McDonald Observatory Trip

BY

Wyatt McAllister

Project Week Proposal

Student: Wyatt McAllister
Advisor: Jason Daniel

Project Name: McDonald Observatory Trip.

One sentence description of your project:
I am going to journey to McDonald Observatory to study astronomy.

One paragraph explanation of why this project is important to you and/or the community:
I am very passionate about astronomy and am fascinated by the idea that there is so much more to life that just the earth itself and that we may not be alone in the universe. I am very exited about going to an observatory because I love to view stars and look for objects in the night sky but the range of objects that I can see is extremely limited. Observatories have state of the art telescopes that I would love to have a chance to look through because they will give me a wonderful view of the sky that I would not be able to have with an ordinary viewing device such as a regular telescope or set of binoculars. I also do not know as much as I would like to about astronomy and going to an observatory and meeting real astronomers would be an amazing experience for me.

Brief description of the necessary ways of being for you to ensure the success of your project (ex: organized, courageous, etc.):
I need to be very **organized** and keep track of what I need to do for my project and when. I would need to prepare a list of questions to ask the astronomers that I interview ahead of time. I will need to de **devoted** to my project because sometimes I will get frustrated because I will not understand something and the astronomers will not explain it to me. I will need to be **focused** so that I can get my work done in an orderly fashion and so that my work will be quality. I need to be **prepared** so that I have what I need to get all of my work done on time. I will need to be **optimistic** so that I will not give up when I face a very challenging problem.

Your mentors and their contact information (phone & email):
Name: Kelley Janes, E-Mail: Kelley@khabele.org Phone: 512-217-8101
Name: Astronomers and staff at McDonald Observatory, Phone: 432-426-3640, E-Mail: http://mcdonaldobservatory.org
Name: Kyle Fricke, E-Mail: kylef@astro.as.utexas.edu
Name: Dr. Judith Meyer, E-Mail: meyerj@astro.as.utexas.edu, Phone: 432-426-4153

Project Timeline: Be sure to add in requesting the rides you will need

✪ Eloise will be driving me all of the places that I will need to go ✪

Action	By When	Result Produced	Date of Completion
Contact McDonald Observatory to find out what programs are available	Nov 20, 2008	Schedule obtained	Nov 10, 2008
Confirm schedule	Dec 14, 2008	schedule confirmed	Nov 23, 2008
Make hotel reservations	Nov 25, 2008	Place to sleep	Nov 23, 2008
Get names of mentors from kelley	Nov 24, 2008	Kyle Fricke	Dec 3, 2008
Contact mentor	Dec 5, 2008	Interview set up	Dec 4, 2008
Plan travel route	Dec 14, 2008	Organize fastest route to destination	Nov 23, 2008
Pack	Dec 14, 2008	Gather materials needed for trip	Dec 14, 2008
Prepare questions for interview	Dec 11, 2008	Prepare for interview	Dec 11, 2008
Interview mentor	Dec 11, 2008	Further my knowledge of astronomy	Dec 11, 2008
Drive to McDonald Obsevatory	Dec 15, 2008	Arive at destination	Dec 15, 2008

Project Schedule:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8-9 AM	Drive all day	Breakfast	Breakfast	Breakfast	Breakfast
9-10 AM	↓	Explore Decoding Starlight Exhibit Hall	Self guided tour of 362 Hobby-Eberly Telescope	Pack up	Finish anything else that needs doing
10-11 AM	↓	Watch multimedia presentation	↓	Drive back and work on finishing essay and presentation	Write thank you noted to mentors
11-12 PM	↓	Solar viewing program	Interview mentor	↓	↓
12-1 PM	↓	Lunch	Lunch	↓	↓
1-2 PM	↓	View sun spots and flares	Private tour with mentor	↓	↓
2-3 PM	↓	90 minute tour of large research telescope	↓	↓	↓
3-4 PM	↓	↓	↓	↓	↓
4-5 PM	Check in to our hotel and get settled there	Early dinner and journal work	Dinner and journal work	↓	Dinner and journal
after 5 PM	Go to sleep	Explore five different planets thru telescopes	Private tour with mentor	settle back in at home and go to sleep	Sleep

• Include who will be bringing you to your commitments on the calendar
• Schedule a minimum of ,* minutes a day to keep a journal.

Materials Needed:

Materials Needed	Where to get it	Cost
Camera & extra batteries	N/A	N/A
Journal materials	N/A	N/A
Clothes	N/A	N/A
Computer & accessories	N/A	N/A
Hygiene supplies	N/A	N/A
Suit case	N/A	N/A
Car	N/A	N/A
Telescope	McDonald Observatory	N/A
iPod	N/A	N/A

Project Schedule II:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8-9 AM	Left house and drove	Breakfast	Breakfast	Breakfast	Breakfast
9-10 AM	↓	Finished working on yesterday's journal	Worked on yesterday's journal	Pack up	Drove back home and finished journals and presentation
10-11 AM	↓	Solar Viewing Program	↓	Drove to Big Bend National Park while working on journal	↓
11-12 PM	↓	90 minute tour of two large telescopes	↓	↓	↓
12-1 PM	↓	↓	Tour with mentor	↓	↓
1-2 PM	↓	Lunch and journal work	↓	Lunch at Big Bend	↓
2-3 PM	↓	Started tour with Dr. Judith Meyer	Lunch, Decoding Starlight 2:30 to 3:00	Hikes at Big Bend	↓
3-4 PM	Checked into our hotel and got settled there	↓	Journal work	↓	↓

4-5 PM	Hiked to the top of a mountain	4:30 to 5:30 worked on journal	Played sax and took a hike	Ddrove to Sanderson	Dinner
after 5 PM	Had dinner and went to bed	6:00 Twilight Program, 7:00 to 9:30 Star Party	Dinner and journal work	Had dinner and went to bed	Sleep

- Include who will be bringing you to your commitments on the calendar
- Schedule a minimum of ,* minutes a day to keep a journa

Wyatt McAllister
12/15/2008
McDonald Observatory Trip
Day One

Day One

Hello reader,

I am on my first day of my project week trip. I am going out to McDonald Observatory in Fort Davis, Texas to study astronomy.

A few days ago I interviewed my mentor, Kyle Fricke, with a list of questions that I had prepared ahead of time. I met him at a cafe near UT. We talked about the first of my questions. We talked about dark matter, dark energy, and alternate dimensions. We talked about particle accelerators and the god particle. We talked about the theory of relativity and we talked about Galileo. Then he took me to the UT astronomy building. We went up on to the roof and he showed me the telescope that belongs to UT. He showed me how it worked. He showed me the system of the dome covering it and how it swiveled. He showed me the computer system that it ran on. The computer ran on Doss. It was crazy. you had to type in commands to operate it. We did not get all of my questions answered so I sent the rest to him and he is E-mailing it back to me.

After that I went back home to pack for the trip out to Fort Davis. I got up today, loaded the car and started driving. I have been driving all day. Thus my day has been pretty uneventful. I slept for the first four hours of the trip. We passed some beautiful country side though. Have attached some pictures of it below:

This is an old windmill for pumping water out of the ground that I saw.

When I was about three miles from my hotel I went by the Wild Rose Pass pictured above.

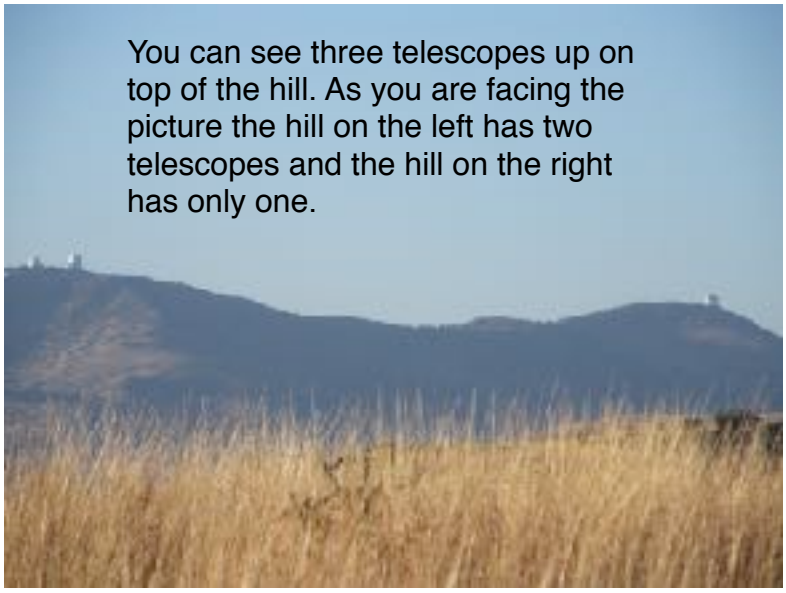
I saw modern wind powered generators. We can clearly see how wind power has developed in west Texas over the last century.

I also saw a cool pyramid shaped rock pictured above.

We stopped at Pizza Hut and I got an individual size super supreme pizza that had nine toppings on it.

Then I kept driving on for a few more hours. Now I am at my destination getting settled into my hotel. It is called The Indian Lodge. It is the closest hotel to McDonald Observatory.

I just went on a hike with my mom up into the Davis Mountains by our hotel. We got all the way up to the top of this huge hill. When we got to the top we could see the McDonald Observatory. From our hotel it is thirteen miles away but we were so high up that we got a great view of it. We could see all three telescopes:



You can see three telescopes up on top of the hill. As you are facing the picture the hill on the left has two telescopes and the hill on the right has only one.

Here are more pictures from our hike:

This is an ariel view of our hotel from

This is the Fort Davis Mountains from

This is me on my hike. You can see our hotel in the background.

This is the view from the top of the hill. That is all the reward that I needed after a long hike.

This is an awesome opossum that I saw before leaving for Fort Davis:

Now I am just working on my journal in my hotel room. When I am finished I will watch the third MATRIX movie with my mom and then chill in bed to prepare for tomorrow when we head out to the observatory for a day of fun.

Now that I have told you about what I did today I will now reflect upon my day and tell you about the challenges that I faced.

The first major challenge that I faced was a problem that I had with my computer. I lost some files on my computer that I had created. I did not handle that very well. I had worked very hard and had gone to the Apple store two days in a row to get my computer organized. When all of my work was lost I started screaming. My computer kept saying that all of my files were in the trash but they were not and I did not know what to do. Eventually my computer started saying that all of my files could not be opened because it could not connect to the proper server. I still do not have them back and that is heartbreaking to me.

Another challenge I faced was the long drive to get to the observatory. I handled that fine. I just made the best out of the drive by reading and working on my computer.

Another challenge I faced was the long strenuous hike to the top of the mountain that I climbed. I handled that very well. I didn't think about the pain. All I thought about was the amazing view that I would have when I got to the top. I was rewarded with one of the most beautiful views I had ever seen.

I also had some great successes today. Getting to the observatory was a great success. I fixed a program on my computer called iListen that I had been having trouble with. I climbed to the top of the hill. I did this journal. I watched MATRIX 3. I captured some great pictures and I finished a good book that I had been reading.

Wyatt McAllister
1/16/2008
McDonald Observatory Trip
Day Two

Day Two

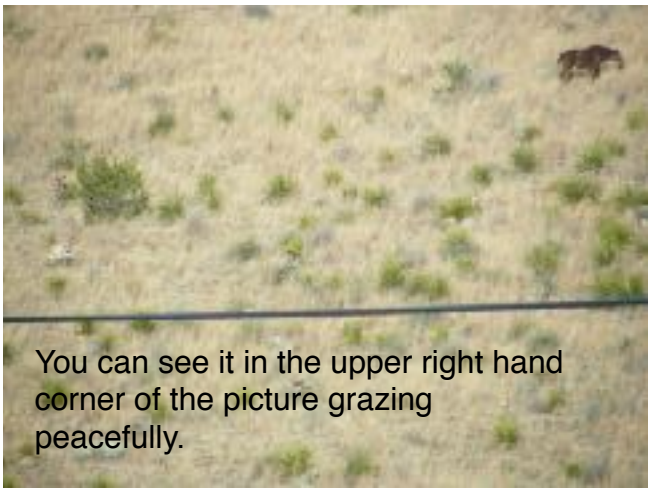
Hello reader,

I am on my second day of my project week trip. I am going out to McDonald Observatory in Fort Davis, Texas to study astronomy.

Today was a great day. I got a ton done and had a great time. I will start off with my first big challenge. I had a terrible time going to sleep last night. I was up until 2:00 am. I woke up today very tired. I got dressed and staggered to the little restaurant at my hotel. It is the only restaurant for miles and the only reason it stays open is because it is state funded. In other words the state pays for it because it wants to have a restaurant in its park. Despite all of this it has good food considering it is a small cafe. I had eggs, a bagel and bacon.

Then I drove to the Observatory. I saw a havalena on the way. She was so brave. She stood out in the middle of the rode and snorted at the car. The reason for this may have been that she had a child with her. I did not get pictures of the child but I did get pictures of the big one. She looked like this: I also saw a horse:

Look how she walks out in the rode to protect her baby.



You can see it in the upper right hand corner of the picture grazing peacefully.

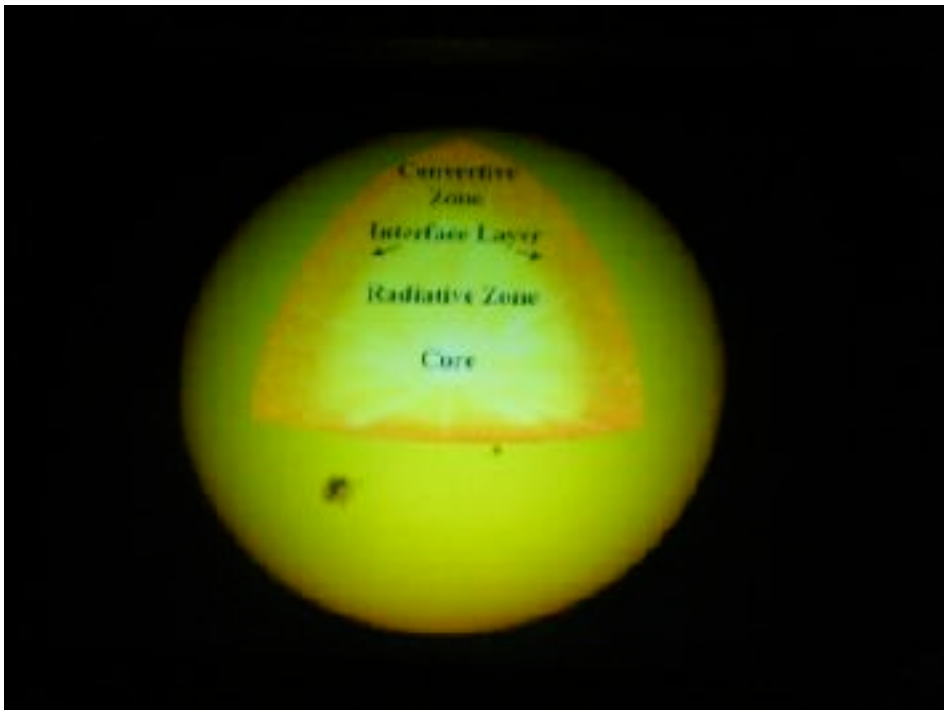
I also got a great view of the Hobby-Eberly telescope: And a great scenic view:

When I got to the Observatory it was about 9:30 am. We found out that it did not open until 10:00 am so I got in the car and slept until then.

I knew that my mentor Kelley Janes had set up another mentor for me at the observatory but the name was on my E-Mail account. A nice woman let me use her internet connection to get the name. It was Dr. Judith Meyer.

I went to an exhibit in the visitor center of the Observatory called Decoding Starlight Exhibit. I learned about the use of spectrographs in astronomy. Astronomers use them to analyze the light from stars and they can extrapolate amazing information from them. Such as: how old the star is, what temperature it is, and what type of star it is.

I did not get to finish the exhibit today because just as I was getting really into it a voice called out on the megaphone: " attention all visitors. The Solar Viewing program is starting" and that was my next stop. Usually in that program you get to view the real sun through one of the telescopes. But today it was so overcast that we just watched a virtual tour of the program. It was a great experience. I learned about the different types of stars; how the coolest ones are red and the hottest ones are white. I learned that the sun has a surface temperature of 10,000°F and how a blue star has a surface temperature of 60,000°F. The hotter a star is the shorter its life span because it uses up its fuel more quickly. Our sun will live to be about 10,000,000,000 years old. But a blue star will only get to be about 300,000,000 years old. Stars are not balls of fire but in fact they are balls of heated gas. Stars are basically huge nuclear fusion reactors. I learned about the composition of a star:



I learned that stars heat up gas so much that it becomes electrified and this creates a network of magnetic fields around the star that run horizontally from its top to its bottom like longitudinal lines. The star spins faster at its equatorial region so the

magnetic fields get looped around in the middle. Then they just get more and more loopy until they explode in a solar flare. Anyway, there is more that I learned, but I can't tell you right now because I have to move on.

After I finished with Solar Viewing Program, our tour guide, who was named Shannon Rudine, said that we would have a twenty minute break and then he would take us on a tour of some of the telescopes in the observatory. On my break I went to the cafe and got a brownie and some tea. I then went to to the gift shop and looked around there. I sat in the cafe and finished revising my last journal. Then the intercom told everyone that the tour had started so I got on the bus and we drove over to the 107 inch telescope called the Harlan J. Smith Telescope. Telescopes are measured by the size of their mirror. The telescope was a lot bigger that 107 inches. It was about 100 ft tall.

As we were walking up to the telescope he showed us the the Hobby -Eberly telescope that was on the mountain opposite. He showed us the Astronomers Lodge which is the place where all of the astronomers that come to the Observatory stay. He told us about the history of McDonald Observatory: In the 1930's, money was given to The University Of Texas by a man named William J. McDonald for an observatory. He was very interested in astronomy and so he gave everything he had to UT when he died. He gave them a ton of money and a 600 acre property for them to use as an observatory. What he did not know was that UT had no astronomy department and his relatives contested the will. After seven years in court, UT won and got $800,000 to build the McDonald Observatory. Since UT did not have an astronomy department they partnered with the University Of Chicago to help develop McDonald Observatory. They have since built nine telescopes. The largest of which is the Hobby- Eberly named after the two families that donated to build it.

Then we went inside the 107 inch telescope, the Harlan Smith Telescope, which is named after the first director of the Observatory from UT. We went up into the telescope room in an elevator. This elevator was special, it had a red florescent light. The light went off before we got to the floor with the telescope in it because at night the florescent light can mess up all the readings that the astronomers are making. The telescope was amazing. It looked like this:

You can see how big it is because of my tour guide standing right next to it. That thing on the bottom that looks like a pyramid (the one behind him) is a spectrograph (I told you about that earlier.) The telescope is a reflecting telescope. The light comes in through the dome (the gray part of the picture on the right.) There is a hole in the dome which is the brown area that you can see on the gray area. It is rimmed with yellow pipe. The dome swivels around and the hole in it opens up so that the telescope can be both protected from the elements and get a good view of the sky. The light enters the telescope through that cage of pipes on top of it that you can see. The light then goes into the tube of the telescope and hits the back mirror. The mirror is concave (caves inwards.) This curved feature focusses the light and it hits a secondary mirror at the top of the telescope. Depending on which of the three interchangeable mirrors that is put in place, the light then goes into one of three holes and is then fed into a computer and goes into the control room where astronomers look at the images. The control room looks like this:

So I looked at that and he told us how it worked and then we went to the newest telescope that is called the Hobby-Eberly Telescope named after the two families that donated to its cause. It is 362 inches. It is a strange variety of telescope. Unlike most telescopes that can swivel on an axis, it is fixed in place to cut down on costs. He showed us how it worked. There were 91 mirrors that are fixed in place and they have to turn the whole telescope on these inner tube-things to get it to move because it was fixed in place. We listened to a lecture from our guide. Then we went back to the visitor center and I had lunch. I ate a chicken salad sandwich. Then just as I was finishing, my mentor walked up. (We had agreed to meet at two.) She looks like this:

We spent two and a half hours together. First we went back to the Harlan Smith Telescope but this time I got to move it. I got to move the whole thing north, south, east and west. I got to do the same for the dome. I got to go into the control room and look at all of the machines. Before we did that though, we went to the aluminizing room. Every so often the telescope mirrors have to be cleaned. They take the mirror to the aluminizing room and they remove the coating of aluminum that makes the mirror reflective. Then they put the mirror in a vacuum:

They vaporizes aluminum wires and coat the mirror all over. Her husband works there. His name is Keven Meyer. He looked like this:

After we did all of that we went up onto the cat walk that went around the side of the building.I got some great pictures:




Then we went over to the Otto Struve Telescope, named after the first director of the Observatory. Before we went up to the telescope, we went to talk to an astronomer that was working in the building at the time. His name was Steve Odewahn. He looks like this:

We talked for an hour with him about the big bang. Then we went to look at that telescope. We then went back to the visitor center. I said goodbye to Judy. I went back to my hotel and started working on this journal.

I then went back to the visitor center and did a twilight program. We learned how to use a planisphere. We learned about the different constellations and how to find them. We learned about the Starry Night software that the observatory uses. Then we took a twenty minute break.

Then I went to the star party. First we watched a presentation. We looked at some of the things that were targets for that night such as the Orion Nebula, the Eye of Taurus, Venus, Jupiter and the Andromeda Galaxy. We looked a the Starry Night program more. We then went outside and saw some of our targets for real. It was a very cloudy night at first so we could not see our target stars very well but we got to see some fuzzy images. I got a video of Venus. When we looked at Venus it was close to the horizon and the earth's atmosphere was acting like a prism so that Venus looked like a ball of rainbows. It was amazing.

The best part of my day was that just when I was about to go back inside from star gazing the sky cleared up. Everyone else had gone back in to see the Powers Of Ten video but I got to see the Davis Mountains sky. I was out with all of the astronomers as they were about to pack up their stuff. When the sky cleared, me and my mom got to see all of our targets without interruption and talk with some of our astronomer friends.

After that I came home and I worked on this journal until midnight. Then I went to bed and surprisingly fell asleep very quickly.

Now I will reflect on my day. First I will tell you about the challenges that I faced and how I handled them. My first challenge was that the sky was overcast and so I did not get nearly the experience that I wanted because I could not see the sky. I think that I handled this challenge very well. I just accepted the reality that the sky going to be cloudy all day and didn't get upset by it. I had a great time. At the end of the day the sky did clear up giving me a great view of the stars.

My second challenge was that I was given so much information so fast that I could not process it or remember it. I handled this challenge by trying my best to absorb all of the information that I could and writing as much of it down in these journals as I could.

My third challenge was that I did not get to finish the Decoding Starlight Exhibit. I handled that OK. I was a little sad about it but I soon forgot because I had so much more information to deal with.

Now I will get to the best part of my journal: my success- the best parts of my day. My first success was that I got to go with my mentor to three of the most frequently used telescopes and got to get an inside view of how they worked.

My second success was that I got rewarded for my patience with a great view of the stars at the end of the day.

My third success was that I got to meet a real astronomer that was actually awake in the day!! Usually astronomers are nocturnal because they need to see the stars. I got to have a great conversation with him about he big bang.

Wyatt McAllister
12/16/2008
McDonald Observatory Trip
Day Three

Day Three

Hello reader,

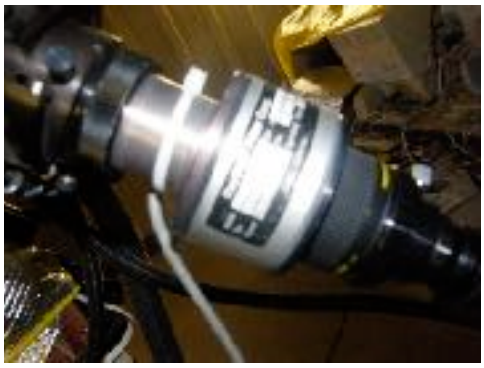
I am on my third day of my project week trip. I am going out to McDonald Observatory in Fort Davis, Texas to study astronomy.

I got up today at 9:30 am and then went to the Observatory. I went to the Star Date Cafe and ate a bagel with smoked salmon, cream cheese and scallions. I worked on my Day Two journal from 10:00 am-12:00 p.m.. I then went with my mentor to finish up my behind-the-scenes-tour.

First we went to Judy's office to put some of her stuff away. We stopped by the Observatory's 15 inch, solar telescope. It has two 3 inch telescopes hooked onto the sides. It also has a filter attached to it because the sun is such a bright star, that if they let all of the light from it into the telescope, it would ruin the optics. It has web cams on all three telescopes so that the information can be broadcast into the theater for the Solar Viewing Program to view. It looks like this:

This is the telescope.

This is the filter. See how the hole is so small?



This is the web cam.

In the picture, the roof of the building slides off to allow the telescope to see the night sky.

Second, I went to the 36 inch telescope that does not have a special name. It is not in use for research today. It is very old and does not have any of the high tech equipment such as a spectroscope or the modern navigation that astronomers need to do their work. Instead of a spectroscope it has an old filter wheel that allowed the astronomers to see the amount of different colored light coming through the telescope. It looked like this:

This telescope has an open tube as you can see. It does not matter very much to the quality of the image you see through the telescope. It just lets more light in. The light that is focused through the primary mirror still gets to its destination just as it would in a closed-tubed telescope.

We then went to the 30 inch telescope. It was a lot more up-to-date than the 36 inch. There were astronomers coming that night to look through it. The air in the camera on it was being pumped out so that liquid nitrogen could be fed into it in order to keep the camera cold so it could function properly.

The telescope looked like this:

The camera looked like this:

The vacuum looked like this:

The control room looked like this:

We then went to visit the Monet Telescope. It is a robotic telescope that can be remote controlled. It also has a web cam that I am now on because I stood in front of it for so long. I did not get to go inside of it because Judy didn't have the right key so I do not have cool pictures from inside of it. Sorry!! I did see some cool deer, and I did get pictures of them:

Anyway, this is a picture of the outside of Monet:

You can see the cut that goes through the center of the barn where it comes open.

I then walked back to the car and on my way I spied a radio telescope that does not belong to the Observatory. There are ten different telescopes exactly like it, each in a different state. They work all together to produce the effect of a 5,000 mile wide radio telescope. Is that not the most ingenious thing you have ever heard? The telescope looks like this:

You can see it in the middle of the image with its huge dish. Contrary to what you might think, those buildings in front of it are a dude ranch and have nothing to do with the telescope. Wouldn't it be cool to live right next to a radio telescope?

I then drove back to the visitor center and said goodbye to my wonderful mentor. I worked on finishing my day two journal from about 1:15 p.m. to 2:30 and finished it up. I ate lunch while I was doing that.

Then I got to go back to the Decoding Starlight Exhibit and finish up there. I did that from 3:00 to 3:30. I took some great videos but sadly I cannot show them to you .

I went to the gift shop and finished my shopping. I got some cool T-shirts, a map of the lunar cycles for 2009, and a poster celebrating the International Year Of Astronomy in 2009. The reason that 2009 is the International Year of Astronomy is that it is a celebration of the 400th anniversary of when Gallileo looked though the first telescope in 1609. I also got some astronomy books and two planispheres. Then I purchased a postcard and wrote a thank-you-note to Dr. Judith Meyer. I then left it for her and left McDonald Observatory. I came back to my hotel. I practiced my new soprano sax. Then me and my mom took a walk and I started working on this journal.

Now I will reflect on my day. First I will tell you about the challenges of my day. My first challenge was that I did not eat dinner last night because we got back from the star party so late. That made me hungry this morning. I think that I handled that very well. I just got up and waited to get breakfast at the Observatory. Then scarfed my bagel.

My second challenge was that I did not get enough sleep last night because I got home so late and then I worked on my journal. I handed that well. I was just a little tired.

My third challenge was that since I got home so late I did not get very much of my journal done at all, so I had to work on it a very large portion of the day. I think that I handled that the only way that I would. I just accepted the reality that I needed to get my journal finished and did it.

My fourth challenge was that I did not get to see Monet. I just made the best out of it and had a good time watching the family of deer and listening to my mentor talking about Monet.

Now for my successes!!! My first major success was that I have now seen most all of McDonald Observatory and it has been an enlightening experience.

My second success was that I got to finish my Decoding Starlight tour and I have learned a lot from it.

My third success is that I am about to be finished with three out of four of my journals.

My fourth success was that I got to practice for a good thirty minutes on my new soprano sax. I serenaded a bunch of people in the hotel and they liked it.

Wyatt McAllister
12/18/2008
McDonald Observatory Trip
Day Four

Day Four

Hello reader,

I am on my last day of my project week trip. I am going out to McDonald Observatory in Fort Davis, Texas to study astronomy.

Project week is about to end. It is now 3:30 p.m. on the last day of project week. Project week will be over in 15 minutes. I have had a good day. It has also been pretty uneventful. I have been in the car all day. I got up this morning, got dressed and then went to my hotel's restaurant that is called the Black Bear and had breakfast. I ate a pancake, a biscuit, and an egg.

I packed up all of my stuff, got in the car and left the hotel. I drove to the grocery store and got batteries for my camera. My camera does not have a rechargeable battery. It runs on AA batteries and it runs out of juice constantly. I always forget to bring batteries for it.

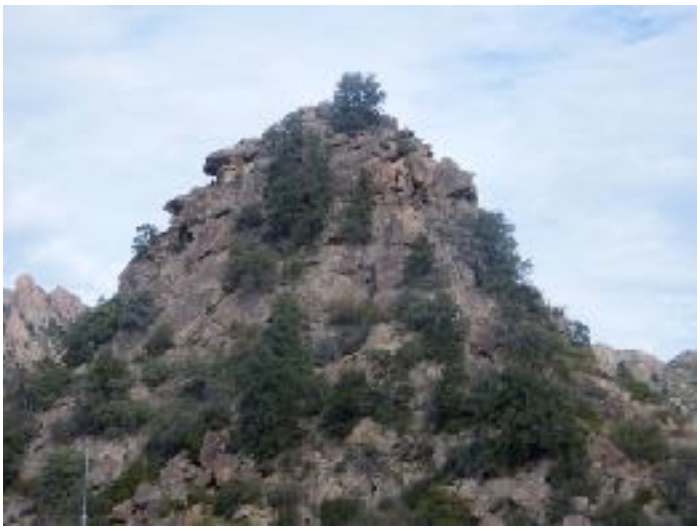
After I did that I went around Fort Davis and tried to find a barber shop because my hair was getting really long and I could not see. I asked the cashier and he told me that there was one in Alpine so I started driving there. On my way I passed the original Fort Davis used in by the pony soldiers to protect the settlers from the Apache Indians. I got some great pictures:

Then I fell asleep. When I woke up I was in Alpine. I got my hair cut. Then I started driving to Big Bend National Park.

I fell asleep again and when I woke up we were nearing Terlengua.
I went through there and then entered Big Bend National Park:

I wrote my reflective essay in between Terlengua and Big Bend National Park.

After I got into the park I had lunch at the Big Bend lodge and then took a hike in the Chisos Mountains. I got some great pictures:



Next I drove down to the Rio Grande and enjoyed the view of Mexico and took a swim. Mexico look very similar to Texas from where I was standing. I do not know what I was expecting. I think I wanted to see a village with men and woman in sombreros riding donkeys. Instead this it what I saw:

I was disappointed but now that I think about it I realize that there is no way that the landscape would drastically change in over 100 ft, even if it was on the other side of a river. I am now driving to Lake Amsted to spend the night.

So long journal. I will miss you. My project week is over.

Now I will reflect on my day. My first major challenge was that my camera ran out of battery. I handled that well. I just found the nearest grocery store and got some new batteries.

My second challenge was the long hike that I took. I handled that well just like last time. I just focused on the great view and had a good time.

My third challenge was writing my reflective essay. I handled that well. I just tried my hardest and really thought about my trip. I ended up getting a good piece of work out of it.

First success was getting to see the great sites I saw along the road. Big Bend is a great park. It has country that is so beautiful. It is one of the best I have ever seen.

My second success was finishing up writing everything for my project. I feel like I got a lot done today. I finished my reflective essay and I am about to finish this journal.

My third success was getting to see Mexico for the first time and taking a swim in the Rio Grande.

Wyatt McAllister
12/18/2008
McDonald Observatory Trip
Reflective Essay

Reflective Essay

Hello reader,

I am am on my last day of my project week trip. I am out at McDonald Observatory in Fort Davis, Texas studying astronomy.

My Project week is almost over and I am sad about that. I loved my trip to McDonald Observatory and I wish that I could have stayed there longer. My favorite part of the trip was getting to go behind the scenes and get a hands on tour of the humungous telescopes and figure out how they worked. I even got to move two of the biggest ones. I also loved getting to see the great views that McDonald Observatory had to offer. I could see for miles and miles. Mountains upon mountains stretched before me. I think I might even have been able to see into Mexico.

My worst challenge was that I did not ever have clear skies so I did not get the experience that I wanted. I went to an Observatory and did not get to see the sky as clearly as is possible out there. I am still very disappointed by that.

My best success was that I got to learn more about astronomy than I ever had in such a short time period. I learned about stars, what they are, how they work, and how to find them. I learned about telescopes, how they work, the different types of them, and what they do. I learned about our solar system, what it is, and how it formed. I learned about the National Year of Astronomy. I learned about nebulas, galaxies and globule clusters. I learned so many things and I had a great time.

Another one of my biggest challenges was that I did not get to spend very much time with actual astronomers because they were always asleep during the day. The one time I did get to talk to one I had a great conversation with him. That only left me with more questions. I would have loved to have been able to talk to him again.

I stayed in a great hotel and got good meals. I enjoyed a great hearty meal of steak one night and a nice burger the other. I had a great time hiking by my hotel and got a great view. I am happy about that. My hotel was not even very expensive.

I have gotten a great insight on how astronomers live and the kind of things that they do day to day. This has helped me figure out whether or not I want to grow up and be an astronomer. I am still unsure on this subject. I know that my life would be very different if I were an astronomer. I would be nocturnal for one thing. I would see the world in a very different way though. I would realize the vastness of the universe and the insignificance of everything compared to it. I would most likely find a grace in life that is uncommon to most men.

Project Week Portfolio Rubric

Student: _____ Advisor: _____

Portfolio Component	Points Possible	Pionts earned
Title Page Includes name of your project and your name.	10 Pionts Total 5 for tite 5 for name	
Planning Formes (typed) Project propoaal Project timeline Materials Chart Daily schedule	50 Pionts Total 10 for proposal 10 for timeline 10 for materials 10 for schedule 10 for typing	
Daily Journals One gor each day (4 total) One page typed 12 piont font Double spaced	100 Pionts total 20 for journal 1 20 for journal 2 20 for journal 3 20 for journal 4 20 for typing	
Photo journal three photos for each day captions for each photo	120 Points total 30 for day 1 30 for day 2 30 for day 3 30 for day 4	
Final Reflective essay Minimum of 5 paragraphs 12 point font Double spaced	120 Points total Evaluate on: content grammer	
Pionts Earned = /400		
Percentage =		