

EVALUATION *of the*
CERES
S'COOL
PROJECT



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Supporting Data from Inactive Teachers

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Introduction

The CERES S'COOL Project is the quintessential instructional activity - one that integrates mathematics, science, and technology while emphasizing and developing 21st century skills. Through participation in the program, students

- collaborate with others
- think analytically
- utilize technology
- take responsibility for planning and carrying out activities
- come to understand and appreciate their role in conducting meaningful research.

Teaching within the context of real-world problems is the goal of most standards-based science programs, but it is often difficult to pull together lessons that do not seem contrived. S'COOL addresses this challenge, and engages students in real research, utilizing real data.

Evaluation Methodology

The evaluation of the S'COOL initiative focused predominantly on teacher use of the program, and on issues that might improve participation and implementation. Two distinct surveys were designed – one for teachers who have been actively participating in the project, and one for inactive teachers.

Emails were sent to all registered teachers (both active and inactive), and they were asked to complete the online surveys. We waited two weeks, then resent emails to the teachers who had not yet responded, in hopes of increasing participation.

In total, 126 active teachers responded, and 48 inactive. Due to the relative homogeneity of teachers who would opt to register and/or participate in a high-level science program, such as S'COOL, we feel confident that the sample is sufficient to generalize to a larger population.

Overview of Findings

Instructional Value

- Teachers felt strongly that the project was useful, and that it kept students engaged.
- Several teachers commented that the project often brought out leadership qualities and sparked interest in students who were reluctant to participate in regular classroom activities.
- Students loved the idea that they were helping NASA conduct real research.
- 100% of non-active teachers indicated that they would have participated if they had known the state standards that were addressed.
- Even teachers who did not use the program spoke highly of it, and hoped to someday have the time to fully engage.
- Several teachers expressed concerns that the materials were not available in Spanish.

Getting Started

- A few teachers weren't certain how to begin participating in S'COOL. They seemed to need more hand-holding or step-by-step instructions.
- Teachers liked getting printed materials, in addition to those available for download on the website.
- While many teachers found the website easy to navigate, others found that it was difficult to find things. Some suggested a revamping of the website to give it a more up-to-date image and to improve usability.

Cloud Observation

- Finding time in busy schedules to observe clouds was the most common barrier to participation.
- Teachers were less inclined to observe clouds if they knew that no satellite was passing overhead.
- The teachers reported very little difficulty managing their classes during cloud observations.

Data Submission

- Some teachers found the data submission process confusing.
- One teacher remarked that the turnaround time to get results back from NASA had improved, but others felt that the lag time between data submission and data analysis caused students to lose interest.

Additional Resources and Materials

- One of the aspects of the project that most impressed teachers and students was the quick response to questions by NASA scientists.
- Most teachers were aware of the cloud tutorials, but many teachers were not aware of some of the other resources available on the website (e.g., lesson plans, science fair projects, etc.).

Recommendations

- Consider updating the website to give it a cooler look and improve its usability. Most participants are middle school students, and one teacher even hinted that the site appeared to “kiddy” to appeal to them.
- In addition, the full scope of what’s available on the site is difficult to realize from the entry page. Making all of the resources (lesson plans, science fair projects, etc.) more prominent might increase awareness of these materials, thus increasing their impact.
- Several teachers suggested that you develop a step-by-step set of instructions for getting started (possibly using a visual slideshow, PowerPoint, or flash presentation).
- Think about developing alternatives for teachers with scheduling problems. One teacher suggested not even trying to coordinate with the satellite. She suggested that students could observe whenever convenient, upload their data, then have NASA choose the ones that met their needs (i.e., the ones that were aligned with the satellite’s positioning).
- You might explore the idea of offering incentives to increase participation. This suggestion came from one of the teachers:
I suggest special events with some incentive. (“Add silver linings!”) For example, GLOBE's Contrail Count-a-thon seems very effective as an event, and the possibility of a NASA scientist or astronaut coming to the school who collects the most to provide a presentation could be an incentive. Maybe the winning school could get a 1-year loan of video conferencing equipment that could be used for many student-scientist presentations?
- There was suggestion that you develop more structured inquiry problems to do with the data.
- Give teachers more background about the project, and explain more thoroughly what the data is used for.
- Consider correlating the various project-related activities to all state standards. Psychologically, in this time of accountability, teachers might feel more inclined to use something that has been externally validated as meeting their own state standards.

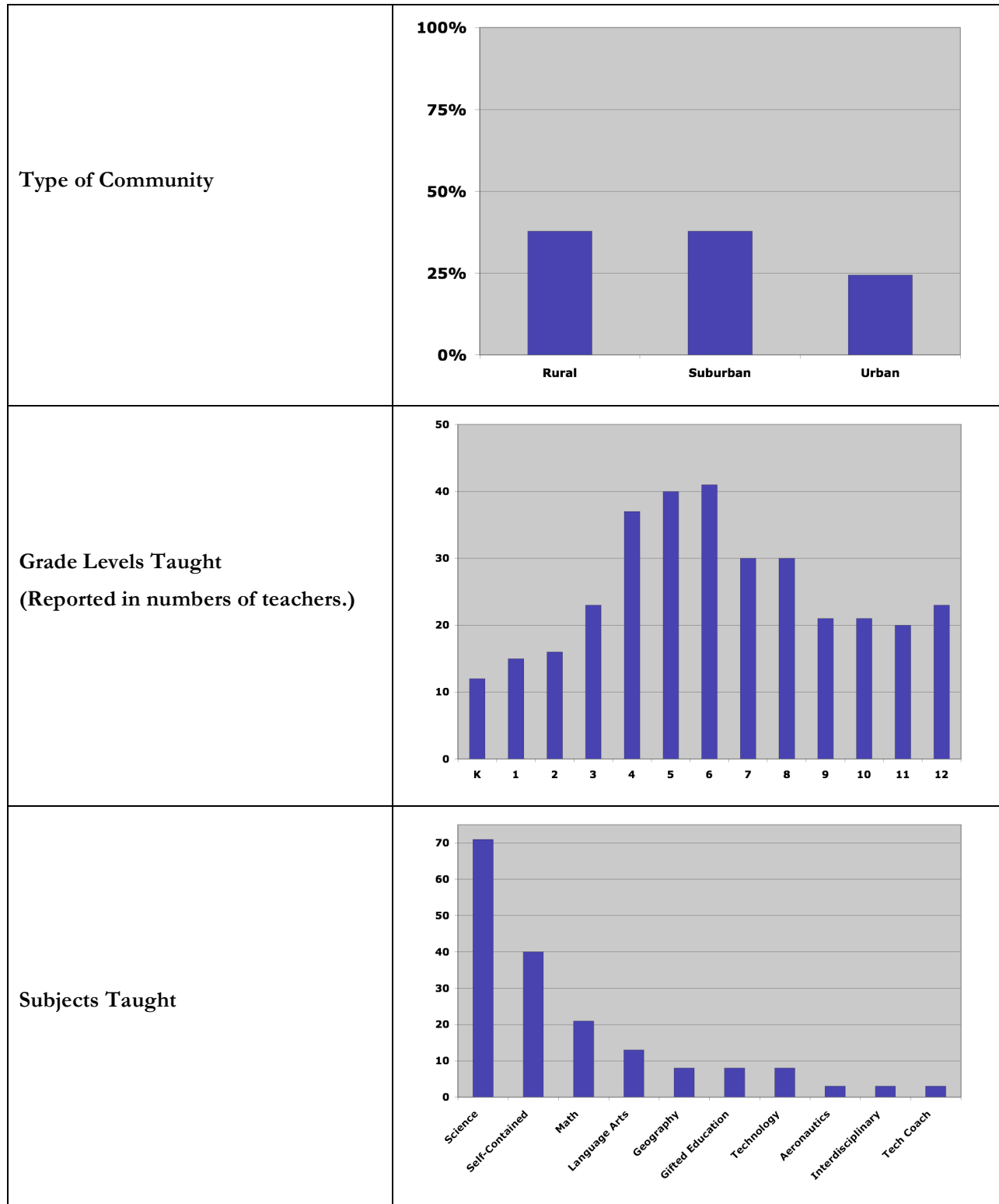
Supporting Data from Active Teachers

About the Teachers

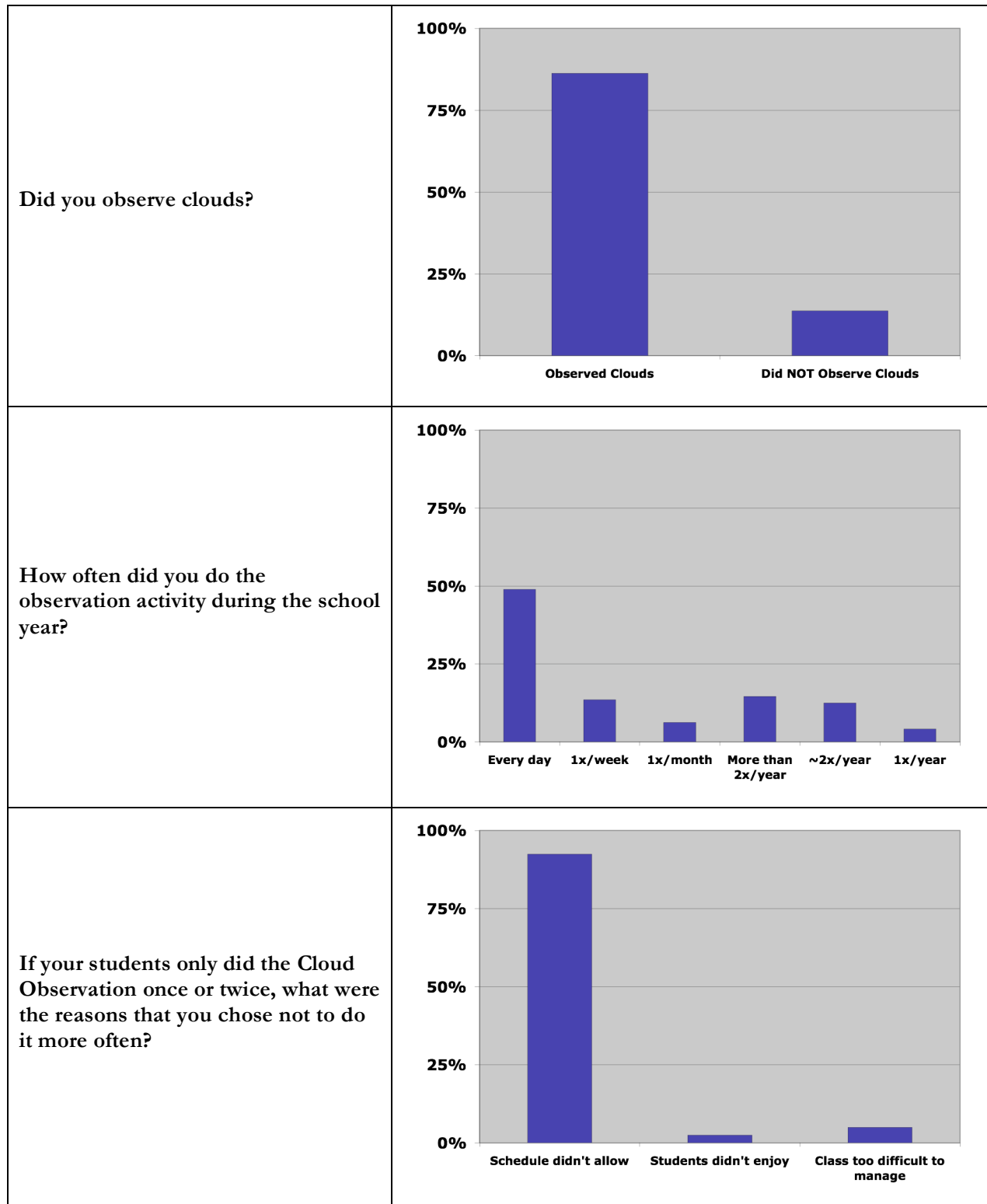
Number of Teachers from Various States	
Virginia	13
New York, Puerto Rico	8 each
Pennsylvania	7 each
North Carolina, South Carolina	6 each
California, Kentucky, Massachusetts, Michigan, Ohio	5 each
Arizona, Georgia, New Jersey, Washington (State), West Virginia	4 each
Illinois, Oregon, Wisconsin	3 each
Alaska, Connecticut, New Hampshire, Tennessee, Texas	2 each

How Teachers Heard About S'COOL	
Online (e.g., using search engine)	29
NASA-Sponsored Event	25
Conference	24
Teacher Workshop	19
Friend/Colleague	9
Newsletter	8
Word of Mouth (1 parent, 1 student; 1 curriculum coordinator)	3
Other	6

More Teacher Information

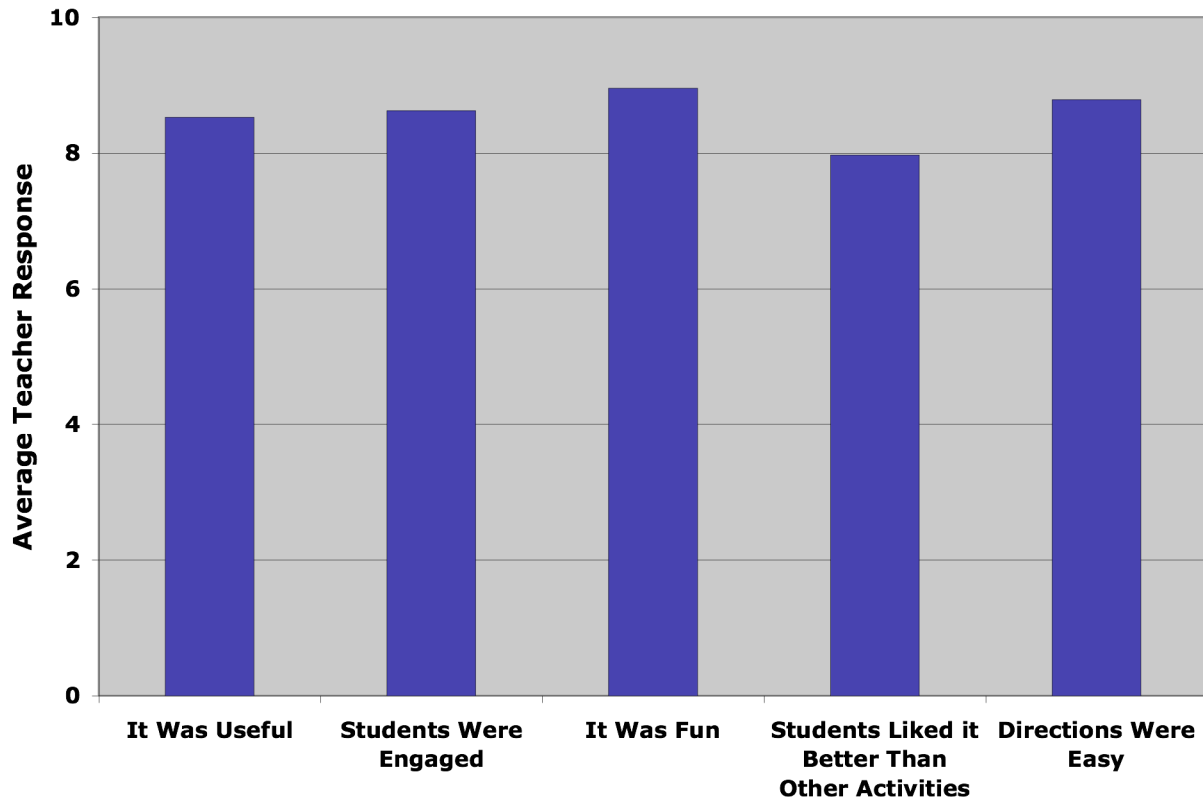


Cloud Observations



How strongly do you agree with the following statements regarding the Cloud Observations?

(1 = completely disagree; 10 = completely agree)



Comments About Cloud Observations

Frequency of Observations

- We observe clouds daily during the meteorology unit, then occasionally. (5)
- We try to get outside each day if possible. Sometimes other scheduled activities cannot be interrupted for our observations (5)
- We talk about the clouds often, we actually do more observations than we send in, as sometimes we just key in on what is happening in the sky. Usually I try to do it every day for a month.
- Everyday for a period of about 2 weeks when the satellite overpass times worked out well for the classes I teach.
- Each student completed 2 observations on their own.
- Last year we did it every day - this year it has been harder to work into our schedule.
- We were unable to send info to S'COOL due to technology issues stemming from damage from Hurricane Katrina. Also our school was closed from Aug. - Jan. due to flood and wind damage and damage from looters.
- We observe on occasion for training purposes. Then we pick a month and try to observe every satellite pass for the month.

- We are irregular, sometimes do it daily or 3 times a week for a while, then not again for some time; this year has been less active for us; problem is scheduling and integrating.
- I had a group of 10 students do observations 3/each during a two-week period; thereafter, I have two students observe and submit data almost daily.
- The students were responsible for the observation. Each week someone new was in charge so some weeks were better than others.

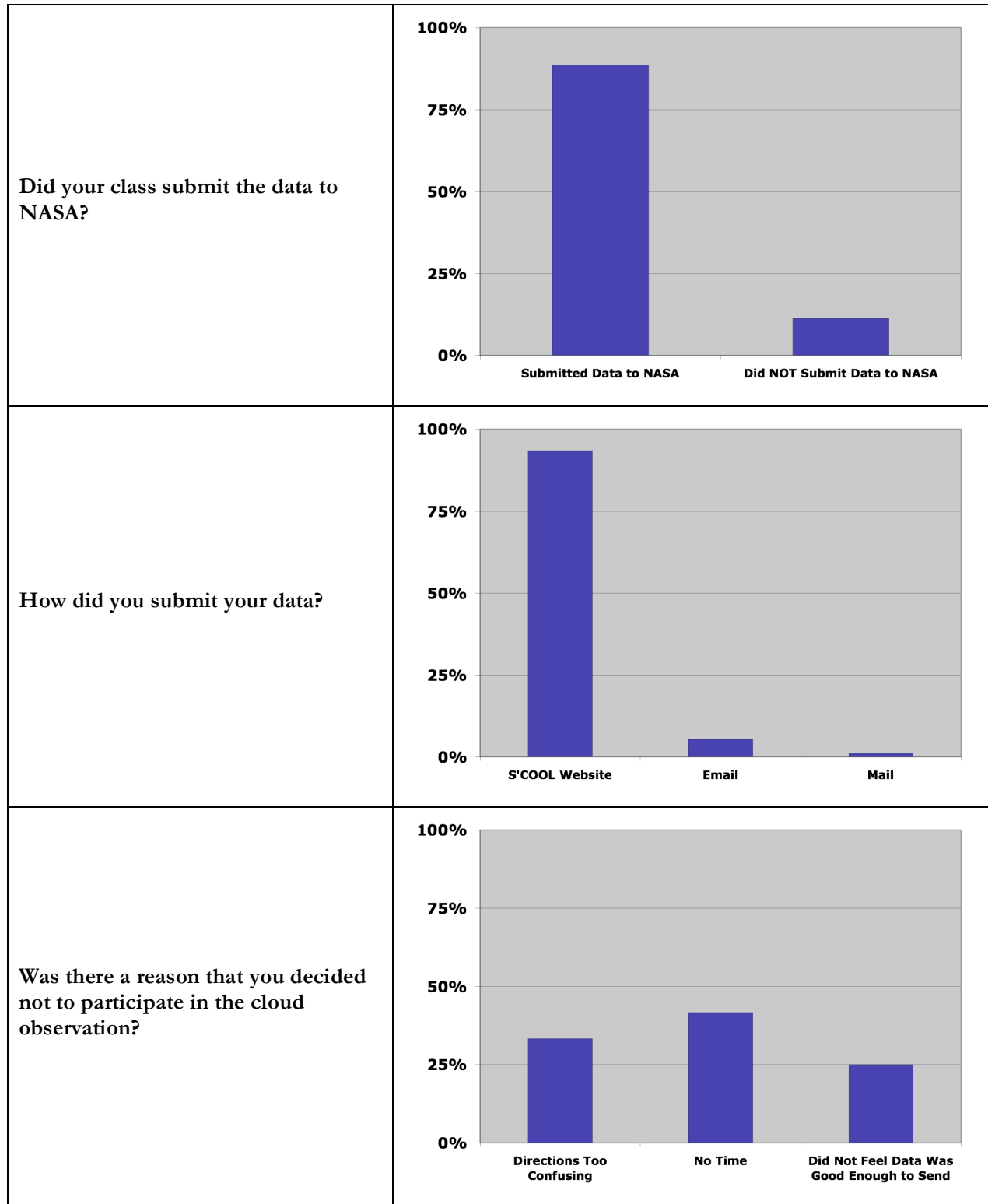
Reasons Teachers Decided Not to Participate

- My class schedule this year did not allow me to take observations during the time that the satellite was going over my location.
- S'COOL-like activities are not in our curriculum- too hard to coordinate and organize students to keep on track--- structure of school day does not permit going out at specific times of day.
- It sounds wonderful but I just can't seem to get it started for some reason.
- I didn't know how to get started or how to jump in. I needed more information/direction.
- I can't understand how to contact the satellite for my position in Puerto Rico.
- I would like to do it everyday with my seventh grade students, but the times of the observation did not work out with the time of my classes.
- I mentor other teachers [and] I have tried to get this going for 2 years. I don't know where to begin.
- I was just not clear on how to begin. Next school year I will try to incorporate this activity from the beginning.

Suggestions to Increase Participation

- If you could send someone out to help me! Actually, our school district is working toward integrating science and technology next year. We are getting started soon with laptops and overhead projectors. Perhaps this will be the year to get school off the ground in my classroom.
- I just need more time to look at the information. I did recently find the posters and other info given at the workshop. I would like to explore with it more this summer.
- You did have enough advertisements/emails to encourage everybody to participate in cloud observations. We just didn't have time for that.
- Nothing, I think the program is fabulous and so easy to use. It's just finding the time to actually use it.
- Maybe if you contact me in Spanish and I receive instructions in this language.
- I suggest special events with some incentive. (“Add silver linings!”) For example, GLOBE's Contrail Count-a-thon seems very effective as an event, and the possibility of a NASA scientist or astronaut coming to the school who collects the most to provide a presentation could be an incentive. Maybe the winning school could get a 1-year loan of video conferencing equipment that could be used for many student-scientist presentations?
- I would like some additional information to assist getting started.

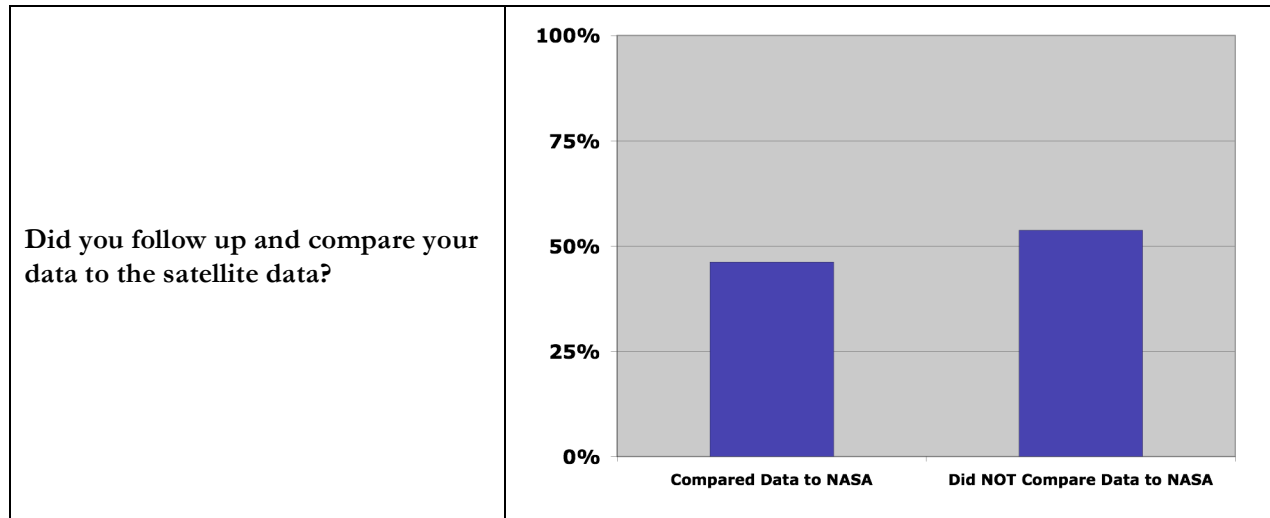
Submitting Data to NASA



Is there anything we could do to make the data submission process easier or more beneficial to your students?

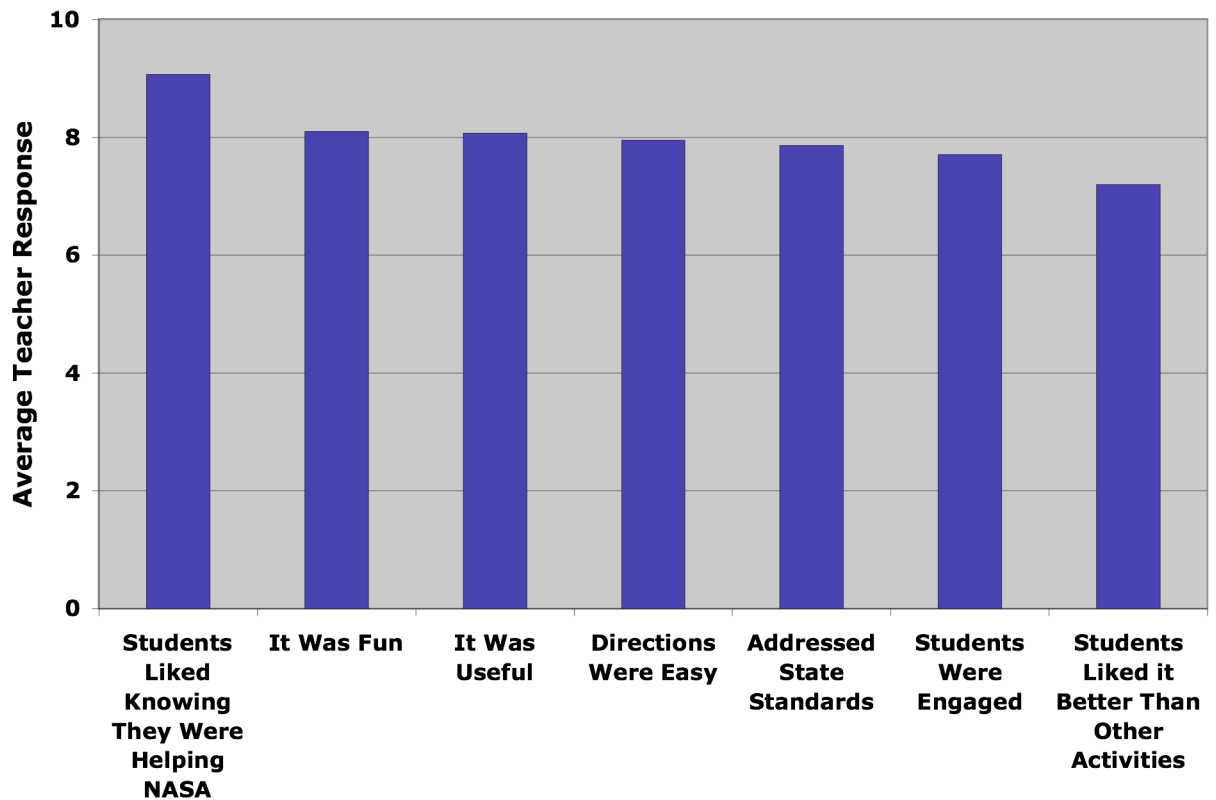
- No. The students learned a lot, but I need more time in my day to get everything done. Since reporting is not crucial to our day or the activity for us, this part got neglected.
- This year, I was unable to correlate the data in time to submit it. It was due to technological restrictions that I did not have last year.
- I thought the data submission was similar to GLOBE'S.
- This was our first year and now that I've used it I feel more confident in sending our results.
- Have a quick way to respond to problems and reporting of problems.
- Maybe go ahead and give more detailed information on figuring the time schedule for a satellite passing over. Maybe have a different submission process for younger students.
- As we attempt this for a 2nd time next year, I am sure we will develop a system for regularly submitting data.
- Create a form where the kids could log their data and send it to NASA themselves from our school computers. Then, you look at the date, time, etc. of the observation and pick and choose the ones that would qualify for your use. My students didn't care about doing it because they were smart enough to figure out that if it wasn't done at the right time, the information wouldn't be useful in the real world. Don't give them that much information. Just let them think their work is important to NASA.

Follow Up Comparison of School Data with NASA Satellite

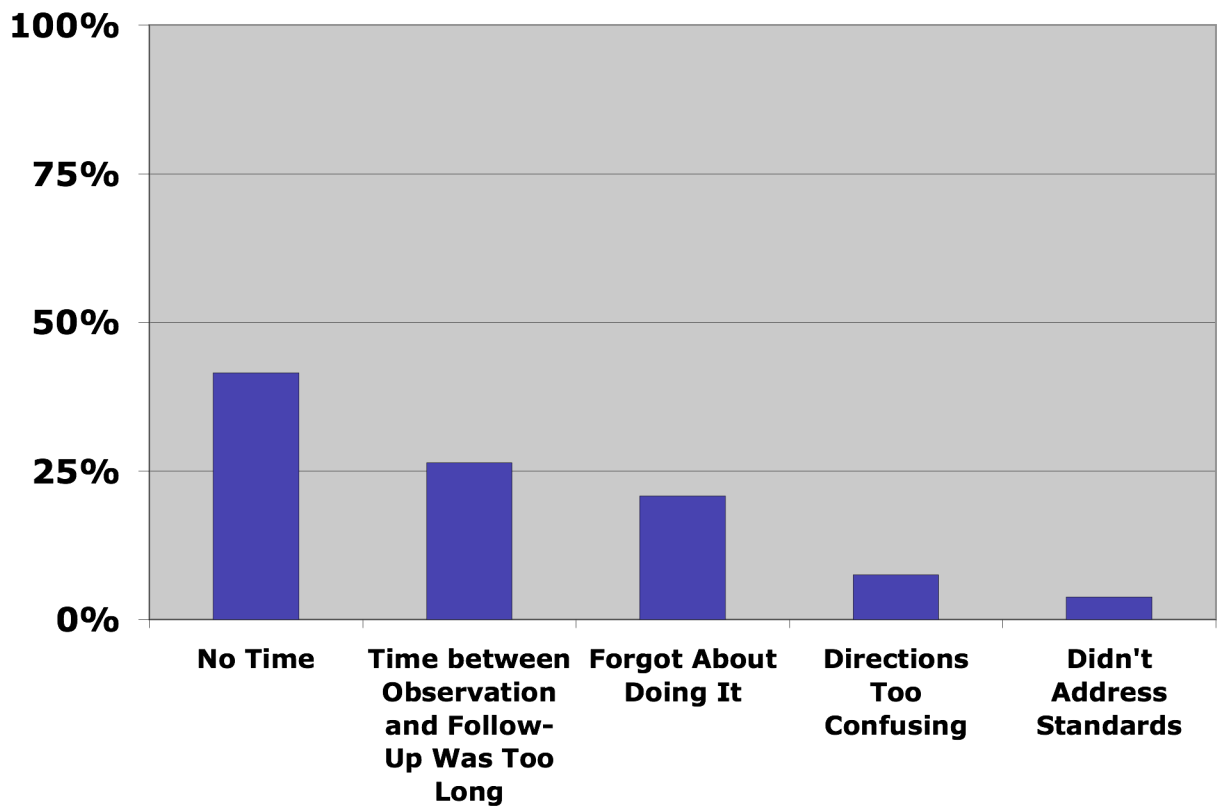


The degree to which teachers agreed with the following statements

(where 1 = completely disagree and 10 = completely agree):



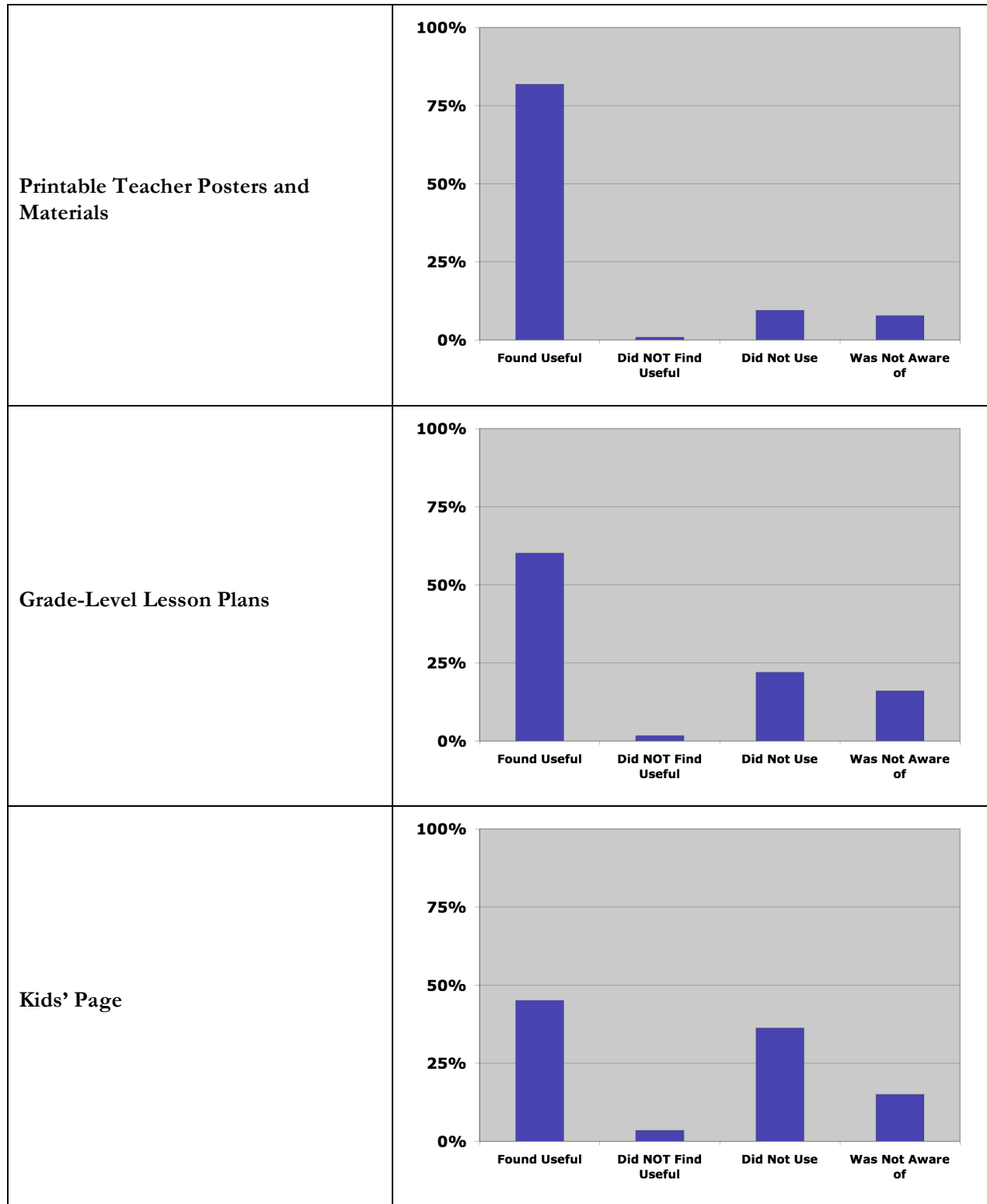
Is there a reason you decided not to compare your student data with the satellite data?



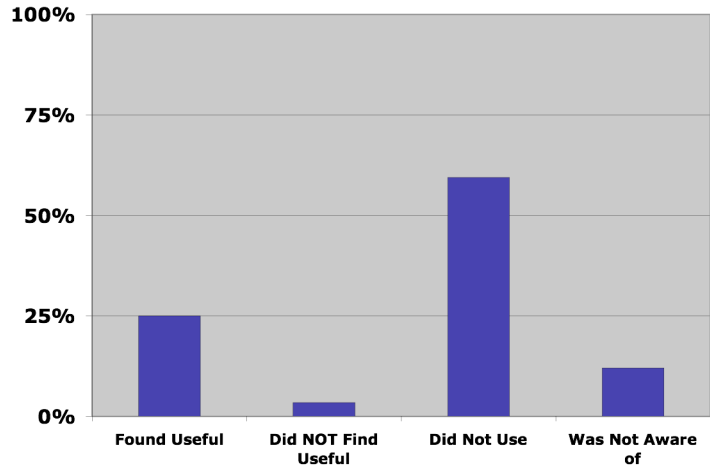
Other Reasons

- We had to go on to another unit, unfortunately.
- I did not realize it was available, time between observation and follow up. I could have done better.
- We conduct day programs so the follow-up was up to the discretion of the classroom teacher.
- We didn't take enough data. Did compare the data in past years.
- I developed my own curriculum to use the observation process but have not yet added activities to incorporate the satellite data.
- I am still trying to find time before the end of the year to do this. I do plan to have them analyze the data and brainstorm what we can graph. The one thing that looked discouraging is that we didn't agree with the satellite very often. I realize it does not see from the same vantage point, though.
- I don't have the Internet in my school.
- I wasn't aware of how to do that.
- Our satellite data isn't available yet but we will check it when it's ready.
- We tried it one year, several years ago, but it was too confusing for the students and me....time constraints is a big issue, too.

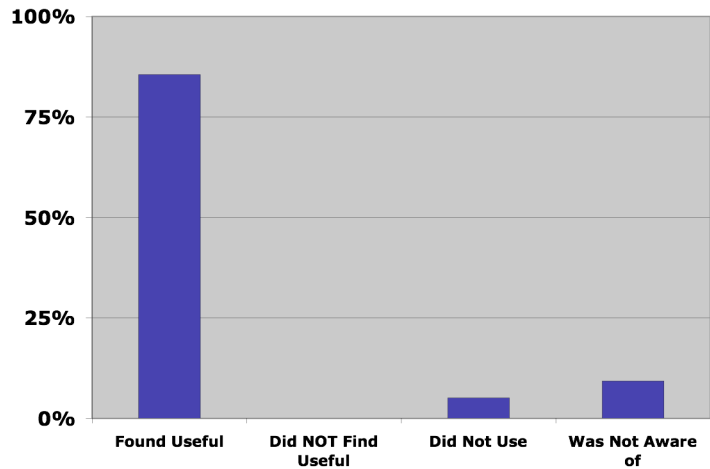
Teacher Opinions - Components of the S'COOL Website



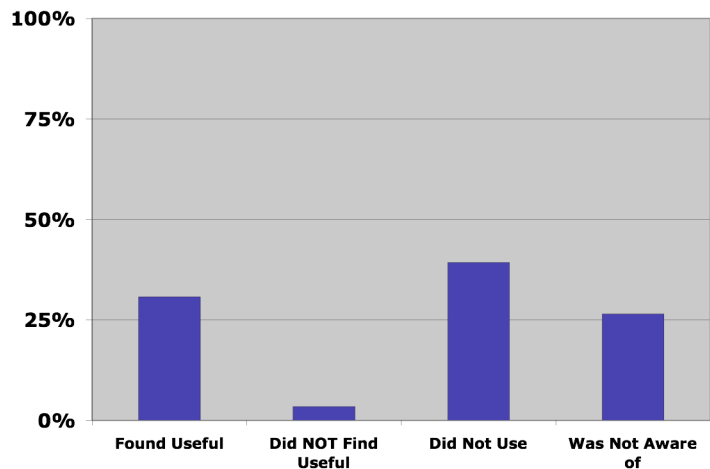
Cloud Photo Contest



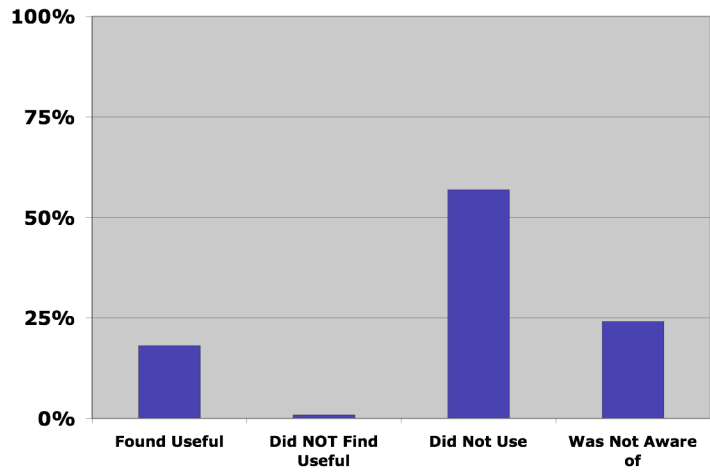
Cloud Identification Tutorial



Classroom Management Information



Science Fair/Project Ideas



What did teachers like BEST about the S'COOL project and website?

Direct Involvement with NASA

- The students liked the idea that we were collecting data that would actually be used by NASA scientists. (13)
- It teaches students that science is for everyone and gives the students an opportunity to give back to society in an easy yet important way.
- The students felt they were doing important and real data collecting. They worked in rotating teams of 3 and were independent and came back to my classroom on time and did the report without my help. A reporter for our local newspaper did an article on our class collecting data for NASA which was exciting for the kids and good PR for us too!
- It really excites the kids just to know that they are helping NASA in some way. This allows them to use the knowledge that we've learned in a hands-on way. We have also been able to dig even deeper because they enjoy it so much. I plan on continuing SCOOL as long as I teach.
- The children feel like they are working for NASA. They are proud of their involvement and tell everyone about it that will listen. We teach a unit on weather in 4th grade and a large piece of it is studying and identifying clouds. They feel as though they are experts. It has also sparked an interest in NASA and their work.
- My students PROUDLY say that they are involved in real research for NASA. This carries a lot of clout with the community and their peers.
- Students are actually doing science by observing and collecting data, and reporting it to NASA on a daily basis without interruption of instruction. Painless, exciting science without the fuss of pre and post tests. EACH DAY'S WEATHER IS DIFFERENT, even in sunny southern California.

Authentic, Real-World Application

- I like the fact that students are involved in gathering and submitting data that is real-world useful, and hands-on for students to get as in-depth as they desire. (12)
- That my students could be like real scientists, collecting data and sharing it with other scientists. also was something they could use for a lifetime. (2)
- I like the fact that students are engaged in real data that makes sense to them, i.e. clouds and weather conditions. Finding activities that use real data can be a challenge for 11 year olds
- The students enjoyed learning about weather and became aware of which clouds bring rain and which predict fair weather. The vocabulary development was great for ELL students.
- It is so easy to use and the kids really like to look at the data that, not only they submitted, but data around the world.
- It got my students thinking about science and participating in a way that they could make connections with things they see everyday.
- Great opportunity to involve new teachers in inquiry.
- It is very engaging to the students and makes them feel responsible for science and mathematical accuracy in their conclusions. (2)

Classroom Management

- It's easy to fit into the day. 2 kids can do it without disturbing the rest of the class. It only takes a few minutes of the day.
- I liked how I could use it during the day and the students reminded me to put up the week's schedule so they could go and observe.
- I have tried doing GLOBE, but it involves too much. I really wanted my students to be able to collect data with a purpose. S'COOL was everything I was looking for. We can do a complete observation in less than 10 minutes, a nice break for students with the purpose of collecting data. Kids really like to be doing this to help NASA.
- I like the fact that we can do as much or as little as we want. I also like to turn the project over to the students. They can make the observations and then I can have a student type in the information as long as I check it over before they push the send button.
- The students felt they were doing important and real data collecting. They worked in rotating teams of 3 and were independent and came back to my classroom on time and did the report without my help. A reporter for our local newspaper did an article on our class collecting data for NASA which was exciting for the kids and good PR for us too!

Website

- The cloud tutorials are FANTASTIC! I've used them every year, even when we didn't get around to logging onto the site and entering the daily cloud information. The photos and descriptions make it so easy for the students to understand the various cloud types! Thank you!!!! (3)
- It is a very user-friendly site. Students can navigate through it on their own. (2)
- I like the cloud photos. the students like checking out the cloud photos and looking for their own. I also like that what I need to know in order to do a good job of teaching the material is there for me to look at during the day at school or at home. (3)
- I love that my students can be actively involved in this project. Many parents have commented that they checked out the website and even used the cloud tutorial. How wonderful to have something both parents and kids can be excited to learn more about. I have found the website easy to navigate. I've become more confident as our participation has increased.

Support from NASA

- It is easy to use. Whenever I sent an email, I received prompt information and help. (4)
- The kids think it's cool to be involved in a real NASA investigation. They are excited to learn, and it is a rewarding and fun unit to teach. Also - I love the personal contact and immediate feedback by the S'COOL team to our questions/comments posted on the S'COOL online observation reporting form. The NASA team (led by Dr. Linn Chambers) is there to guide you, and help you in any way they can.
- What my students and I liked best was the quick turn around for satellite comparison. Until this year, students lost interest because results were not in a timely manner. We also like the user friendly website.
- The cloud charts and some of the pages were in Spanish and I have a number of ESOL students who were thrilled to receive their personal color copy of a cloud chart in their own language.
- The fact that students can see how their observations are useful and scientists can use it for collecting and comparing data. Also when you answer their questions is very useful and exciting for students. (4)

What did teachers like LEAST about the S'COOL project and website?

Teacher Training Issues

- We need to understand more about what NASA does with their satellite data...how it helps us, etc..... in a video or kid site???
- I need a walk through. I need to see it before I can proceed.
- I am unsure of many things in the program. I guess I am very visual. I would like to be able to see a program that is already up and running to observe firsthand.
- All instructions were in English and on places far from Puerto Rico.

Trouble Fitting S'COOL into Their Schedule

- The times the satellites passed our school, was not always best times for students. (7)
- It is difficult to incorporate it into each of the five classes I teach each day due to the differing satellite overpass times. I guess I could do dummy observations with classes that do not coincide with the satellites.
- Hard to be consistent with observations due to our schedule and fluctuating satellite times.
- Given this is but 1 unit out of several I need to cover, it is difficult to devote as much time as we should to this project. (7)
- I just did not have time for follow-up because of the standards I need to meet throughout the year.

Difficulties Conducting the Activities

- It was difficult to make the data we collected meaningful and useful in an educational environment. I found the instructions for comparing our data with satellite data to be confusing. I tried to do some simple research with the excel spreadsheet data and found it a difficult format to work with, even as a graduate student in meteorology.
- Difficult to be certain of the clouds we are identifying.
- We like the pictorial comparison of student and satellite but do not like the data worksheets. The elementary has a hard time downloading the data into Excel. It will not column out and is difficult to read.
- Using the database was cumbersome. Sometimes the codes on the key and the database did not match. There needs to be a search-by-state function on the database. There also need to be more structured inquiry project directions that real teachers could do with their students.
- I would like to be able to conveniently change my user name and password from year to year. I'm sure there is a way, but I haven't figured it out yet. (2)
- When uploading the data online, we would have multiple days of data to upload. Once you submit data, you have to re-login. It would be nice to have an option to continue entering data to avoid the extra step of re-login.
- I know that they get a lot of info, but I would like to see the satellite comparison done a little quicker. I still have observations from 2004-05 that have not been compared yet. (3)

Website Issues

- A couple of things: 1. I found it difficult at times to locate the link to the data sheets because they are only located in one particular section. It would be helpful to have a link from a main page to a 'materials' page that would have these on it. I could never get to it directly from the first page.
- Sometimes I get lost searching. The site need to be more user friendly specially for kids
- The only thing I found frustrating for the kids, and it's very minor, was the whole universal time thing (especially when adding on the 'is it daylight savings time or not' question). It'd just be so much easier if they could enter their location and current local time and the program would convert it for you. (3)
- A little hard to realize what is available and to find what I need
- The whole project is great but if I were to change anything, then I would probably re-work the web site. I don't necessarily subscribe to the thought that web pages need to change every six months (like business web pages) but I do think the S'COOL web site should be updated. It has the homey look but comes across as kiddy.
- Too static. Would prefer a news area, or links to news items directly on the front page. Consider doing a SCOOL podcast or link to appropriate NASA podcasts already created.
- I love everything about it. It would be helpful if there were a link to NOAA or someplace to find local weather data for the ground data. It would also be nice to have a slide show to model to the students how to submit the data.

Classroom Success Stories!

Impact on Student Learning

- Again, the cloud tutorial CD is a fantastic tool. Through the use of the tutorial and outside observations, my students gained a tremendous amount of knowledge about the cloud types. Parents frequently comment on their child's ability to identify clouds and how their interest in weather has grown along with their child's. It has been a wonderful addition to my Weather units. Thank you!!!!
- We do naval science ii, which includes meteorology. I usually don't have the time to cover it in depth. With this resource students are covering a good deal of it w/o me. Since we are a navy unit the students decided to make it more realistic and assigned a meteorology section to do the weather. I have told them over and over about the importance of meteorology to the navy. The kids keep up with the schedule, readings, input etc. All I have to do is supervise. Great program.
- One day as we were going to the bus for a field trip, my students were looking up at the sky saying there are contrails, I see a cumulus cloud. (None of the other 1st grade classes do this program so they were all looking at my students as to think "how did they know all of that?").
- As a class the students really feel they have a greater understanding of weather and are willing to make predictions about what the weather will be using gathered data.
- One of my students taught another teacher about contrails. The teacher stated to a group the clouds are rather strange today being streaks in the sky. My student said what she was seeing were contrails made by planes. And yes many contrails could affect weather if it was a military site. But what she was seeing would not.
- The kids are excited to learn the background lessons because they want to do an accurate job of reporting. I kick off the weather unit with the letter from S'COOL asking for cloud observation teams. When we saw our school on the top ten list, it was exciting. The kids were amazed to see where the other schools around the world were at.
- Most of my students are computer challenged, at least for this project. This was an easy way to help them navigate the web, and making and reporting this data was one of the chief reasons my small Christian school subscribes to the internet.
- Great use of technology, we even take our CBL's (those Texas Instruments graphing calculators with temperature and light probes) out with us to compare measurements. I just wish I could be organized enough to do observations done everyday thru out the year. But I'm not.
- After Lin Chambers visited our school, one of our students (Abigail Hogle) was so inspired by her presentation that she did her own research and independently continued observing the PM satellite. Along with posting her observations, she asked many questions on the website form, thoroughly inspired by the answers provided by Lin, Robert S., and others. She went on to study weather/cloud science and astronomy in a private secondary school after leaving our school. She will always be changed by her experience with S'COOL.

Student Engagement

- Several staff members felt compelled to stop by our outdoor classroom. The entire class of 'active' 6th graders was focused on sketching their section of the sky and trying to identify cloud types. Staff members were amazed to see every single student fully focused on a school assignment!
- Well, Channel 8 TV from New Haven came a few years ago to do a short spot about S'COOL and our participation. Everyone was quite excited to see the kids from our school on television. Video segments showed kids actively collecting data and discussing clouds.
- My students are always so excited to look at the clouds. They told my principal to start looking at the clouds.
- I train a few students early in the school year and as the year progresses the other students desire very much to get a sticker and be a part of the Cloud Thing. They want to learn the cloud formations. In some cases they even have verbal battles to who is next. We make a monthly chart with students' names. The cloud contest has been a rewarding part of SCOOL. I have seen my students' interests rise when the camera comes out.
- When the students took pictures with my digital camera and they were posted on the internet, they were ecstatic! It was nice to have recognition for something they did that was fun.
- The hands-on recording of our observations is wonderful. I've created an easy surface observation form that is very Kindergarten kid friendly. The kids feel very official with their clipboards. In fact, we are known as the weather people at our school. We have three science teams who rotate observations and the children check the schedule to see whose turn it is. It is the kind of project where everyone is involved and proud of their contribution to the team.
- After presenting the cloud observation lesson and reporting procedures to my class, I assign 2 students per week to do the observations and report forms. One student is so involved in the project that he has taken over the instruction of new students and the responsibility for observing and reporting. He takes this project very seriously and feels responsible and proud of what he is doing.

Different Learning Styles/Special Need Students

- Last year I had two students who struggled in reading. Consequently, they didn't enjoy much of school. I made them my project monitors. Their jobs were to remind students on their days when it was time to observe and record, and also to follow up on reporting. They really found their niches, and both improved in their reading!
- I am currently doing S'COOL with our Alternative School (students that have difficulties academically & behaviorally in a regular classroom setting). When I first introduced the project to them through a PowerPoint I created using the online S'COOL data, most students were sarcastic & disengaged. One student said I've had this every year and have never understood, so what makes you think I'm going to understand now. After the introduction to the activity, we went outside (during the observation time) and the very same student was right at my heels filling out her reporting form and taking her own digital picture of the clouds. She was definitely engaged!
- All of my students can be involved. My special needs students as well as my non English-speaking students. They can all compare a cloud in the sky to a cloud in a picture and feel success. I just love it for that reason. I love it when I'm on recess duty and one of my students will run over all excited to point out a contrail or a type of cloud.
- About three years ago, I had a group of Special Education students with low testing scores etc. What these students did have, was an enthusiasm for weather and determination. Since my instructional strategy is Project based Learning, this became their project. I delegated full responsibility to them. They set as their goal to have BCIT ranked on the top ten observer's list. They did that several times, and got

us ranked number one once. All three of these students graduated successfully from BCIT and are now at the Community College and doing well. By the time they graduated from my program, they were fairly accomplished in the field of Meteorology and gave them an identity in class. I am confident that this was an important factor of their high school experience.

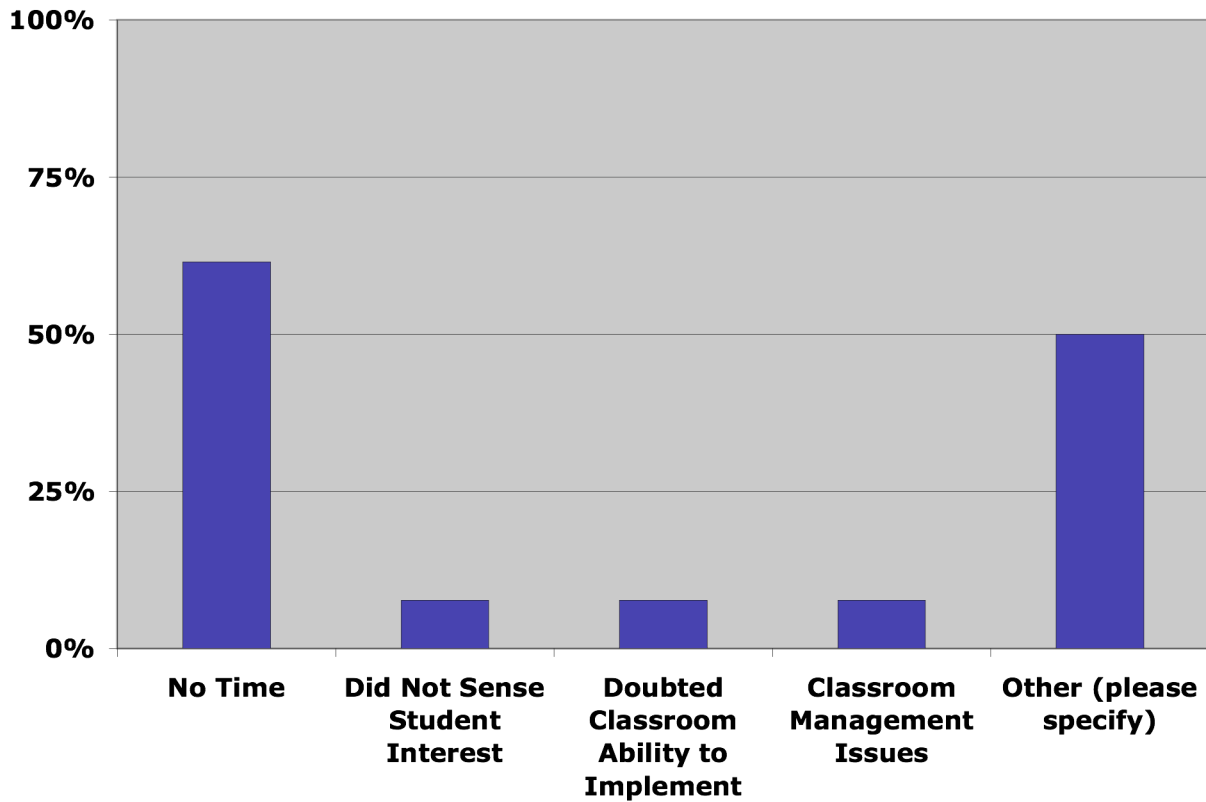
- I have started to send kids out to do the observations in small groups without me. They carry FRS radios in case they need help. They must demonstrate the ability to take a perfect observation before they can do this. I am working on improving this for next year. Start with more intensity and push them to do perfect observations early in the year.
- A struggling student was so excited to be doing real science, that he took on the responsibility of observing everyday, keeping the records, and reporting via the website. He taught several other students how to do it. His grades came up and his motivation to work in science increased.

Increases in Family Involvement

- Just about every parent that came to school said how their student came home and taught them how to identify clouds. We also had our 5th graders show the first graders how to identify clouds.
- The only thing I can think of is that this learning carries over to home, as some students tell their families about the clouds and what they see in the sky. The parents would remark about what their child taught them as they went riding in the car.
- Some students get motivated and they record data in their houses and share with family members
- My students have gone home and taught their parents about clouds. They have gotten digital cameras so they can take pictures. They enjoy sharing with the students at their home school what we are learning. They are much more aware of the sky and clouds.
- I love to hear from parents that their children are learning. I had a parent tell me that she and her son were driving to the grocery store and he kept quizzing her on what clouds were above them. This tells me that he not only learned something, but that he enjoyed it too.

Supporting Data from Inactive Teachers

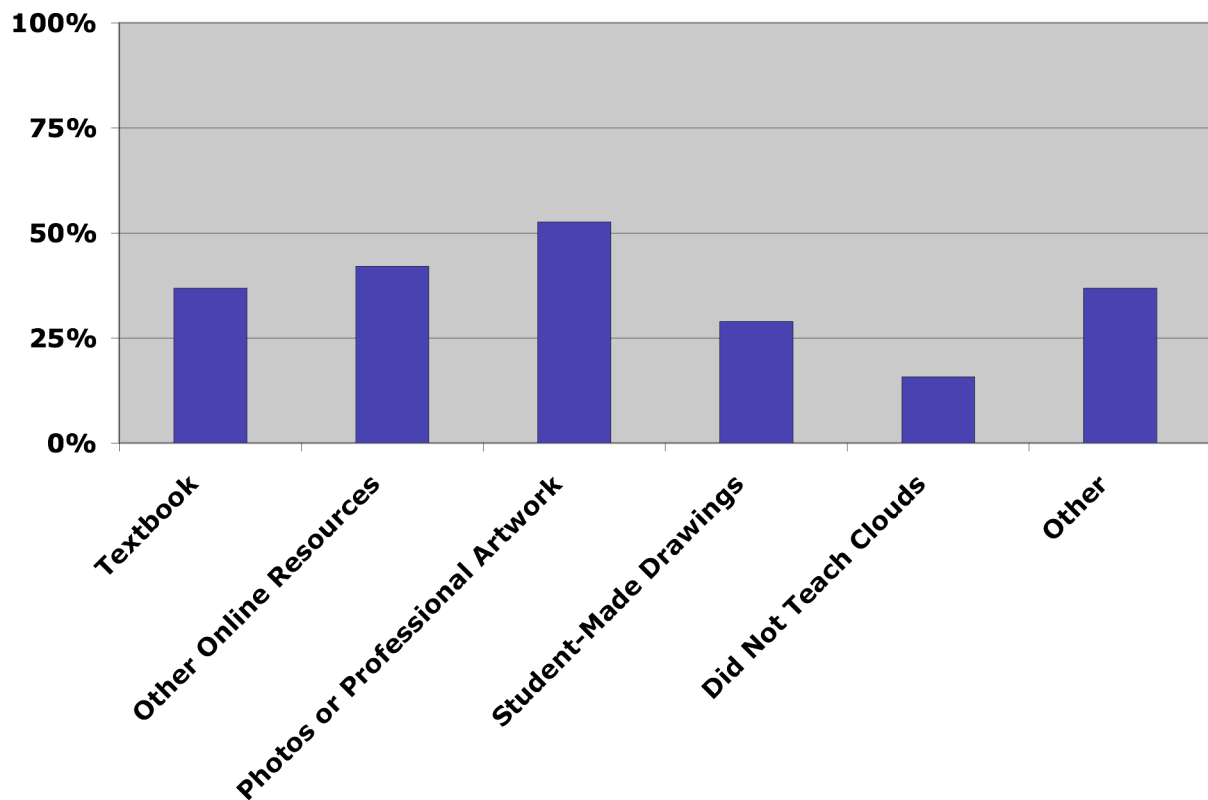
Why did you opt not to participate?



Additional Reasons for Not Participating

- Language, in Spanish would be better.
- Satellite overpass schedule only fit with 1 class period out of 4.
- My Principal would not allow students to exit building everyday to view sky for 2 minutes. High security school in urban environment.
- My teaching assignment was changed.
- I used S'COOL in my workshops for teachers.
- We are about to do a weather integrated unit for our whole school and are going to use it for that unit...K-5th grade but mainly it has been a time factor that I have not used it so much before now...we have used the materials....about clouds and identifying them...and done activities out at recess....but have not done them at the times for the program...but I do intend to do it next year.....
- This year has been really difficult with all of the time that we lost due to hurricanes. We spent the year trying to catch up.
- I went to another school and am not teaching science.
- I did have my students do some cloud observations, but I never input the data this year. It was difficult to manage the timing, since the satellites do not pass overhead during my class times.
- Difficulty connecting with satellite.
- The fly over times did not match up with when my children were in class with me.
- We did some, then I ran out of time in the day.

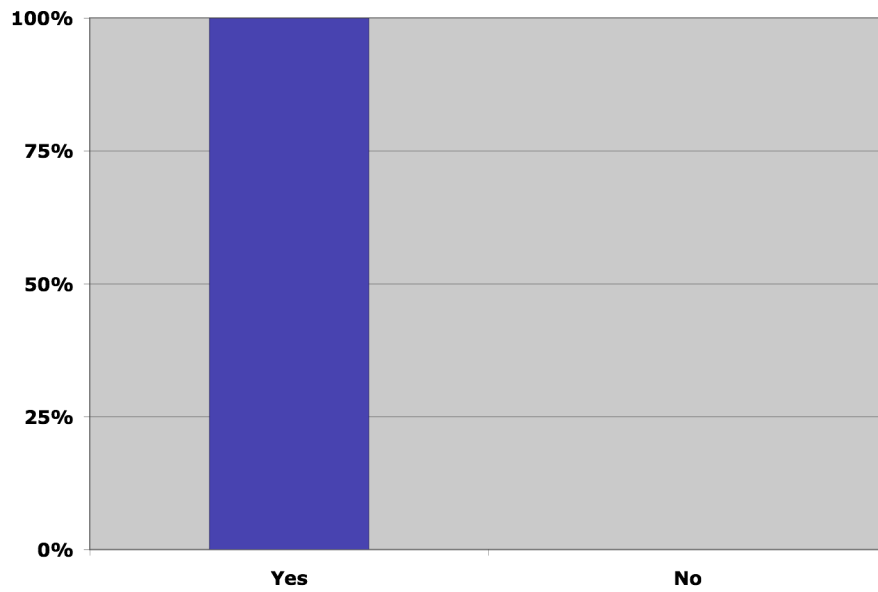
How did you end up teaching about clouds?



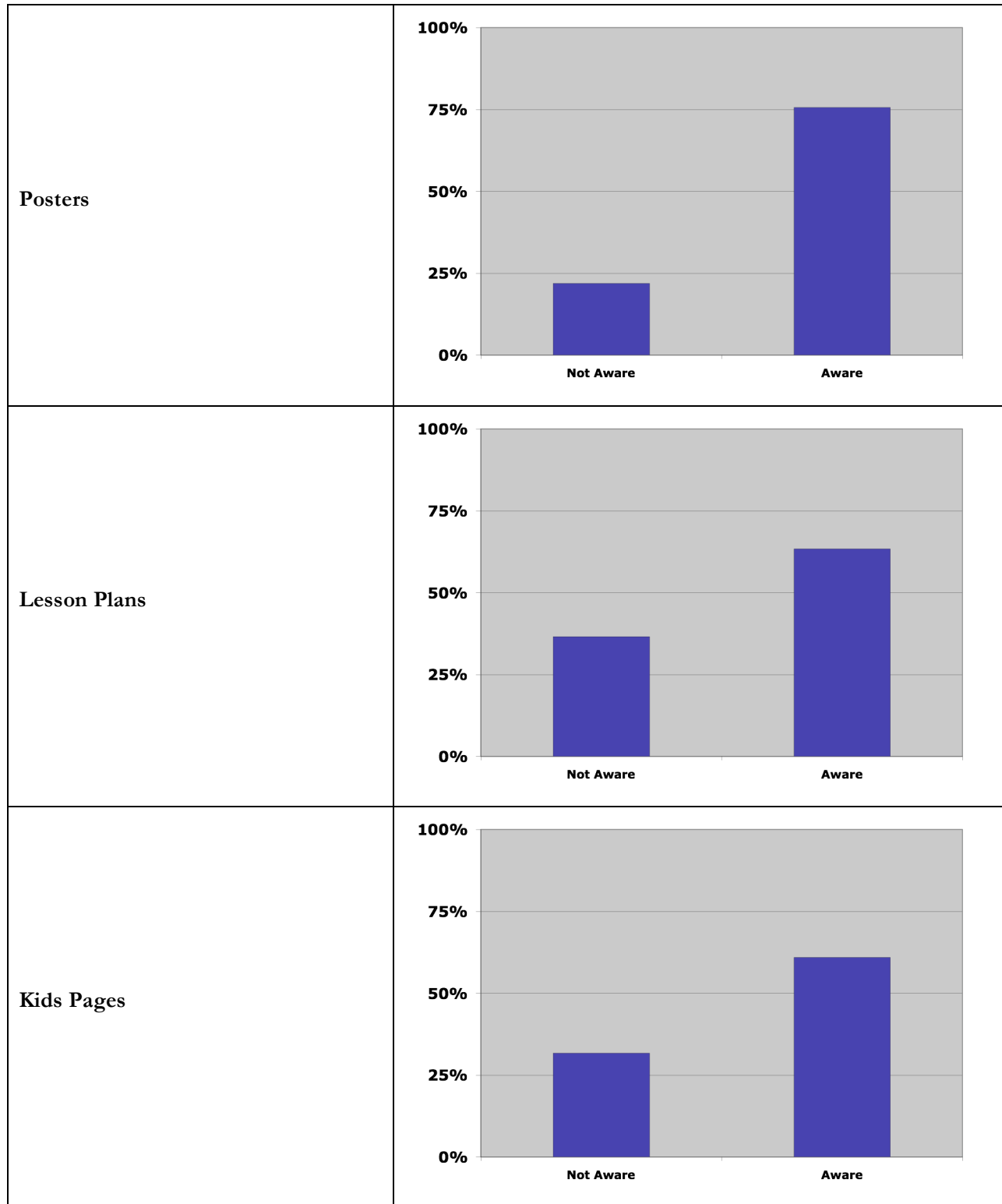
Other Ways That Cloud Lessons Were Taught

- I used S'COOL resources in addition to other online resources and outdoor activities. The only part we skipped was entering the data into the computer.
- FOSS Inquiry based science kit provided by our local educational service district.
- Overhead transparencies, movies.
- S'COOL posters
- We used the materials from S'COOL...and also other internet resources from NASA... and are about to teach the integrated unit where students are going to do reports on clouds
- Se trabaja con diseños hechos por los estudiantes en plastilina, concursos de identificación de nubes y generalmente son clases con mucha dinámicas de juego.
- I use the S'COOL site and the materials they provide
- I use the S'COOL website.
- They made different types of clouds using cotton batting
- Curricular activities outside of textbook.
- Homework for parents got them very excited too.
- I've used the clouds on the S'COOL cloud charts.

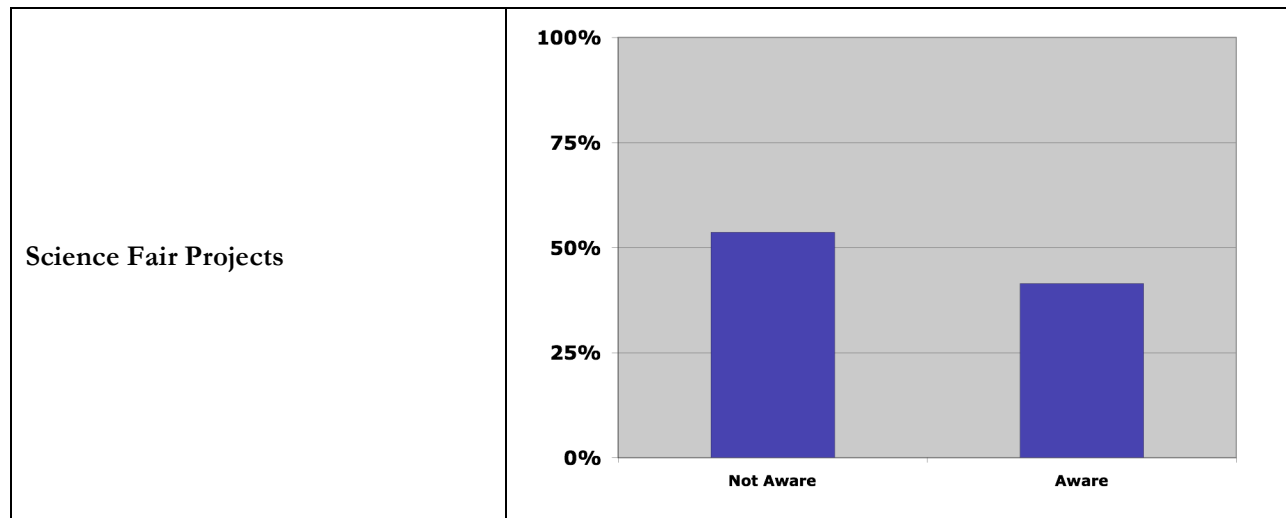
If you knew that the S'COOL program and activities were correlated with your state's standards, would you have used S'COOL?



Teacher Awareness - Components of the S'COOL Website



<p>Cloud Photos</p>	<table border="1"> <thead> <tr> <th>Awareness Level</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Not Aware</td> <td>38%</td> </tr> <tr> <td>Aware</td> <td>62%</td> </tr> </tbody> </table>	Awareness Level	Percentage	Not Aware	38%	Aware	62%
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<p>Tutorials</p>	<table border="1"> <thead> <tr> <th>Awareness Level</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Not Aware</td> <td>18%</td> </tr> <tr> <td>Aware</td> <td>82%</td> </tr> </tbody> </table>	Awareness Level	Percentage	Not Aware	18%	Aware	82%
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Do you have any suggestions for things to add/change/etc.?

- I'm not familiar enough with the program to offer suggestions. I would like to see a short step-by-step approach to using the site. I guess I'm asking you to dummy it down, maybe too much. It's hard to find the time to plan the long-term project, which I assume is the best way to use the program. Thanks for providing it and for asking.
- If the directions could be a bit more user friendly so I may be able to implement the program into my lesson plans as well as for those on my grade level.
- Even though I am fully versed in computer technology, it would be great if some of the material were available in a hard copy format that is mailed out. Thank you and look forward to being more involved next year.
- No, I think the program is very good and I encourage teachers to use it.
- I think it is a great program and website and will be using it....
- None at this time....in fact I will most likely redo a number of things over the summer to facilitate using this program
- This is a fabulous program!
- Students use their free time after learning in class to observe the clouds and remember what they are. They originally learn about clouds in 5th grade, but many of my observers are in 8th due to class scheduling. They love the program!
- I think it's an excellent resource for instruction across the curriculum.
- I presented this information at the 'Georgia Weather Fest' in Atlanta in January 30 for the Georgia Meteorological Society called 'CLOUDS TYPES'. I hope I influenced more teachers to participate in the S'COOL PROGRAM. THANKS YOU THE FUN. WE WILL DO IT NEXT YEAR TOO.
- No. I just need about 6 more hours in my day to do all the things I think the kids need to do to be ready to face the world and still pass the state tests.