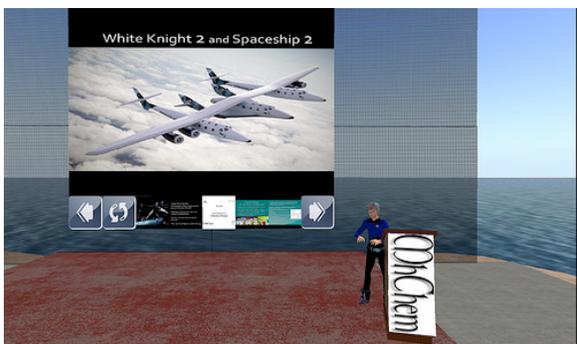


Teaching in Second Life - *Impressions*



Thoughts and Lessons Learned During Five Quarters of Teaching Experiments in Second Life



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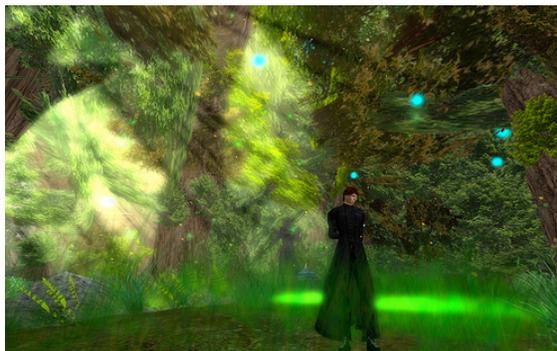
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If you have any questions, please feel free to contact me.

See you in the Metaverse! Peace,

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Regulus Darkstone

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Michael Russell (SL: Regulus Darkstone, mike.russell@mhcc.edu), June 2009

I have recently completed my fifth quarter using the 3D virtual world known as Second Life as a teaching aide in my chemistry classes. My hope is that some of the lessons and knowledge I have gained along this path might prove beneficial to others wishing to explore the teaching opportunities which abound on this platform; hence, this document emerged to educate (and also entertain, hopefully!) interested individuals.

But first some background regarding my classes and use of Second Life. I primarily teach majors-level chemistry courses (specifically Chemistry 221, Chemistry 222 and Chemistry 223) at Mt. Hood Community College (**MHCC**) in Gresham, Oregon, USA. These courses consist mostly of "face-to-face" classroom experiences, although some of them were taught as a hybrid or "blended" mixture of face-to-face teaching with considerable online activities.

During an October 2007 Oregon Community College Distance Learning Association (**OCCDLA**) conference in Bend, Oregon, I first learned about Second Life and quickly realized the potential the platform could offer classes and learning. My avatar, **Regulus Darkstone**, was "born" on October 12, 2007, and I spent the next several months learning how to fly, teleport, navigate, build and script within this new world. I also immersed myself in the OCCDLA "Second Life Island project" and figured this would assist my journey to understand what Second Life could offer the educator.

Over the Thanksgiving 2007 break I began essentially "renting" virtual land in Second Life to set up a "home" and learning center for my students. My land, which I call "**MhChem**", is open to all and continues to serve my education needs quite well. Later, the OCCDLA purchased an entire "island" called "OR Community Colleges", and if this had been available at the time I started in Second Life, I may not have required MhChem... but I love my virtual land and would hate to part with it now.

In late 2007, the amount of interactive chemistry modules and learning opportunities available in Second Life was quite limited, so I decided my teaching goal should be "team building" experiences for my students: to bring in the introverted, to instill a sense of belonging and community, to make them see the wonder and power of Second Life. This has always been my ultimate goal, and I hope to add more informational and learning opportunities for students soon (perhaps next quarter even! ☺)

What follows is a quarter-by-quarter description of my teaching (and learning!) experiences in Second Life.

**First Term: Winter 2008 - Chemistry 222 - "Build it, and they will come....
won't they?"**

Having purchased land in Second Life, I began to develop a "meeting place" for my students and friends on my virtual homestead. Called "MhChem" after a Lyris email list I use in my regular face-to-face classes, I found it was exciting to build your own house and meeting areas. I mostly used pre-fabricated houses and furniture purchased with my own funds through sites like XStreetSL.com... and the investment was minimal, especially considering the joy experienced in creating this world of my own design.



Regulus sits on the roof of his MhChem home in December of 2007



Regulus posing next to the entrance to MhChem. I enjoyed creating signs and textures for Second Life, including the MhChem sign shown here.

So now the house was ready for visitors, and my ideas of how it could be used in education were bubbling over... and I figured, "Hey, Second Life is so freakin' cool, I'm sure the students will come in droves!" I told my students all about Second Life through a series of handouts and through discussions, both in class and out of class, and held "special Second Life-only office hours" during Winter quarter 2008 to encourage students to come learn with me. No problem, right?

Wrong!

Little did I realize that getting students into Second Life was not as easy as I had thought initially. There were several reasons for this:

- **Technology** - many students at Mt. Hood Community College did not have access to the Internet as readily as I had anticipated. They were able to check email and surf web sites, but to participate in a graphics-intensive environment with a requirement for a high bandwidth speed like Second Life would require some help from the school and our Computer Services department.
- **The Learning Curve** - students were, alas!, not quite as excited about experiencing Second Life as I had been, and their motivation for conquering the learning curve was not very high. Students needed a reason to be in Second Life and to discover how it operates.

I offered two additional office hours from within Second Life each Friday of winter term, and during these hours I had five students appear. Two of the students came twice, three came only one time. Most of the questions I received during their visits had to do with Second Life itself ("How to I change my hair?" "How do I use the camera?") and did not relate to chemistry or the learning of science per se.

One nugget of information I did glean from these encounters was **the value of community** in Second Life. The two students who appeared twice came back the second time because the other student was there; i.e. they came because their friends were present, and they would not let them down. Jonathan Richter (University of Oregon) said, "Build community instead of building structures (in Second Life)", and I quickly saw what he meant.

Speaking of buildings, I began to see the limitations of using a traditional "house" in a virtual world. The original MhChem house was a three level mansion with waterfalls, a fireplace, and much more, but when more than one avatar arrived, it became clustered and uncooperative, especially when using a camera and trying to view visitors, etc... it was too constrained. I needed a new structure design which would allow for inspiration and unencumbered learning to transpire effortlessly.

I also realized that I had to incorporate some sort of chemistry activity to motivate students to attend a session(s) in Second Life if I was to give the experience any kind of worth as an educator. All of these lessons led me to Spring Quarter 2008.



Regulus watching for student visitors during Winter 2008



Regulus had a lot of time to explore the many features of Second Life... here you can see his (seldom-seen!) black wings! ☺

Second Term: Spring 2008 - Chemistry 223 - "The Classroom in the Clouds, and the Science Sim Contest"

After the uninspiring results of winter 2008, I decided that I needed to tackle some new goals for this quarter:

- The "house" structure was inappropriate when multiple avatars were present, and a new meeting place was required
- I needed to invoke team building strategies in my students, to build community within this (sometimes alien) virtual world
- I also needed to provide an incentive to entice students into Second Life

The idea for a new meeting place came about fortuitously. Pipsqueak Fiddlesticks (Denise Cole in real life) from the College of DuPage (Glen Ellyn, IL) created an active network of Community College educators in Second Life, and while viewing her "school area" in Second Life, I came across what she called the "**Classroom in the Clouds**."

The Classroom in the Clouds was essentially a platform high above her land, and with some disguised clouds (which can be purchased or created from scratch), it appears that the classroom area is literally "floating" high above the ground (quite impressive! trust me!) I created my own version of her "Classroom in the Clouds" to act as a meeting place for my students, and when coupled with sitting cushions, a teleporter system and an invisible "safety barrier" to prevent students from falling off the edge (!), this new place would serve admirably as a location for students to connect and learn.

To address the teambuilding issues for my student population and also provide a reason for students to investigate Second Life, I created a "contest" whereby students would form teams and search Second Life for "science related sites". They would collect landmarks from these "Science sims" and create a note card to be sent to me by a certain date; the winning team would have assimilated the greatest number of science related landmarks in their note card. All students who successfully compiled a note card with at least ten science related sites received extra credit, and an additional small amount of extra credit went to the group who collected the most sites. I started calling this the "**Science Sim Contest**", and the term has stuck in my vocabulary.

To participate, students first had to create an avatar and instant message my avatar, Regulus Darkstone. Regulus sent the new students a "welcome" message and an offer of friendship, along with L\$100. The "welcome" message included the location of the "Classroom in the Clouds" as well as some landmarks for free (or virtually free!) clothing shops, etc. in case they wanted to personalize their avatar (this is the reason for the L\$100 gift, which, mind you, comes to about \$0.30 in USD currency!) The exact language used in this note card can be found at the end of this report ("**Appendix A**").

I had them meet me *twice* in Second Life, once to receive the instructions, and once to turn in their note cards. The first Spring 2008 meeting was held at the Classroom in the Clouds, and Regulus gave them instructions on how to find landmarks, create a note card,

and also the date by which the completed note card had to be turned in for credit. Originally I had publicized the meeting to be on a Sunday at noon, but I had to re-schedule a second meeting for the same Sunday at 2 PM because the computer labs on campus did not open until 1 PM on Sunday (ack! learning all the time!!!)

The exact language used in this second note card detailing the "Science Sim Contest" rules can be found at the end of this report ("**Appendix B**").

Scenes from the first "Classroom in the Clouds" meeting can be seen below:



Regulus (front, center) meets his students for the first Spring 2008 meeting at the "Classroom in the Clouds"



Regulus meeting additional students at the Classroom in the Clouds. Notice the variety of avatar styles.

Scenes from the second "Classroom in the Clouds" (where the students turned in their note cards) meeting can be seen below. Note that there are more students at this meeting because the "first" meeting had to be split into two sections due to a snafu in my organizational scheme (the student computer labs at MHCC did not open at noon.)



Regulus (front, center) meets his students for the second Spring 2008 meeting at the "Classroom in the Clouds"



It was great seeing so many of my students at the Classroom in the Clouds... wonderful!

This Second Life experiment was a resounding success by my standards. I brought approximately 50% of my Chemistry 223 class into Second Life and got them to participate in the "Science Sim Contest." I split them up into six teams with 2 or 3

members each, and all six teams completed their assignments. But more importantly, the feedback I received after the event was wonderful - "this is too much fun", "I learned so much about my lab partner through this experience", "I didn't know you could do that" (in the real world, after seeing a Second Life exhibit on carbon scrubbing). Very exciting!



The "Classroom in the Clouds" became rather crowded during the second Spring 2008 meeting



Most people found the meeting area to be very peaceful and conducive to learning



A campfire provides a symbolic centering point for meetings, and rainbows offer a spirit of luck and opportunity to the "Classroom in the Clouds"



Rutha was one of Regulus's students in Spring 2008, and his avatar was wonderful to behold

Third Term: Fall 2008 - Chemistry 221 - The "Four Mini Assignments"

Spring quarter 2008 was a success, and I was anxious to repeat the experience in the Fall of 2008 with my Chemistry 221 class. However, due to reasons that need not be explained here, I ended up with a smaller class of students and a much busier non-teaching workload to accommodate during this quarter. Necessity dictates that it was time for something new!

I decided to offer my much smaller pool of students a "do it yourself" assignment in Second Life. Worth a respectable amount of extra credit, they could form teams in Second Life and complete "four mini assignments" at their leisure, turning in the final results to me by a certain date.

The four "mini assignments" I selected were mostly aimed at introducing the students to Second Life, but I also threw in a true "chemistry" question. In Second Life a plethora of quality science exhibits demonstrating various phenomenon are emerging in an attempt to educate viewers as to some aspect of our daily world. I found an appropriate exhibit at "The Exploratorium" which asked about the ability of gaseous molecules to absorb infrared light (which contributes to greenhouse gases), and this applies well to the curriculum of my Fall 2008 chemistry course.

The other assignment questions asked them to find a "coffee shop" (a social meeting place), an art museum (using the "Search" tool, the equivalent of google.com in Second Life) and also to find a "science related site" (to let them know how many wonderful opportunities exist for exploring different types of science in Second Life.) Also, they had to create a note card and take a picture of themselves at the coffee shop (familiarizing them with the tools of Second Life.)

The exact language used in the "Four Mini Assignments" note card given to my students can be found at the end of this report ("**Appendix C**").

Included below are two pictures sent to me by my students as part of this assignment:



Two of Regulus's students pose for a photograph at a coffee house found during the "Four Mini Assignments"



Another of Regulus's students poses for the "Four Mini Assignments" at a coffee shop during Fall 2008

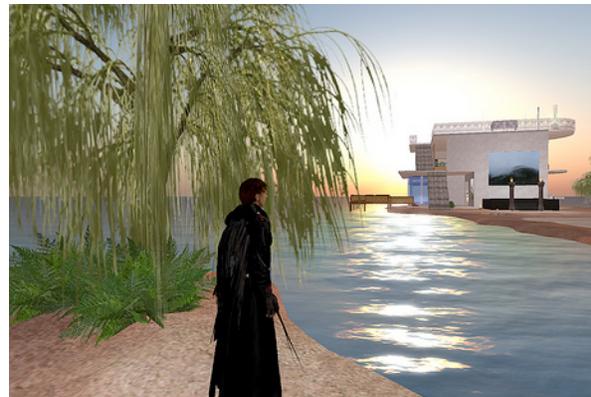
Results from this experience were mixed. Students enjoyed the mini assignments: they enjoyed searching for science sites, figuring out the science questions, even exploring art galleries appealed to most of them.

But only about 25% of the class participated in this assignment. I feel that the lack of a "common meeting time" made this assignment too open and unstructured, and the sense of community experienced during Spring 2008 did not manifest itself in this "do it yourself" assignment. Also, I worry that the four mini assignments were too open ended, and maybe they needed a linking goal to make it a worthwhile adventure.

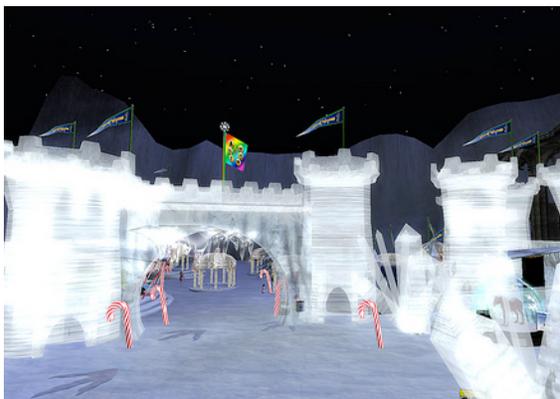
Building community is very important in Second Life! So, learning from these explorations, I moved on to Winter Term 2009.



Regulus talks with his neighbors while waiting for some of his students to arrive



Regulus watches the sunrise over MhChem during Fall 2008



Regulus attends the Linden's Winter Carnival... beautiful sculptures and designs abound



Regulus goes for a ride on his Chopper with his friend Tatyana

Fourth Term: Winter 2009 - Chemistry 222 - The "Science Sim Contest", Part II

During Winter quarter of 2009, my teaching schedule returned to "normal", and I had more time to devote to my teaching. I was anxious to repeat the success of Spring quarter 2008, so I offered my Chemistry 222 students the chance to participate in a "Science Sim Contest" for finding the most science related sites in Second Life.

As before, I first asked that the students sign in to Second Life, create an avatar, then let me know (through instant message, friendship offers, etc.) that they had joined. I then sent them a "Welcome Message" (the text of which is in Appendix A, at the end of this report) and told them to report to the "Classroom in the Clouds" on a Sunday at 2 PM for the "assignment". Scenes from this first meeting are shown below:



Regulus, standing on the left, talks to his CH 222 students at the first meeting in Winter 2009



Regulus attempting to place his students in groups for the "Science Sim Contest" assignment

At the first meeting, students were split into groups and given the instructions on how to complete the assignment by finding science sims, etc. The text of this assignment is virtually identical to the text provided in Appendix B at the end of this report.

Each group created their note card and returned for a second mandatory meeting at the Classroom in the Clouds. The second mandatory meeting was a celebration of the hard work they had accomplished in creating their note cards, of learning the intricacies of Second Life, and more. Scenes from the second meeting are provided below.



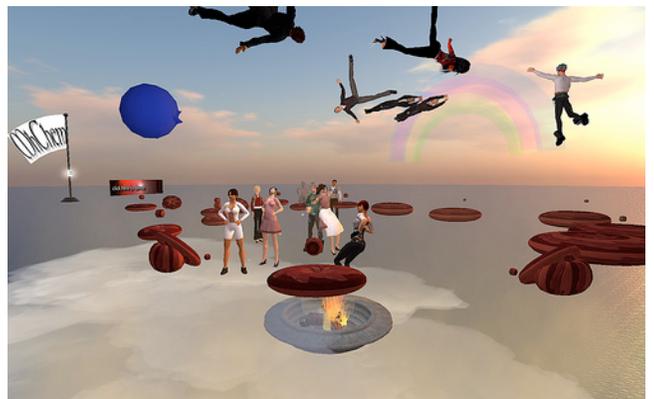
Scenes from the second Winter 2009 meeting where students turned in their note cards to Regulus



This was a large student population, and ensuring all note cards were received tended to be difficult



Regulus and some of the students begin dancing... letting go of the stress before finals week



Regulus's chimera (used for dancing) could only take 10 avatars at a time, leaving others to simply watch... frustrating, but a good lesson

This event was also wildly successful, but there were some differences between Winter 2008 and Spring 2009. I had seven groups participate in the event, and each group had between three and four members... the number of students involved was quite a bit larger (more than 60% of my students participated), making the organization a bit trickier. Breaking students into groups, and ensuring that all note cards were turned in and received by me, took some patience and understanding.

The number of science sims found by my students was amazingly higher during Winter 2009 than in Spring 2008. In Spring 2008, the group that discovered and cataloged the most science sites in Second Life found a total of 51 locations, which I thought was pretty fantastic at the time. In Winter 2009, **the winning group found 308 science related sites** in Second Life - wow!!! This disparity probably results from the growing popularity of Second Life as an educational medium and due to the increased technological comfort (and maybe convenience) expressed by the students during this activity.

Also, due to scheduling constraints, the second meeting had to occur on the Sunday before finals week at MHCC. I found that this time period made students anxious for "release", and we ended up having a "dancing session" at the Classroom in the Clouds

after they turned in their assignments. Dancing in Second Life is very social, and Regulus happened to be wearing a "chimera", a device which allowed others in the vicinity to start dancing easily. The chimera was a great hit - the pictures above show avatars dancing in the sky, very fun!

The dance chimera had one drawback, however. The chimera has a "ten avatar dancing simultaneously limit", and since there were more than ten people present, many had to sit out and watch the dancing, which frustrated me greatly. It would have been nice to have everyone dance, so next time I'll make sure I bring a "dance ball" which can facilitate more than 50 dancers at once! ☺

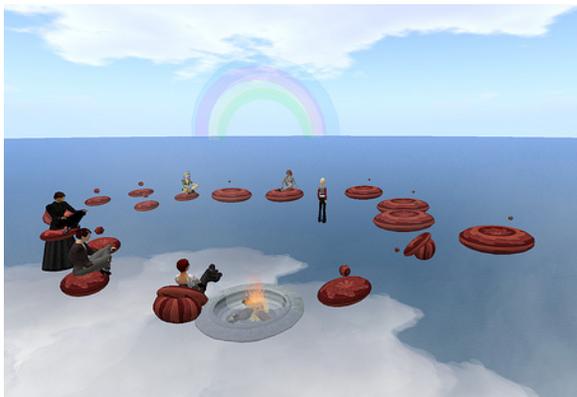
The "Science Sim Contest" continues to be very popular, and I can hardly wait to try it again next year!



Scenes from the Winter 2009 Meeting



The Classroom in the Clouds works very well as a meeting location



Many students makes for an exciting time as the organizer of the event



Many questions asked of Regulus concern the basic functionality of Second Life...

**Fifth Term: Spring 2009 - Chemistry 223 - A "Student Science Seminar" in
Second Life**

It was time to "up the ante" and take my teaching experiments to the next level in Second Life.

For many years I had been the faculty advisor to the Mt. Hood Community College Science Club. One of our annual events consisted of a "Student Science Seminar" whereby students would present a five minute presentation and/or demonstration on something in science of interest to the general populace. People were invited from the greater MHCC community to watch students create colorful chemistry demonstrations or talk about advances in topics ranging from research in dreaming to making your own biodiesel.

I decided I wanted to try something similar, but have it conducted from within Second Life. Students could present on a topic in science of interest to them, and an "audience" of avatars could listen in and ask questions towards the end. Each presentation would require roughly five minutes with a couple of minutes for questions afterwards (...or so I thought! ☺) Ideally, this could lead to a community event whereby my students could practice science presentation skills and we could publicize MHCC at the same time.

But creating a "Student Science Seminar" would require some work. First, I needed to construct a structure for the presentations. I wanted something a bit more "lecture hall"-ish for the seminar, and I found a free (and modifiable) auditorium presentation set which fit my needs, at least after several pieces had been removed and altered! ☺

For the student presentations I also required a PowerPoint screen presentation system. I decided upon the "Preso-Matic Turbo-Builders Edition" after comparing more than ten models. The Preso-Matic had a very intuitive interface, it had a "lock" feature to allow only the presenters access to the slide controls, and it was free! The Preso-Magic is available from Xstreet SL and highly recommended.

Next, I included in my Spring 2009 Chemistry 223 syllabus an invitation to my students to participate in the event (see the full text towards the end of this article in **Appendix D**). They could choose to either present and/or watch and write a summary of the experience. Giving a lecture was worth additional extra credit, and I preferred presentation teams to individual presenters.

After selecting eight groups to present, I sent them a notice telling them how to prepare their PowerPoint presentation (the complete text of which is found at the end of this article in **Appendix E**).

They sent their PowerPoint presentations to me by a specified date, then I saved their files as a series of JPG images. Textures in Second Life load much quicker if they are 512 x 512 pixels, so I opened each of the student PowerPoint slides and added a small black (or white) border to each slide, then converted the sizes to 512 x 512 before

uploading into Second Life (I performed all of these transformations in GraphicConverter, but Photoshop, Fireworks, etc. would have worked equally well.)

After I uploaded the slides into Second Life as textures, I added them to the Preso-Magic in the order of the presentations (each file was sequentially numbered to make this work.) I then had them meet me in Second Life before the actual presentation day to make sure they knew how to operate the Preso-Magic slide viewer, how the presentations would work, etc. Voila! Everything was ready!

The selected student presentations included the following topics:

- The Chemistry of Love
- Virgin Galactic: World's First Spaceliner
- Chelating Therapy
- The Chemistry of the Hair Perm
- Emotional Chemistry
- Historical pH Variation in Rivers
- How to Purify Water for Drinking
- Extremophiles: Life in Extraordinary Places

Some of the presentations came from library research and some came from actual laboratory experiments performed by my students. Needless to say, the presentations were wonderful! But I also learned a lot from the experience... see below.

Below are some pictures from the presentations:



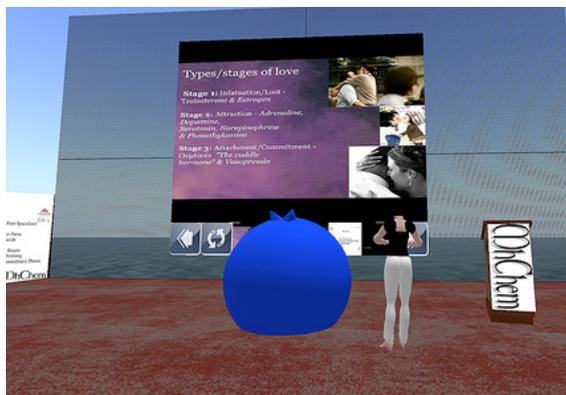
Regulus standing on the completed platform to be used in the student presentations



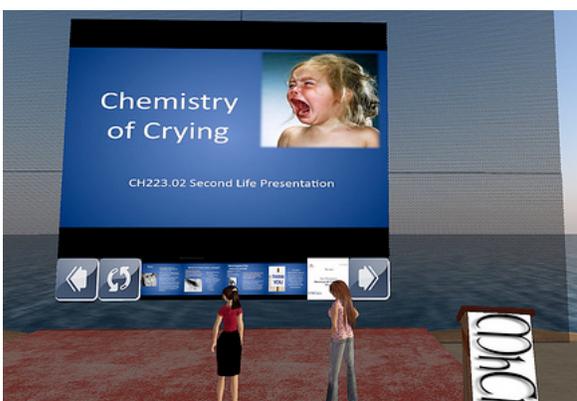
The presenters met me earlier to practice using the slide show controls, etc.



More than 30 avatars attended the presentations, many of them unconnected to my class



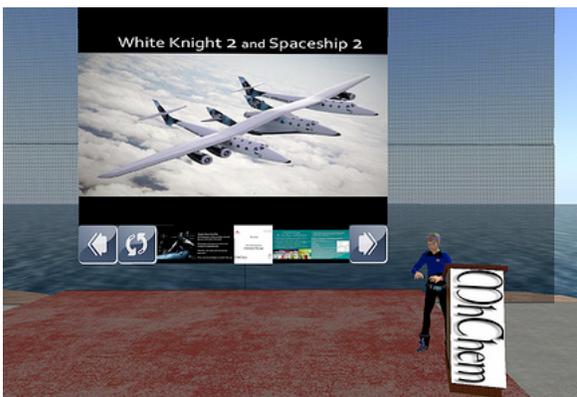
The presentations begin... I love the blue berry avatar!



The presentations were on a variety of subjects



The presentations were engaging and quite interesting...



Presentation subjects ranged from the chemistry of love to the pH of local rivers



Some of the presentations went on a bit longer than expected.... but they were all great!

Overall I was *very* pleased with how the presentations turned out, but I did have my share of unexpected learning moments.

The first surprise came from the "acoustics" of Second Life. When someone "talks normally" (i.e. chats), the range for people to "hear" (i.e. read) the comment is 20 meters.

I had measured my stage to be 20 m x 20 m, so I had assumed that everyone would be able to "hear" (i.e. read) what was being said.

Whoops!

I did not account for the diagonal distances... and presenters in the corner, next to the podium, were not being heard by audience members on the far opposite side of the listening platform. A quick edit by me of the stage while the presentations were occurring corrected this problem, but alas! despite my best attempts, something still happened! ☺

The second surprise came from the "length" of the presentations. In a normal "face-to-face" presentation, students normally present the material at an acceptable pace, and you can use visual facial cues to ascertain if the presentation is nearing completion, etc.

But during my Second Life presentations, students were *considerably* less rapid because a) typing is a slower communication medium than talking, and b) I could not "encourage the presenters along" as the instructor because I did not know if they were finished or still preparing to type something. *Doh!*

Also, despite my self-imposed limit of only four presentations maximum, I caved and allowed eight presentations to occur because of the interest shown by the students... it is hard for me to say no to students when they are so passionately interested in something!... a weakness of all good educators, I hope... ☺

Fruitful conversations with Monica Martinez-Gallagher at Portland Community College have helped me create a list of "things I will do differently next spring term" to ensure a more tangible length for the presentations:

- First, make the students create a pre-typed "script" of their presentation before the actual day of their lecture and have them email me a copy. This will allow for a quicker presentation speed (they can copy and paste into Second Life!) *and* allow me to know if they are almost finished, etc.
- Second, invoke some kind of physical timer to "ring" or "flash" after five or so minutes have passed. This will also keep the duration of the student presentations down to a manageable level.
- Third, I might invoke a team of three or so students in my class who will not be presenting to act as "judges". The judges will pick the five or so topics from the student submissions, and these will be used in the presentations. This would keep me as the instructor from "being the bad guy" and saying no to less desirable presentations. It also might encourage a sense of community (and interest, or even excitement!) within the judges and bring additional audience members to attend the presentation.
- Fourth, you can purchase an "audio amplification system" whereby normal chat is extended further than 20 meters. I could also shrink or even re-design the stage

somewhat, but this will ensure that the students get heard by the audience while presenting across the entire auditorium.

- Fifth, Second Life has wonderful built-in audio conversation tools, allowing for voice communication in a group or in a personal one-on-one environment. If I could arrange with Computer Services at MHCC to have a room of voice-enabled Second Life workstations, we could actually have a voice-enabled Second Life Student Presentations event. This would be exciting... but learning curves with microphones can be higher, so additional scheduled meetings would be required for students unfamiliar with microphone settings to learn how they work, etc.

Students were asked to provide feedback of the experience to me afterwards, and the comments received have been priceless. Paraphrased comments include:

- It was fascinating, I loved watching the presentations in the privacy of my own home. I could Google information at the same time, very helpful!
- I loved being able to ask questions in SL, I didn't feel as intimidated as I do in real life when wishing to ask questions of a presenter.
- The presentations were way too long, but it was nice being able to get up, grab a soda or take a bath room break without making a scene.
- I felt just as nervous presenting in Second Life as I did in real life! But just like in real life, I took a deep breath, I didn't look at the avatars, and it went ok.
- If I missed something, or had difficulties understanding the material, I loved being able to look at the chat history to "re-learn" it (from an ESL student).

I consider the spring term 2009 student science seminar event to be wildly successful, and the feedback and experiences I gained will ensure that spring term 2010's presentation series will be even better!



The avatars selected by the students continue to impress me



Regulus watches the presentations intently, watching for problems... and trying to enjoy himself! ☺

Teaching in Second Life - *Final Thoughts and Future Directions*

As you can probably tell from my enthusiasm, I find teaching in Second Life to be very rewarding and beneficial for learning. Students appreciate the new learning environment (especially when coupled with extra credit activities), and I believe the social interactions gained from Second Life experiences are effective and relevant to higher education situations.

I do not foresee a "mandatory" Second Life experience for my chemistry classes in the near future. Many of my students are quite content to never delve into the Second Life medium due to technology fears, busy schedules, lack of interest, etc. and I respect their wishes, especially since the amount of chemistry educational facilities are still somewhat limited.

However, as a social experiment, I love the Second Life platform for exploring science, furthering education and learning about my students. Here are some of the lessons I have learned as an educator in Second Life:

- Building community within the students in my class is the primary goal for my Second Life activities. Learning about the subject matter is important, but building the cohesion of a functional class trumps all other reasons, at least in my classes.
- Most people experience a technology curve (or even barrier) when starting Second Life. Creating an avatar, signing up, etc. can confuse new Second Life users. Expect your students to have questions and comments about it. If you have a required meeting time in Second Life, it will force them to overcome the initial barriers and see the advantages of the Second Life platform.
- Speaking of learning curves... expect more questions on "how do I change my hair?" or "how do I use the camera?", etc. than on anything else about your presentations or plans in Second Life. Allotting time for these questions makes a great learning experience for the students.
- Find or create a space in Second Life to meet which is open, inspiring, and relatively lag free. The OCCDLA's "OR Community Colleges" island might be a great place for this to occur... see the references at the end of this report for information on how to get in contact with them.
- Organize your class into student teams as often as possible in Second Life. It helps to create a valuable cohesion of learners (which often extends into the real world!) and also lets them answer their own technology curve questions independently of you, the instructor.
- If organizing a presentation, ensure that the distance from the presenter to the audience is no more than 20 meters. You can purchase a 10 meter "measuring stick" from XStreetSL which can prove very useful. Voice applications in Second Life will probably require additional help sessions to conquer the challenges of the microphone and headset.
- Actively watch the Second Life blog (<http://blogs.secondlife.com>) and status grid (<http://status.secondlifegrid.net/>) for the "mandatory" upgrades of the Second Life

viewer. These upgrades will sometimes occur at the worst times, and if using Computer Services personnel on your campus, you will need to provide them as much time as possible to install software patches on any student lab computers using the Second Life viewer.

- As a precaution, think about a "worst case scenario" plan in case of a complete Second Life grid outage. I have yet to have one affect my presentations and meeting times, but the stories do circulate on the internet. Planning helps to prevent disasters and disappointment.
- Above all, remember to have fun, and do *not* be afraid to make mistakes. Students will appreciate the fact that you are trying something new, and open honesty is very important. Second Life is a great place to experiment and try new things... 'nuff said! ☺

To this end, I believe my 2009 - 2010 academic year will involve the following Second Life activities:

- Starting in Fall 2009 I'm going to be using a "note card giver" script which will automatically give each student arriving at the meeting place a note card of instructions for the assignment. This will make the organizational chaos during these events much more manageable for this instructor.
- During Fall 2009 I plan to have a "Four Mini Assignments" or perhaps even a "Scavenger Hunt" activity for my students, but with drastic changes from Fall Term of 2008. I will have a mandatory meeting in Second Life (probably at my "Classroom in the Clouds"), then send them off in groups of no more than three to solve a series of questions. I *might* make it a type of "scavenger hunt" whereby they have to solve a series of small questions in Second Life, then use a certain letter in their answers to solve a "Jumble" like question... stay tuned, still thinking about this activity... ☺
- My Winter 2010 class will probably see a repeat of my "Science Sim Contest" activity used in both Spring Term 2008 and Winter Term 2009 whereby they will be broken into teams to find as many science related sims as possible. I will probably have mandatory initial and final meetings for this activity.
- Spring 2010 will see a repeat of the "Student Science Seminar" activity of Spring 2009 with some notable improvements. I will have the students pre-script their lectures (and send me copies of the scripts) in order to keep the time durations at a manageable level. I also might ask for non-presenting students to act as "judges" in order to decide who will be presenting, etc., and the inclusion of a five minute timer may be warranted.

If you would be interested in observing (or even participating!) in some of these events, please contact me and we can arrange something.

Acknowledgements:

I would like to thank several people for their assistance on this project:

- **Jill Russell** - my wife, favorite colleague and patient friend while I explore the nuances of Second Life
- My son **Grayson** for keeping me company while writing this report and watching me explore the worlds of Second Life
- **Dr. Ron & Bev Russell** - my parents for their enthusiasm for all my varied technological endeavors
- **Gordon & Jean Russell** - my grandparents for purchasing my first college computer
- My colleague from Portland Community College **Monica Martinez-Gallagher** - I could write volumes of great things about Monica, and her help in my development as a Second Life educator cannot be understated. Monica also is the "curator" of the OCCDLA's "OR Community Colleges" island. *You are the BEST, Monica!*
- My colleague from Columbia Gorge Community College, **Paula Ascher**, who first demonstrated Second Life to me in October of 2007 at an OCCDLA meeting. She has been instrumental in the development of the OCCDLA Second Life grant. *Wow! I'm still stunned! Thanks Paula!*
- Fellow explorer in Second Life **Donna Swanson** from Portland Community College. Also a member of the OCCDLA's "OR Community Colleges" Second Life island project, Donna has been an inspiration to work with and a joy to interact with consistently. *Thanks Donna! Still laughing over the "beaver scribe"!*
- To someone I've never met in the real world (to the best of my knowledge!): **Rachel Brimm** is a student from MHCC who I met in Second Life and have yet to know her real world name. Rachel has proven to me that Second Life can be a valuable tool to students, and her enthusiasm for learning the technologies of Second Life is inspirational. *Thanks for everything Rachel! You rule!*
- I would not have been able to do almost anything without my "MHCC SL Posse" - namely, **Valory Thatcher, Dr. Wally Shriner** and **Brenda Wise**
- I would also like to thank the many students who have joined me in my Second Life teaching quest. *You have inspired me, and I cannot thank you enough.*
- Finally thanks to my supportive friends in administration: **Dr. Beth Pitonzo, Dr. Wendy Schissel, Michael Callaghan, Dr. Michael Hay**, and last but hardly least, President of MHCC **Dr. John "Ski" Sygielski**

I would also like to thank **you**, the reader, for taking the time to read this report. *Thanks!*

All of the materials in this report can be found on the Web at <http://mhchem.org/slt>

Feel free to contact me if you have any questions. Peace, and I look forward to seeing you in the Metaverse!

Michael Russell, Ph.D. (SL: Regulus Darkstone, mike.russell@mhcc.edu)

Resources for Further Information:

Second Life Resources

- <http://secondlife.com/join> - The URL to use when creating a Second Life account... join! it's free! you won't be disappointed! ☺
- <http://secondlife.com/download> - The URL used to download new versions of the Second Life viewer and much more
- <https://blogs.secondlife.com> - The main blog page for Second Life activities, sponsored by Linden Labs
- <http://status.secondlifegrid.net/> - The Status page for Second Life, showing the current condition of the "grid" (i.e. if Second Life is operational or offline.)
- <https://www.xstreetsl.com/> - Xstreet SL, a valuable resource for finding Second Life items (clothes, objects, scripts, etc.) and transacting funds to and from Second Life

MhChem and OCCDLA Resources

- <http://slurl.com/secondlife/Dreamworld%20Ocean/52/36/22> - A link to MhChem, my land in Second Life
- <http://slurl.com/secondlife/Dreamworld%20Ocean/38/25/228> - A link to my "Classroom in the Clouds" site in MhChem
- <http://slurl.com/secondlife/Dreamworld%20Ocean/24/24/22> - A link to the "MhChem Pavilion" site in MhChem
- <http://slurl.com/secondlife/OR%20Community%20Colleges/94/90/35> - A link to the OCCDLA's "OR Community Colleges" Island in Second Life
- <http://slorcc.blogspot.com/> - link to OCCDLA blog

Miscellaneous Resources

- <http://www.youtube.com/watch?v=q8bFI262yFA> link to SL MHCC Promotional Video
- <http://mhchem.org/sl> - The "Getting Started in Second Life" guide
- <http://www.flickr.com/photos/regulusdarkstone/> - My Flickr photo stream with additional pictures from all of the Second Life events discussed in this paper



Regulus at a wonderfully beautiful sim



Regulus and Monica at a SLEDcc Presentation



Appendix A: The text of the "Welcome to Second Life" message that I sent to all of my students who participated in my events

Greetings CH 223 Students!

Welcome to Second Life! I think it's great that you're here, and if you have any questions, do not hesitate to contact me, ok?

The location for our two scheduled meetings (Sunday, April 13 (at noon and 2 PM) and Sunday, June 1 at 2 PM) will be my "Classroom in the Clouds", which you can find by using this landmark:

(Landmark for the Classroom in the Clouds was here; the SLURL is: <http://slurl.com/secondlife/Dreamworld%20Ocean/38/25/228>)

Click on the link above, then select "Teleport" to get there.

In addition, I think it's really cool to personalize your avatar in Second Life. It makes you feel like the avatar is "you", somehow... I don't quite understand it, but it works, believe me!

To that end, I'm sending you L\$100 (one hundred Linden dollars) to get you started... and that means it's time to go shopping!

Many of the clothes in Second Life can be purchased for free or virtually so. Here are two places that I have used extensively in the past:

(Links to "The Freebie Store - ThinkTank" and "BodyBasics" in Second Life were included here)

Most of the clothes (as well as the skins, hair, etc.) are free at these places, and with L\$100, you can even "splurge" and get something fancier! (ha ha!)

I would also encourage you to join the "MHCC SL" group.

(A picture of the MHCC SL logo was provided here as a texture)

MHCC SL is a group devoted to things related to Mt. Hood Community College in Second Life.

Joining is free and easy; either IM me (Regulus Darkstone) for an invitation, or select "Search" (lower middle of your screen), then "Groups", then enter "MHCC SL". Select "MHCC SL", then select "Join".

Enjoy your travels in the Metaverse of Second Life! Let me know if you have any questions, and good luck!

Peace, -- Regulus Darkstone



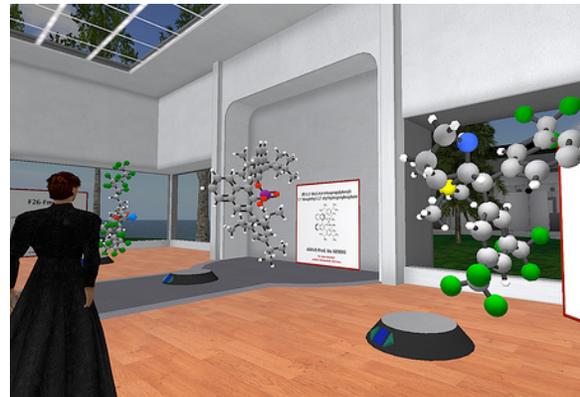
Regulus, EO and Serillion in January 2008



Regulus, EO and Serillion in Fall 2008 - notice the changes to the avatars!!!



*Regulus's friend Rachel Brimm with her pet snake!!!
Don't touch, it bites! ☺*



Regulus observes a chemistry demonstration at the Aldrich site in Second Life

Appendix B: The rough text of the "Science Sim Contest" message used during Spring 2008 and Winter 2009

Greetings!

I am very pleased that you have decided to join me in Second Life and participate in this extra-credit assignment! Below are a series of questions you might have regarding this project. If you ever have any questions, contact me!

*** How many points is this assignment worth?

You will receive 20 points for completing this assignment with your group and turning it in on June 1st at 2 PM. Late assignments will be worth zero points. You will receive 10 points for attending both of the in-world class meetings (April 13 at noon or 2 PM AND Sunday June 1 at 2 PM. Both the April 13 and the June 1 meetings will be held at the Classroom in the Clouds.

(Landmark for the Classroom in the Clouds was here; the SLURL is: <http://slurl.com/secondlife/Dreamworld%20Ocean/38/25/228>)

Finally, your team has the opportunity to win 10 points of extra-credit by winning the contest!

*** What do I have to do to complete the assignment?

Your goal is to find as many science-related places in Second Life as possible. Second Life is exploding with academic and scientific creativity, and I'd like for you to find as many of them as you can.

But you won't be alone: I will assign you to a team of CH 223 people in Second Life who will search for science-related places with you. Your team will be responsible for completing a brief report (typed on a note card in Second Life) which you will give Regulus at the June 1st meeting.

When you find a science related location in Second Life, you will need to make a Landmark of that location (World -> Create Landmark Here). The Landmark will be stored in your Inventory folder under "Landmarks" (Select the "Inventory" button in the lower right of the screen or push "Ctrl-I", then look under "My Inventory" and "Landmarks").

When you're ready to construct the "report" of the science-related places you find in Second Life, go to your Inventory (lower right corner, or Ctrl-I to open the Inventory Window), then select "Create -> New Note" from the Inventory Window. You can drag Landmarks from

your "Landmarks" inventory window into the Note card you just made (landmarks show up in the note card as blue text with a stick pin icon), and also include a sentence or two describing what you found. Press Save when you're done! The landmarks in your note card will look something like this:

(An example landmark was provided here for MhChem or something like it)

Here are some tutorial videos on how to create a note card with landmarks:

<http://mhchem.org/221/media/CreateNotecardWithLandmarks.wmv> (Windows version)

<http://mhchem.org/221/media/CreateNotecardWithLandmarks.mp4> (Macintosh version)

To transfer the note card to Regulus, simply open your Inventory window, then drag the note card you created on to Regulus as he's standing next to you. Here are some video tutorials on how to drag a note card to someone standing next to you:

<http://mhchem.org/221/media/DragNotecardToAvatar.wmv> (Windows version)

<http://mhchem.org/221/media/DragNotecardToAvatar.mp4> (Macintosh version)

You can also drag the note card on to the profile of Regulus (select "Communicate" in the lower left corner, then highlight Regulus Darkstone in your "Friends" list by clicking on him once, then select "Profile". You can drag your note card on to the Profile of Regulus; this will also deliver your final work to me.) Here are some tutorials on how this is achieved:

<http://mhchem.org/221/media/NotecardViaProfile.wmv> (Windows version)

<http://mhchem.org/221/media/NotecardViaProfile.mp4> (Macintosh version)

Make sure you have all of the team members listed at the top of the note card. Also, I would like a count of how many landmarks you found at the top of your note card. Your note card ***must*** be organized! Poorly organized note cards will suffer a penalty for sloppiness or repeated landmark entries.

*** Tell me about the contest to win five points of extra-credit!

The team that collects the most original landmarks of science-related sites will receive a five point extra credit bonus (5 points per team member.) It's a bit of an incentive to work hard on this assignment!

*** How can my team do well on this assignment?

First, make sure that you know who your other team members are and how to get a hold of them. I would recommend offering friendship to them (right-click (apple-click on the Mac) and select "Offer Friendship").

Next, determine a time before the June 1 meeting where your team can meet and create the note card report. You could meet at the Classroom in the Clouds or another place, this is up to you.

(Landmark for the Classroom in the Clouds was here; the SLURL is: <http://slurl.com/secondlife/Dreamworld%20Ocean/38/25/228>)

Then comes the fun part: go out and start collecting landmarks! Use the Search tool (select "Search" in the lower middle part of the screen, then start looking for science related sites.) Make sure you collect a Landmark at each place you visit (World -> Create Landmark Here).

At your pre-June 1 group meeting, trade the landmarks with each other (drag the landmarks from your inventory to the person collecting them) and create the document for Regulus. Make sure that your note card is organized! Be sure to include the team members and also how many landmarks your team found total.

*** If I have questions about this assignment, who do I ask? At any time if a question arises, please contact me. You can send an IM to Regulus Darkstone or email me (mike.russell@mhcc.edu). Let me know!

All the best, and enjoy your adventures in the Metaverse! Peace, -- Regulus Darkstone



Sporting a western look, Regulus takes a pleasant stroll through the woods...



Regulus and Chimera Cosmos (Liz Dorland in real life) dancing and singing at her new house

Appendix C: The "Four Mini Assignments" used during Fall 2008

The four mini-assignments are as follows. You do not have to complete these assignments sequentially.

Assignment #1: The Coffee Shop

Find a coffee shop in Second Life (hint: use the "Search" button toward the bottom middle of the screen.)

Include a landmark of the coffee shop you visit in the note card.

Group exercise: take a picture of you and your group at the coffee shop. Use the Camera Controls (View -> Camera Controls) to get a good shot, then use the Camera Tool (File -> Take Snapshot). Your picture will be saved on your desktop. Send it to me either by email (mike.russell@mhcc.edu) or, if you'd rather, upload an Image (File -> Upload Image) and send it to me that way. Uploading an image will require \$10L, IM me if you need 10 Linden dollars, I'll send it to you...

Assignment #2: Chemistry

Go to the Exploratorium:

(A landmark to the Exploratorium was found here: SLURL:
<http://slurl.com/secondlife/Science%20School/174/150/29>)

Using the exhibits, tell me which of the following gases should absorb infrared (IR) light in our atmosphere:

water vapor, argon, carbon dioxide, neon, helium, methane, ozone, nitrogen, oxygen

This is a really cool place... take some time, explore!

Assignment #3: Science

Find a science-related site in Second Life that appeals to you and might be useful to students of Chemistry 221.

Send me a Landmark of the site and a brief (four sentences or so) description of the site and why you (and other CH 221 students might) like it.

Assignment #4: Art

Visit an art gallery (G or PG rated art galleries only!!!) in Second Life.

Send me a Landmark of the site and a brief (four sentences or so) description of the site and why you like it.

Questions? IM me (Regulus Darkstone) or email (mike.russell@mhcc.edu) with any questions you might have.

Enjoy your stay in the metaverse! :-)

Peace, -- Regulus



Regulus (left), DharmaPuppy (center) and Monica (right) at an OCCDLA meeting at OR Community Colleges



Regulus and his Second Life-only friend Elisha during the holiday season in Second Life



Regulus at the "Stepping Into Science" conference during Winter 2009



A dreamer, Regulus looks toward the future and imagines a wonderful path ahead... ☺

Appendix D: The "Student Presentation Promo" used during Spring 2009

The Spring 2009 CH 223 Second Life Extra Credit Opportunity

This quarter I am offering a **special Second Life extra credit opportunity**. We will be providing a **day of student presentations on Sunday, May 31, 2009 at 2 PM**. Attending the presentations and writing a one-page summary can earn you **ten points** of extra credit. Additionally, I will need up to four two person groups to present within Second Life; these individuals will receive **20 points** of extra credit for presenting for a total of **30 points possible!**

Second Life is a 3-D virtual world entirely created by its residents and managed by Linden Labs. Joining Second Life is free, but you will need to create an **avatar** (your representative in the Second Life world) and learn how it works to participate. To join, go here (<http://secondlife.com/join>) and more help can be found here (<http://mhchem.org/sl>).

The May 31 meeting will be held at the **MhChem Pavilion** within Second Life, found here:
<http://slurl.com/secondlife/Dreamworld%20Ocean/24/24/22>

To receive the 10 points of extra credit, you will need to **attend the Sunday, May 31, 2009 at 2 PM presentations** and **write a one-page paper summarizing the experience**. In the paper, describe what you saw, what you thought of a presentation in Second Life, things you liked about the presentations, etc. These one-page summaries (submitted electronically or in hard copy) are due **Friday, June 5 at 9 AM** and no late assignments will be accepted.

If you are interested in presenting (and receiving an additional 20 points of extra credit) you and your partner will need to present a one-paragraph summary of the **chemistry-related topic** you intend to present by **Friday, May 1 at 3 PM**. Include a brief summary of your presentation. Groups with one *or* three or more participants will be automatically disqualified. Only four groups will be allowed to present, and groups will know if they have been chosen by Monday, May 4 at noon.

If you are chosen to present, wonderful! Additional instructions will be forthcoming, but essentially you will need to create about five static PowerPoint slides for your presentation. You can export the slides as graphic files, and then upload them to Second Life for viewing by the audience. You and your partner will be talking about your topic via text chat in Second Life, and a question and answer period will follow the presentation.

If you have any questions, please feel free to email me (mike.russell@mhcc.edu) or IM ("instant message") me in Second Life (as **Regulus Darkstone**). I hope to see you at the presentation!

Appendix E: The Second Life "Presenter Instructions" text used during Spring 2009

Greetings!

...and more importantly, **Congratulations!** Your proposal was selected for the May 31 at 2 PM Second Life extra credit presentation! I ended up selecting more than four proposals due to the quality of the submitted topics... *wow!*... you continue to impress me as a class with your creativity and skill, and I'm greatly looking forward to your presentations!

Here are some "questions and answers" related to the upcoming presentations:

When are the presentations? They will be **Sunday, May 31 at 2 PM.**

Where will the presentations be given? They will be given in Second Life here: <http://slurl.com/secondlife/Dreamworld%20Ocean/24/24/22> If Second Life is installed on your computer, you can enter the above address in your browser (Safari, Internet Explorer, Firefox, etc.) and it should send you there. Alternatively, you can instant message me (Regulus Darkstone) in Second Life and I can get you there.

What will be the order of the presentations? The order that I'm proposing is given below. The order will be important for me as I arrange slides, etc. for the presentation day.

1. Jennifer and Trinley - The Chemistry of Love
2. Yusef - The "White Knight 2" Space Liner
3. Leza and Katie - Chelation Therapy
4. Mashall and Tahmena - the Chemistry of the Hair Perm
5. Jessica G and Cassy - Emotional Chemistry
6. Jessica P - Historical pH Variation in Rivers
7. Ngoc and Dorothy - How to Purify Water for Drinking
8. Nick - Extremophiles

What do I need to do for my presentation and get the extra credit? Good question! :) Here's what you need to do:

1. First, check out the "order of presentations" list above and look at the "quick description" of your topic. Should the quick description be changed? I need a "less than one sentence" tagline to promote your talk... if you'd like that description change, **let me know before Friday, May 8 at 3 PM.** After this time you'll be stuck with your tagline as I wrote it above.
2. Next, start researching your topic and investigate the material for the presentation.
3. Once your materials are ready, **start creating a PowerPoint presentation on your subject with no more than five slides.** Because I have opened it up to more than four groups, I will need you to keep your total PowerPoint slides at five or less. Note that your PowerPoint slides can have still pictures and text only. Videos, "flying text", transitions, etc. will not come through to Second Life (...at least not yet, using the method we're using... :)

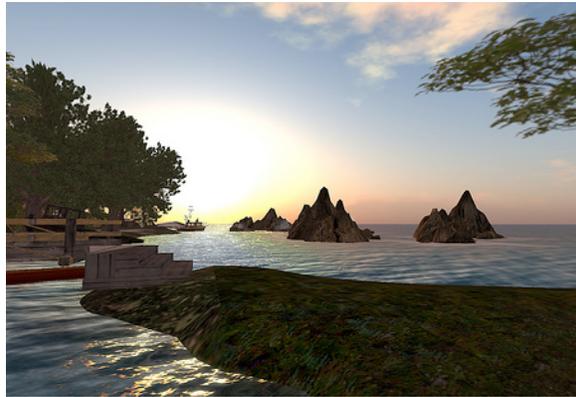
4. **Submit your PowerPoint file to be by Friday, May 22 at 3 PM.** If the PowerPoint file is late, you will not get any credit. I will take your PowerPoint file and turn it into a series of still images, then upload them to Second Life and install them in a PowerPoint-like presentation tool.
5. **Plan on meeting me in Second Life on Wednesday, May 27, between 11 AM and 1 PM.** I want to meet with all of you before the Sunday date to show you how this will work, etc. I'd like for each of you to meet with me (either as a group or individually) during this time, if possible. **You will not need to be in Second Life the entire time, only for a few minutes, but meeting me is important.** If you have classes on Wednesday between 11 AM and 1 PM, let me know and we can figure out an alternative time.
6. Finally, **attend the Second Life presentations on May 31 at 2 PM.** Present to the audience (it shouldn't take too long), there will be a brief question and answer period afterwards, and all will be well. You will be eligible to complete the entire class's 10 point extra credit project as well if you'd like... more details about this will be forthcoming through *mbchem*.

This will be an incredibly fun event, and I'm looking forward to seeing your presentations! If you have any questions, please do not hesitate to contact me, ok?

Peace, -- Michael



Regulus in the vortex of color



Regulus observes a beautiful beach sunrise in Second Life