

Rock-n-Sol

[Sun-Earth Day intro sound]

Narrator: We live in the atmosphere of a dynamic, magnetic star that interacts with the Earth, the solar system and space beyond.

[Music]

Narrator: My name is Troy Cline and you are listening to the sixth in a series of NASA podcasts for Sun-Earth Day 2007: Living in the Atmosphere of the Sun.

Narrator: The music you are hearing was created by students from around the world! Sound interesting? In today's podcast we'll be exploring the musical side of space weather with a dynamic teacher from Anaheim, CA,... Carol Anne McGuire.

Narrator: A few years ago Carol Anne decided that she wanted to connect her students in Anaheim to other students from around the world. To do this she created the Rock Our World program where kids could collaborate in order to compose music, make movies and hold video conferences. The power of music was used a way to explore a variety of subjects including such themes as 'Holidays Around the World' and 'What's for Lunch'. Her idea quickly grew and to date students from 40 different countries collaborate to create amazing musical compositions, participate in storytelling exercises, and share cultural knowledge.

Narrator: A large amount of this work is accomplished through the use of available technologies such as videoconferencing and MOODLE, which is an online communication tool.

Narrator: Carol Anne explained 'why' she became so impassioned to start this type of program with the students in her particular classroom.

Carol Anne: I started it because I teach blind and visually impaired students and I wanted to teach them about their world. Map skills are very difficult for them because it's all textual and so they have to learn about their world and it's not motivating. It's not exciting looking through an atlas or a social studies book.

Narrator: Ready for your next surprise? Her students didn't just stop with audio editing but quickly moved into the world of Video editing and picked up a few awards along the way.

Carol Anne: I have learned a really valuable lesson by doing this. And that is to never underestimate your kids that you work with. I don't care who they are, what background they come from; what you think they can or can't do. You just don't know until you give these kids a chance.

Narrator: Rock our World projects occur in 3 to 4 month segments or 'rounds'. Each new round is given a particular topic or theme.

Carol Anne: And in that four months these teachers have an assignment. I try to pick a theme that I know is universal for everyone. So we've done holidays around the world, everybody celebrates a holiday. And we've done "What's for lunch", because what is more basic than food. Each round changes depending on the personalities of the teachers and students involved.

Narrator: Last year we asked Carol Anne if she would be interested in using the Sun as one of the Rock our World themes. Without hesitation she said YES and instantly came up with a name for the new theme, Rock and Sol.

Narrator: Not long after that, students from every continent in 14 different countries soared to new levels as they collaborated with other students to explore NASA's rich array solar data, imagery and educational resources.

Carol Anne: Yeah! I mean how powerful for kids! We're talking kindergarden through university level. These kids are able to access this technology and realize that people use this technology in real life.

Narrator: All of that information was used to inspire their 'solar music' compositions. So how do these musical compositions come about? Well I can name that process in one word: rotation. To start with, each school in the rotation is given the same music creation software. During week one they are all instructed to create their first track of sound: drums. During week 2 each school is instructed to pass that track onto the next school in the rotation where an additional track of sound is added: piano. This rotation process continues until all of the schools have had a chance to add a new track. Within a matter of weeks a new symphony has been born. The added bonus is that if 20 schools participate in the rotation, 20 compositions will be created! Let's hear it again in Carol Anne's words.

Carol Anne: Every country around the world, if you imagine the world being a circle and everyone standing around that circle. Everyone starts 30 seconds of drums. And every Friday they hand their drums to the country to the left, and they pick up the drums to the right. So you have somebody else's drums. Then you add the bass guitar, and rotate. Then you add piano, and rotate. Until your drums have touched all of these different countries. Every week the song gets bigger and thicker and fuller and more orchestra is added to it. By the time your drums come back to you it has developed into a full song that has been collaborated on from kids from every single continent. Touching tons of schools, students, teachers, administrators... and it's coming back to us a full song!

Narrator: Now here's the kicker! Each school that participated in the Rock and Sol project was instructed to add at least one track of 'solar sound' which in this case was actual solar data that had been transformed into sound.

Carol Anne: Each country did it different. We chopped it up and used it as a beat, when we did it. We used it for the beat for the drumline that was made previously from another country. Other people made wave sounds with it, had it come in strong and then go down like an ocean sound. Everybody used the sound in a different way, but it was a required track that they had to use in their song. A really cool thing, I was talking to my kids yesterday and quizing them and asked, what supprised you the most on this round. Or what did you learn about the Sun that you didn't know before you started? And they were going, there are layers on the Sun, and it was interesting to hear the vocabularly that they were talking because they were talking about Prominences, Flares, and stuff that wasn't in their vocabulary before. And one of the kids said, 'I did not know that the Sun made a sound'.

Narrator: So without any further delay, lets listen to 3 of the completed student compositions from the recent round of Rock and Sol!

[Music: Composition One]

[Music: Composition Two]

[Music: Composition Three]

Narrator: One of the additional activities that Carol Anne always includes is called, 'The Mystery Box'

Carol Anne: What we've done in the past is to send a mystery box out to the teachers and they don't know what is inside. And they can't know what's inside until we meet in a video conference. We open up the box together, discover the contents, and I tell them what to do with the contents. They then go back to their classrooms and they do it. Now that box's contents is hidden up until that time. But once I release it to the international team I also release it on the "Moodle". So any teacher can say "I want to do that activity". They can then go on line and gather the contents of the box – they are easy, and then just follow along with us, or just make up their own and send that us their original work and we'll share that with the international community also.

Narrator: We do plan to have more rounds of Rock and Sol. However, due to logistical issues no more than 30 schools at a time can directly participate in the video conferencing events. But don't let that worry you...you can still watch the video conferencing events and join in on all the fun!

Carol Anne: They can still hook on to our family nights and watch what is going on. The family nights are an open web cast world wide. You can still get access to the lesson plans and what is going on in the project.

Narrator: You can get to all of the 'rock and sol' information including event times by visiting the home page of Sun-Earth Day.

[music break]

Narrator: We are very interested in hearing your questions and comments about the Sun-Earth Day podcasts. If you have something to say, send an email to sunearthdaypodcast@mail630.gsfc.nasa.gov .

Narrator: For all other details about the Sun-Earth Day program including information about our past SED themes be sure to visit our website at sunearthday.nasa.gov. While there, don't forget to register in order to receive your free Sun-Earth Day educational kit filled with NASA materials rich in science content!