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## Yankeetown School and DCA launches experiment into Sub-Orbital Space



**Earth and space from 90,000+ feet near the highest point of the payload's trip with the view of the Yankeetown and DCA School's experiment.**

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**Story and Photos Provided Published April 26, 2017 at 10:27 p.m. on the Home Page of *HardisonInk.com***

**DEATH VALLEY, NEVADA** -- Seventh grade students at Yankeetown School enjoyed a golden opportunity not afforded many middle school students over the last few months.

In a joint project with Dunnellon Christian Academy's seventh grade, and with help from Dr. Tony Phillips and Earth to Sky Calculus (ETSC), a SpaceWeather.com-sponsored science club, a Sub-Orbital High Altitude Balloon Payload was launched near Bishop, Calif.

In addition to the almost 20 miles high the payload traveled 88 miles to the east landing in Death Valley Nevada.

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**Up, Up, and Away , Launch site 14 miles southwest of Bishop, Calif.**

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The payload carried, in addition to instrumentation, an onboard seed survival project for each of the two schools. The project was to see the effect a sub-orbital space environment lasting over several hours would have on plant seeds.

The seeds were standard Wisconsin Fast Plants and were chosen because of the short life span and very short germination time. This was to allow the project to be completed before the end of the school year (45 days).

The seed packages in both protective and open environments were exposed to the near space sub-freezing cold (minus 62 degrees Fahrenheit), ultraviolet light and cosmic radiation.

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**The equipment and school logos before launch. This is the GPS locator/transmitter, and the orchid and outside experiment.**

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**Going up, the view back towards Earth and the mountains east of Bishop, Calif.**



**Pop goes the balloon -- and the fall back to earth starts.**

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## **A rough landing after the balloon popped.**

Groups of seeds were placed inside a protected container and others placed outside on a special platform exposed to the full effects of the near space environment of the upper stratosphere at ninety thousand plus feet. The balloon was programmed to get to 120,000 feet, but solar heating or some other upper atmosphere effect caused it to explode a bit early.

Just to see the effect (for fun) a Florida-grown orchid was also placed on the outside platform along with logos from both schools. After recovery, a flower from the orchid was dried for each of the schools to have as a reminder of the project.

Photographs were taken by an automatic camera which fired every few minutes and data on altitude (pressure), temperature, and radiation levels were also recorded. The data has been given to the schools for their use in preparing a project report. Also onboard were a GPS locator and transmitter to allow ETSC students to track and recover the payload.

Preliminary results were shown (the seeds as they are growing into mature plants) as a display by the science students at Yankeetown School as part of the school Science and Poster Fair just before Easter break.

The students (in groups of three) produced posters explaining the project and placed them in the science fair. The poster winners were Morgan Pitts, Patrick Stewart and Waylon Machin.

After the project has ended, watch for a final report by the students.

The science fair was broken into groups by grade level. Grades K-2, 3-5. Grades 6-8 did not participate (except for the seed project) because of state required testing. In addition to ribbons cash prizes were awarded top prize winners.

Overall best in fair, went to 5th grader Priscilla McMath. With a second place overall and first place co-winner in grades 4-5 was Corbitt Rackley with a homemade airplane which really impressed the judges.

The other first place co-winners were Destiny Kirkland and Giovanna Burns with a

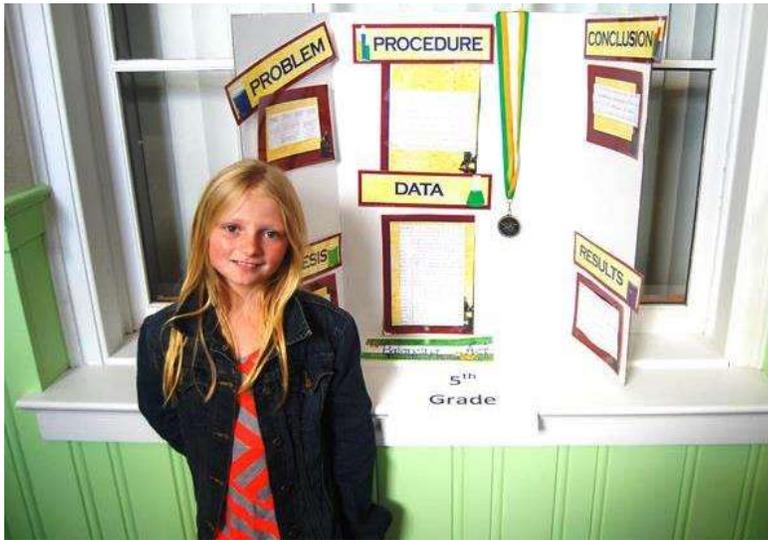
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solar power model car. Principal Denee Hurst congratulated Melody Carson's second grade class on their first place win for Expanding Fluids, which the class did during class periods.

Additional posters were presented on Types and Uses of Florida Trees. That poster contest was won by Madeline Rohrer and Stephanie Smith for their poster on the Queen Palm.

A boating safely class was given last winter and the students from the last two classes were invited to enter posters on what information took away from the class. The poster winners were Chelsea Mekelburg and Emily Robinson.

The Science fair and posters were judged by Scientists and Engineers from the Yankeetown's United States Coast Guard Auxiliary 15-2.



**Yankeetown School overall winner, Priscilla McMath. Outstanding science for a young student.**

**Co-Winner 4th and 5th Grade, Corbitt Rackley, stands with his home built working airplane.**



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**Co-Winners 4th and 5th Grade Destiny Kirkland and Giovanna Burns**



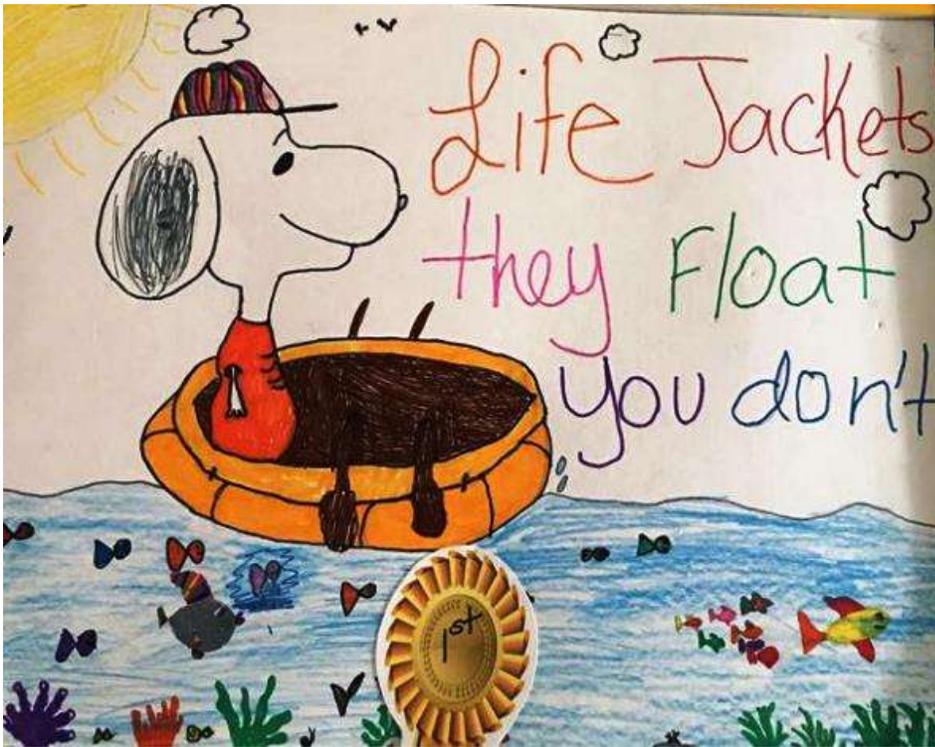
**Yankeetown School Principal Denee Hurst congratulates Melody Carson's second grade winners,**

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**Tree Poster winners, Madeline Rohrer and Stephanie Smith**



**Boating Safety winning poster by Chelsea Mekellburg and Emily Robinson**