Team Teaching

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Two-week Lesson Plan
Subject Chemistry_ Topic: Chemical Quantities Teachers: Stephenson and Hamburger

Lesson 1:
Purpose: Introduce the concept of the mole, Avogadro’s Number

Introduction: Discuss quantities that student already know (i.e. foot, yard, etc)

Activities: Note-taking, question and answer

Review: Review representative particles (i.e. atoms, ions, molecules, formula units)

Homework: Workbook section 7.1

Teaching Methods? Direct instruction, independent practice

Lesson 2:
Purpose: Unit Conversion

Introduction: Conversion from feet to inches, concept of a dozen → concept of mole

Activities: Mole Video, Note-taking, question and answer, independent work

Review: Warm-up on rep. particles

Homework: Molar Concept worksheet

Teaching Methods? Question and answer, direction instruction, share out, independent practice

Lesson 3:
Purpose: Introduce Molar mass

Introduction: Warm-up reviewing mole concept

Activities: note-taking, review questions, share out,

Review: clicker review of mole concept

Homework: Molar Mass worksheet

Teaching Methods? warm-up, clicker review, direct instruction, group practice, independent practice
Lesson 4:
Purpose: Introduce mass to mole, mole to mass conversions
Introduction: warm-up reviewing previous material in chapter 7
Activities: Note taking, group practice – sample problems, independent practice
Review: Chapter 7 Practice worksheet
Homework: Complete Ch 7 Practice worksheet
Teaching Methods? Group practice – sample problems, independent practice

Lesson 5: Minimum Day
Purpose: Review lessons 1-4
Introduction: warm-up reviewing mass-mole conversions
Activities: Practice worksheet #2
Homework: Complete worksheet #2
Teaching Methods? Independent practice, group work

Lesson 6:
Purpose: Expand conversion to molar volume conversions
Introduction: Remind students about STP
Activities: Mole Box, note-taking, sample problems
Homework: Ch 7 practice worksheet #3
Teaching Methods? Direct instruction, real world examples, props

Lesson 7:
Purpose: Percent Composition
Introduction: warm up to review molar mass
Activities: determine percentage of boys, girls, blond hair, brown hair etc in class
Review: 7.2 worksheet
Homework: complete 7.2 worksheet, assign chapter 7 extra credit worksheet

Teaching Methods? Review, paired practice, independent practice, group work, direct instruction

Lesson 8:
Purpose: Assess Ch 7 calculations

Introduction: review, warm-up

Activities: Chemical Quantities Calculation Quiz

Review: Answer student questions, have students complete samples on board

Homework: Extra Credit Worksheet due tomorrow

Teaching Methods? Review, assessment,

Lesson 9:
Purpose: Review of chapter 7

Introduction: Warm-up

Activities: Go over Quiz

Review: Review Sheet

Homework: Complete review sheet

Teaching Methods? Review, sample problems

Lesson 10:
Purpose: Review Chapter 7

Introduction: warm-up, go over review sheet

Activities: Clicker Review Game

Review: Clicker Review Game

Homework: Study for test

Teaching Methods? Review Activity
Team Teaching Assignment  
Reflection Day 1

What went well? Students understand the basic background of the chemical quantities chapter and determine the representative particle.

What could have been done better? I need a better introduction to this chapter that will better access student prior knowledge about this topic. We also needed a better refresher with regards to the covalent vs ionic compounds and how to name. Many of the students have forgotten.

What will you do tomorrow? We need to slowly incorporate reminders of the differences between ionic and covalent compounds and then include more practice naming.

Reflection Day 2

What went well? The video provoked some thoughtful questions that helped to lead into the lesson. It also helped answer some questions about why we’d use a totally different unit like the mole in chemistry.

What could have been done better? Better real world examples are needed in order to better draw the students into this whole chapter. It is so math heavy and their math-phobia kicks in strong.

What will you do tomorrow? Continue reviewing nomenclature until it seems clear that their memory of actually learning this concept returns.

Reflection Day 3

What went well? The clicker review of what we’ve done so far went well, but that’s about it.

What could have been done better? Explaining the concept of a molar mass this year was really challenging. I had trouble finding the right words to explain to the students what they should be doing and where the information should come from.

What will you do tomorrow? Begin by re-teaching most of the molar mass concept. I need to reword the explanation so that they can truly understand.

Reflection Day 4

What went well? Apparently the students understood molar mass better than was expected because after very little review they were able to quickly grasp the concept and move on the converting between moles and mass.

What could have been done better? I did not do a very good job with the sample problems. In the future I need to go through the process more thoroughly in its initial stages in order to make sure that the students know the process and are not just mimicking steps.
What will you do tomorrow? Review chapter 7 thus far.

Reflection Day 5 – Minimum Day

What went well? The fact that today was a minimum day allowed for a slower pace and therefore allowed for more practice solving problems

What could have been done better? Today went really well. I was pleased

What will you do tomorrow? Continue the conversion process to include molar volume at STP.

Reflection Day 6

What went well? Students were able to expand from mole to mass conversion through to mole to volume and vice versa.

What could have been done better? I needed to spend more time on reviewing STP in my earlier classes. I assumed that they remembered more than they did.

What will you do tomorrow?

Reflection Day 7

What went well? The intro activity worked really well as a method of introducing percent composition. It allowed for a good connection from their prior knowledge about percentages.

What could have been done better? I think that a new worksheet should be made to tie in the percent composition to other concepts so that the students are not forgetting prior concepts in the chapter.

What will you do tomorrow? Students will take a quiz to assess their ability to perform the calculations associated with Chapter 7.

Reflection Day 8

What went well? The questions the students were asking prior to taking the quiz showed that they want to learn, which is extremely important.

What could have been done better? Even though they wanted to learn it appears that the students had not prepared enough for the quiz. Many of them left portions blank that I would not have considered to be the more difficult portions.

What will you do tomorrow? Go over the quiz with the students so that they will be prepared for the test as best as possible.
Reflection Day 9

What went well? Students were able to explain answers on quiz to each other in front of the class

What could have been done better? More students need to be involved in process. Some of them were spacing out and not really paying full attention.

What will you do tomorrow? Clicker Review game

Reflection Day 10

What went well? Students really enjoyed review game

What could have been done better? I need to make better questions for the clicker review game. Some of the math based questions took too long and allowed students not doing math based problems too much time sitting and waiting.

What will you do tomorrow? Students will take chapter 7 test

**Team Teaching Reflection**

Suggested reflections:
- Reflections on Working with others
- Reflections on pedagogy
- Reflections on psychology
- Reflections on teaching in general.
- Reflections on science teaching
After completing this team teaching assignment, I have learned a lot about working with another teacher. During my first few years of teaching, I was essentially the only teacher teaching the particular class that I taught. It made my first year extremely challenging given that I was a teaching intern who had absolutely no prior experience. After that first year I was fortunate to transition to a new class where there were others teaching the same subject as myself. There was however much disagreement over how chemistry should be taught, so it really wasn’t until this assignments that I was given the opportunity to closely work with someone teaching the same subject.

One of the troubles that I have faced in the past was that I was doing a large amount of work preparing my for my students. Though I have been teaching for four years and have been a graduate student in education for the last year and a half, and I have shared assignments with other teachers, I have never truly planned with someone else. I feel like sharing ideas with another teacher helped to clarify the plans and make them more developed and possibly better prepared for the students when they were finally exposed to the lesson in question.

The most useful portion of the working closely with another person was actually the reflection after lesson took place. Usually I only have a few times to improve my lesson before the day ends and then a year goes by before I teach that lesson again. The four times a day that I teach a subject is a relatively small to help improve the lesson. By comparing my observations of the lesson during my four periods and with the other teachers five periods, I feel that I was better able to see where the lessons needed to be modified for re-teaching in some cases or even just a way to make the lesson more engaging in the future.

The old adage says that two heads are better than one and in teaching I think that this is epitomized in team teaching. There were times during the two week reflection period that I
encountered problems with lessons during the day and I was able to go and talk with my coworker. Together we were able to brainstorm ways to develop a way to modify the lesson before I continued and taught the lesson a new way. This also applied in reverse. There were times where she would come to me and ask how to modify her lesson. This is something that I think will continue even if we don’t teach the same lessons on the same day.

Though I work with teachers who work extremely closely together, I had never fully realized the potential of working with someone so closely. Working so closely with another teacher who has a similar teaching style can help save time that is potentially wasted by doubling the work load to accomplish the same goal. This same work environment also allows for better lesson development by having multiple viewpoints brought together to help develop the best lessons possible, to decide how to implement those lessons and then how to best improve them. Ultimately, working together can be extremely beneficial.