of students' different Word Study groups. The mean score for students in the DC and SJ groups was 86.4% while the mean score for students for the WW group was a 51%. This disparity, however, is not shocking due to the abnormal makeup of Mr. Hendrix's classroom. Students in the more challenging word study groups (DC and SJ) tend to be pulled for gifted and talented enrichment. Students in the WW group, on the other hand, are often pulled for support or remediation in

either math or reading. Additionally, there are only 5 students in WW group and 2 performed very poorly on the assessment. Their scores brought down the whole average for the group. This however, does not explain the huge disparity because a few students performing outstandingly would also have positively increase the results for the WW group to the same magnitude. The disparity in numbers between the two groups, however, cannot be ignored. Another potential reason for this 35% difference in mean scores between the Word Study groups is that the higher cognitive demand of the assessment taxed the more lexiconically challenged students to a greater degree, depressing their scores to a larger effect in the aggregate.

Mrs. Massengill's Word Study Analysis.

Mrs. Massengill's class did not see a large difference between the two reading groups, or at least not the one that was expected. This may be because the students in the lower group are required to have their tests read to them according to their IEPs. There was also an issue in this class with the students having a difficult time adjusting to Mrs. Massengill taking over teacher responsibilities. Several students saw this as an opportunity to stop turning in assignments, studying, and taking notes in class, resulting in an alarming drop in their grades. The students in the lower reading group, perhaps because of the extra support they receive, did not go through this adjustment period and thus their grades did not drop the way that those of several other students in the class did. In fact, these students who were in the lower reading group had a mean score of 84% on this test, significantly higher than the mean score for the class as a whole (78%) or the mean for the higher reading groups, which was 75%.

Prompt 2: Inferences about Student Learning: Focus on the Individual Students

Ms. Ackerman's Two Students

After Ms. Ackerman analyzed the results of the test with her colleagues, she looked at two students to understand the scores and impact of the assessment on a deeper level. A table with a breakdown of the specific results of these two students can be found in Appendix D. The first student she looked at was a white male, student who is considered gifted. This is M's first year at DJ Montague Elementary. He transferred from a school in Norfolk, Virginia. He is currently receiving services for gifted education throughout the week for both reading and math. He reads on a sixth grade reading level and tends to read books that incorporate Greek mythology. Throughout the entire unit, he knew answers to questions that other students were asking. He received a 27 out of 27 on the test and received three extra bonus points to his average for his answer on the open response question. I believe that he was successful on this test because he was interested in the material. He seemed to always have answers to other students' questions as well as the questions that were asked to the class. He even added extra insights throughout the unit. However, he did not perform well on the pre-Civil War pretest that was given to the students. Out of the 10 questions, he only answered three correctly. There are two possible reasons for this growth. He could have learned new material in this unit. He may not have known information about the groups of people and the important people, like Harriet Tubman and John Brown. If this is the case, then M's knowledge base grew throughout the unit, which as a teacher is what we hope happens with all students. The other reason could be that the questions were too simple for M. M could have been reading into the simple questions on the pretest and answered them wrong. Either way, this student truly understood the content by the end of the unit. Ms. Ackerman would infer that his higher level reading skills and gifted ability helped him to succeed on this test.

The second student that Ms. Ackerman wanted to look at was a student who recently transferred to DJ Montague Elementary. This student, D, is a white male who receives services for special education. Recently, D moved in with another relative, which is why he transferred from another school in the state to DJ Montague Elementary. He began his education here on February 25th, 2013. Ms. Ackerman chose this student to analyze deeper because she began student teaching the same time he became a student. D is a special education student that receives 900 minutes of services a week. He is reading on a first grade reading level. He has some behavior issues but these issues did not interrupt the class. At times, he would not write the same notes that Ms. Ackerman had written and she wonders if he had enough of the notes to be successful. However, he would have the study guide correct for both the quiz and the test. While at times he did not participate, he seemed receptive of Ms. Ackerman. In regards to the test, D did not do well. Out of the 27 questions on the test, he correctly answer 6 of the questions. He did not even attempt the extra credit. Looking back at his pretest, D only answered three questions correct and did not improve by the test. Ms. Ackerman believes that he may have not done well of the test because of his reading level. D has a low reading level, and this test was challenging. This may have obstructed and changed how he answered questions on the test. In addition, Ms. Ackerman had to read the test to him and a few other students. She is typically not the person who reads tests and quizzes. This change could have caused D to not do as well since it is not consistent with what normally occurs. Also, at times D did not seem as interested. He would slouch in his chair and lay his head down. This lack of interest may also attribute to how well he did. If a student is uninterested in a topic, he or she typically does not put as much effort into learning the topic. This may have been the situation that D was in during this unit. If he was not interested, he may not have put the extra effort into learning the material.

Mr. Hendrix's Two Students

The two students chosen from Mr. Hendrix's class for more in depth inquiry represent the two opposite ends of the spectrum for student achievement. The first student achieved a perfect score, a 27 out of 27 on the assessment. This student reads at an above grade level and is pulled for gifted education in reading. Additionally, this student exhibits math skills far beyond the fourth grade content, often completing pre-algebra during an individualized technology based mathematics enrichment program known as Success Maker. During instruction, this student displayed very high awareness and background knowledge on the topic. This was characterized by a score of 10 out of 10 on the Civil War pretest given before the unit began. He will be known as Student A. His achievement of the perfect score on the test indicates not only a high level of interest toward the topic, but also a high level of engagement with the topic during the instruction. A generally has his hand up during instruction and is often eager to engage the material. His high score can also be attributed to the fact the he indicate that he had taken the time to study extra material for the test. This allowed him to answer the question on the Emancipation Proclamation, which had not been covered during instruction, with accuracy. Overall, his interest, engagement, high academic level, and willingness to go above and beyond to prepare manifested in his perfect score.

Student B highlights the other of the spectrum. Student B currently read below grade level at a DRA level 38. He often has difficulty reading for meaning when he is not at least reading out loud and also struggles to maintain focus during assessments. In order to alleviate his focus problem during testing, he is generally moved to a teacher desk that faces a wall in order to lure his attention away from his peers. His lack of testing stamina has been difficult to overcome. These problems were manifested in his very low test score, a 10 out of 27. As the test progress,

the frequency of incorrect answers does not increase, however, the increased rigor of the test as based upon the unpacked ILO' from our table of specifications may have taxed both his attention and stamina to the point where he could no longer focus enough to give a correct answer. Furthermore, by the time this student reached the Bonus question, he had little stamina left, writing the short response that, "I tried but I couldn't write anything" which of the few words were riddled with misspellings and grammatical errors. The mental fatigue from this test showcased most noticeably during the fill in the blank section on question 19 and 20 whose respective responses were "eatpel" and "heshen", one of which is not a word, the latter of which may refer to Hessian mercenaries from the Revolutionary war. Number 19 may have been a valid response, however the student's lack of focus characterized by illegible handwriting rendered what may have been a legitimate response nonsense.

Mrs. Massengill's Two Students

The two students from Mrs. Massengill's classroom whose tests were chosen for further analysis are Student M and Student K. These two students were chosen because while the class as a whole was going through a difficult time of transition, adjusting to a new teacher and acting as if they no longer had to take notes, complete assignments, or study, I believed that these students would perform somewhat closer to their norm. Student M works very hard despite academic struggles and has a strong desire to please. She was part of an emotional upheaval that involved most of the girls in the class which may have affected her performance, but she was still concerned with doing well in class. Student K was very interested in the subject and therefore participated in discussion, asked questions, and was enthusiastic about learning.

Student M is a white female. She is in the lower reading group and has an IEP which requires that her assessments be read to her. She works hard to succeed and yet exhibits some

learned helplessness tendencies, asking for things to be read to her and then growing impatient and reading ahead if the teacher takes too long. She scored 10% correct on the pre-test that was given at the start of the unit. She scored an 80% on the final assessment. In looking at her test results, I see that she confused two Confederate military leaders, Lee and Jackson, and two abolitionists who many students confused, Nat Turner and John Brown. She also missed question 13, which required analysis of events leading up to the war, and 5, a question the class as a whole struggled with which required application. Finally, she missed question 6 which was intended as a test of understanding, but required the use of process of elimination to identify the only battle we hadn't talked about and draw the conclusion that that battle must be the one that took place outside of Virginia. In the case of the questions where she confused identities, these were common mistakes in the class, despite our having employed mnemonics to remember them and practicing them verbally. On the other hand, Student M answered questions 10 -12 correctly, all of which required some form of higher level thinking. This shows that this student is capable of higher level thinking, but may not practice questions at this level as often and if she is going to make a mistake, it is more likely to happen on those questions.

Student K is a male of Pacific Island descent. He is in the highest reading group and is usually a good student. He has a strong interest in Civil War history. He scored 70% correct on the pre-test. His score on the final assessment was 96%. In looking at his test results in greater detail, he missed the first question which is somewhat inexplicable as it was a comprehension question and frequently discussed in class. One possible explanation is that he has heard the many people, particularly in the south, who insist that the Civil War was not about slavery. Another possibility would be that he didn't notice the negative and therefore thought that his choice was the most important reason for the war. His other misses occurred on questions that

assessed higher level thinking with the exception of question 3, the answer for which was unclear in my instruction because my research had led me to believe that the interactive notes on the subject were not entirely accurate. The other two questions assessed the students at a higher level, with question 7 being presented in a way that is unfamiliar to the students, with all the questions being correct, but asking which one was most significant, and question 11 presenting material they hadn't seen in that form before and asking students to analyze it. Student K's responses to these questions, despite his overall knowledge of the subject, support my belief that the students need more exposure to these types of questions so they can practice thinking through them to find the best answer.

Both students scored above average on the bonus question with Student M earning 2 1/2 points out of 4 and Student K earning 3. I was very pleased to see this for several reasons. One was that I was concerned that Student M's need to have her assessment read would translate into difficulty expressing her knowledge in her writing. Another was that the students had not had short answer questions on a test before, which is why it was given as a bonus. They were scored with a rubric which kept the focus on the information and not the technical aspects of writing beyond the tone and both did a good job of conveying their knowledge. In the future, they would benefit from practicing referring back to the requirements listed in the stem and making sure that they cover each item in their answer.

Prompt 3: Inferences about Instructional Decisions

Instructional decisions regarding the pacing and the content of the unit were made as a team. The fourth grade team at DJ Montague Elementary plans all units together and shares resources to give the students the best chance at succeeding. Therefore, most of the instruction was similar between the three classes. The content was aligned with Virginia Standard VS.7 A,

B, and C. The content was also aligned with the interactive notes that the teachers are required to use. Given this, we based our assessment and our instructional on this content.

We administered both a pre-assessment and a formative quiz leading up to our summative assessment. The pre-assessment gave us information about what knowledge students had before we had taught anything about the Civil War. Additionally, we used a KWL chart in order to further gauge student knowledge as well as student interest on the topic. We were able to identify student misconceptions and realized that many students had no background knowledge of the Civil War that we as instructors could rely on. The quiz was administered one week into instruction, on Tuesday, March 12th. After analyzing the results, we were able to further address informational deficits in student knowledge with our subsequent instruction. For example, we all found that the students had very poor command of the identities of John Brown, Harriet Tubman, and Nat Turner. Because of this information, we were able to re-visit Brown, Tubman, and Turner, with the intention of correcting student misunderstandings.

We used supplemental materials throughout the unit to engage the students and emphasize specific content that was on the assessment we created, and we anticipate being on the Standards of Learning test based on the test blueprint. Overall, the same materials, like foldables and worksheets, were used in every class. However, there were times when different materials were used because each class needed reinforcement in different areas. For example, Mrs. Massengill believed that her students needed extra support with the battles and knew that it was heavily emphasized in the assessment. Therefore, she gave her students a battles foldable to reinforce the material. In addition, Ms. Ackerman used a powerpoint review that the other teachers did not use. She wanted to give her students a broad range of questions to reinforce the materials for the test. Finally, while each teacher must use the interactive notes, each teacher

formats the notes in different ways. While some may supplement the notes through illustrations, others used T-charts to present the information in ways the students would better understand.

Short term consequences of these test results include ensuring that as instructors, we cover all of the necessary information that appears both on the standard and on the test. We understand that if we do not teach the content, then it is not fair to the students for us to test that content. We also realized the extent to which our students benefit from the use of a review study guide before the test. This aids the students' ability to study as the information addressed in the SOL and on the test is contained all in one place. An unintended short term consequence of this assessment was that some students' grades were negatively affected due to poor performance. For example, one of Mr. Hendrix's students saw a drop in his grade from a C+ to a C. Our intent was not to bring down students grades, but to have them learn the content, and to assess this content at the level required by the Table of Specifications and can be anticipated for the SOLs.

In regard to long term decisions and effects, this assessment made students aware of higher cognitive levels of questions. Typically, students receive a test based on the textbook. These tests are typically two pages in length, have multiple choice and matching questions, and only test lower cognitive levels of thinking. However, our assessment had a mixture of questions structured similarly to the Standards of learning test and tested higher order thinking by asking students to fill in the blank and write an essay. This rigorous type of assessment also gave students more exposure to how the Standards of Learning test will be structured in May. This assessment also can be used to guide teacher review before the Standards of Learning test in May. If the teacher recognizes which concepts the students do not understanding or remember, then he or she can review that material before the test. While this may not help the students' current test grades, it will help students pass the standards test in May.

Prompt 4: Conclusions related to the Validity and Reliability of the Assessment

Overall, we feel that our test exhibited reasonable validity. Our students' scores reflected their content knowledge of the Civil War as well as reflected their ability to think at the more rigorous cognitive levels as required by the VS.7 ILO's. Despite our best efforts to plan and revise the test, we found that our test still encountered both systematic and random error. For question one, Ms. Ackerman's class did not understand the word "oppose". This would fall under systematic error, as the word oppose was built into our assessment. This vocabulary may have also confused students in the other classes. In the future, the word oppose will have to be replaced to keep the assessment limited to the students' understanding of the civil war, not an assessment of their vocabulary.

In regards to reliability, the test was reliable across all three classes. However, there were specific instances in which the test results of particular students were not consistent with their previous test results and grades. For instance, there was one specific student in Ms. Ackerman's class that received a 60% on the test. This student is considered to be a gifted student and is part of the Visions program. This student typically performs well on tests in all subjects however, received a 60% on this test due to the fact that the student skipped some questions on the test even though the student knew the questions. Ms. Ackerman knows for certain that this student knew the answer to those questions due to the fact that the parents wanted a conference about the student's performance in class, and the test was discussed in the conference.

In each classroom, we also experienced random error. One of Ms. Ackerman's students was absent on the day of the test. This student scored 85% on the assessment and it is unknown how her score was affected by taking the assessment one day later. Additionally, Ms. Ackerman's and Mrs. Massengill's students whose IEPs require that their tests be read aloud did

not have the test read aloud by the same support professional. This professional was needed in the 3rd grade to administer the Benchmark tests so instead Ms. Ackerman and Ms. Slavin read the test aloud to the students who required it. This might have brought their grades down as it was an unfamiliar reader. The way the test was read might have been different which may have negatively affected students' grade. Mr. Hendrix's students also experienced random error. Mr. Hendrix failed to go over the Emancipation Proclamation which negatively affected his students' answer on that subject.

Before teaching this unit and administering this assessment again, there are modifications that will be necessary, both to the assessment itself and to instruction. For example, because the word "opposed" in question one introduced systematic error into the assessment, the response will be reworded to include vocabulary that is more familiar to students. In addition, her students struggled with question six, which focused on what battles occurred outside of Virginia. In the future she would either focus on the fact that we only talk about battles in Virginia or would give students a list of famous, well-known battles that occurred around the country. Finally, she would teach specific concepts in the order that they occurred. During instruction, she did not teach the Emancipation Proclamation. Therefore, at the end of the unit, she had to add in information about the Emancipation Proclamation because it was being assessed on the unit test. The fact that this event was out of order may have affected how well students performed on this question. Therefore, she will teach this along with the unit and in proper order.

We believe that this was a test that did what it was designed to do. The questions we wrote reflected both the content and the cognitive rigor as required by our unpacked standard and ILO's. Students' scores on this test were lower than we would have liked, but not lower than we anticipated. This is because we know that students are customarily assessed only through

multiple choice questions at the knowledge or understanding cognitive level. Because we saw in our unpacking of the standards that students were required to be assessed on this content at a higher cognitive level, we knew that the questions we presented would be an unfamiliar challenge to the students. We, however, realize the importance of consistently testing students at a level that reflects the necessary ILO so that in the future they are prepared for more discerning assessments.

Appendix A: Table of Specification

Content	Bloom's Taxonomy					
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by a) identifying the events and differences between northern and southern states that divided Virginians and led to secession, war, and the creation of West Virginia		✓ S 1=52%, 2=70%, 8=69%, 9=85%, 17=95%, 18=76%, 19=89%, 20=67%				
Identify and interpret artifacts and primary and secondary source documents to understand events in history.		✓ M <i>Assessed in class</i>				
Determine cause-and-effect relationships.			✓ M			
Compare and contrast historical events.				✓ L 13= 89%		
Draw conclusions and make generalizations.					✓ L 7= 82%, 12= 75%	
Make connections between past and present.					✓ L <i>Assessed in class</i>	
Sequence events in Virginia history.	✓ M 14=67%					
Interpret ideas and events from different historical perspectives.				✓ M		

Analyze and interpret maps to explain historical events				✓ M 11=67%		
The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by b) describing Virginia's role in the war, including identifying major battles that took place in Virginia.		✓ S 4=82%, 6=56%				
Determine cause-and-effect relationships.			M ✓ 13=89%			
Draw conclusions and make generalizations					✓ M 7= 82%, 21	
Sequence events in Virginia history	✓ M 14= 67%, 15a,b=64% 15c=93% 15d=62%					
Analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events.				✓ M 10=74%		
The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by c) describing the roles played by whites, enslaved African Americans, free African Americans, and American Indians.		✓ S 3=85% 16a,b=62% 16c=52% 16d=85% 16e=77%				
Determine cause-and-effect relationships			✓ M 5=61%			

Draw conclusions and make generalizations.					✓ L	
Sequence events in Virginia history	✓ M <i>Assessed in class</i>					

Appendix B: Breakdown of question correct by class with totals.

	Massengill	Hendrix	Ackerman		
Total # Students	19	19	21	61	100
Number of question	Number of students who answered correctly	Number of students who answered correctly	Number of students who answered correctly	Total number of students who answered correctly	Percent Number of student who answered correctly
1	11	16	6	33	52
2	15	12	16	43	70
3	17	16	19	52	85
4	19	15	16	50	82
5	7	13	17	37	61
6	11	13	10	34	56
7	14	17	19	50	82
8	14	14	18	46	69
9	18	14	20	52	85
10	15	15	15	45	74
11	14	13	14	41	67
12	15	18	13	46	75
13	18	19	17	54	89
14	13	15	13	41	67
15a	12	11	16	39	64
15b	11	11	17	39	64
15c	18	20	19	57	93
15d	18	3	17	38	62
16a	11	11	16	38	62
16b	14	13	11	38	62
16c	11	11	10	32	52
16d	17	15	20	52	85
16e	16	12	19	47	77
17	18	20	20	58	95
18	13	16	19	48	76
19	17	18	19	54	89
20	11	17	13	41	67
	Mean: 19 Median: 19 Mode: 11, 19, 20	Mean: 19.4 Median: 18 and 22 (20) Mode: 23, 27	Mean: 20.5 Median: 22 Mode: 24, 23, 22		Mean: 72.7 Median: 70 Mode: 85

Appendix C: Word Study Breakdown

	Massengill	Hendrix	Ackerman		
Total # Students	SJ/DC 16	SJ/DC 15	SJ/DC 9	41	100
Number of question	Number Who answered correctly	Number Who answered correctly	Number Who answered correctly	Total number of students who answered correctly	Percent of students who answered correctly
1	9	13	3	25	61
2	13	9	6	28	68
3	14	14	8	36	88
4	15	14	7	36	88
5	6	12	8	26	63
6	9	11	6	26	63
7	11	14	9	34	83
8	13	13	8	34	83
9	16	13	9	36	88
10	12	11	8	31	75
11	11	15	7	33	80
12	13	15	4	32	78
13	14	14	9	37	90
14	11	14	6	31	75
15a	10	10	8	28	68
15b	9	10	8	27	66
15c	13	15	8	36	88
15d	14	15	8	37	90
16a	8	9	8	25	61
16b	10	14	6	30	73
16c	7	12	5	24	59
16d	14	13	9	36	88
16e	13	11	9	33	80
17	15	15	9	39	95
18	10	14	9	33	80
19	14	15	9	38	95
20	8	15	9	32	78
					Mean: 78% Median: 70% Mode: 80%

Appendix C continued: Word Study breakdown

	Massengill	Hendrix	Ackerman		
Total # Students	LN/WW 3	LN/WW 5	LN/WW 12	20	100
Number of question	Number Who answered correctly	Number Who answered correctly	Number Who answered correctly	Total number who answered correctly	Percent Number who answered correctly
1	2	3	3	8	40
2	1	3	10	14	70
3	3	2	11	16	80
4	2	1	9	12	60
5	0	2	10	12	60
6	1	2	4	7	35
7	3	3	10	16	80
8	1	2	10	13	65
9	2	1	11	14	70
10	3	2	8	13	65
11	3	3	8	14	70
12	2	4	9	15	75
13	2	4	7	13	68
14	2	2	7	11	55
15a	2	2	8	12	60
15b	2	2	9	13	65
15c	3	5	11	19	95
15d	3	4	9	16	80
16a	2	1	9	12	60
16b	3	2	5	10	50
16c	2	2	5	9	45
16d	3	3	11	17	85
16e	2	0	10	12	60
17	3	5	11	19	95
18	2	3	10	15	75
19	3	4	10	17	85
20	2	2	4	8	40
					Mean: 68% Median: 65% Mode: 60%

Appendix D: Analysis of Individual Students

Questions number	Ms. Ackerman Student M	Ms. Ackerman Student D	Mr. Hendrix Student	Mr. Hendrix Student	Mrs. Massengill Student M	Mrs. Massengill Student K
1	Correct	Incorrect	Correct	Correct	Correct	Incorrect
2	Correct	Incorrect	Correct	Incorrect	Correct	Correct
3	Correct	Correct	Correct	Incorrect	Correct	Incorrect
4	Correct	Incorrect	Correct	Incorrect	Correct	Correct
5	Correct	Correct	Correct	Incorrect	Incorrect	Correct
6	Correct	Incorrect	Correct	Incorrect	Incorrect	Correct
7	Correct	Correct	Correct	Incorrect	Correct	Incorrect
8	Correct	Correct	Correct	Incorrect	Correct	Correct
9	Correct	Incorrect	Correct	Incorrect	Correct	Correct
10	Correct	Incorrect	Correct	Incorrect	Correct	Correct
11	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect
12	Correct	Incorrect	Correct	Incorrect	Correct	Correct
13	Correct	Incorrect	Correct	Correct	Incorrect	Correct
14	Correct	Incorrect	Correct	Incorrect	Correct	Correct
15	All Correct	1/4 correct	All Correct	All Correct	All Correct	All Correct
16	All Correct	1/5 correct	All Correct	2/5 Correct	3/5 Correct	All Correct
17	Correct	Incorrect	Correct	Correct	Correct	Correct
18	Correct	Incorrect	Correct	Correct	Incorrect	Correct
19	Correct	Incorrect	Correct	Incorrect	Correct	Correct
20	Correct	Incorrect	Correct	Incorrect	Incorrect	Correct
Bonus	3/4	0/4	4/4	0/4	2.5/4	3/4