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APOGEE

PEAK OF FLIGHT

NEWSLETTER

Rocketry Education

By Tim Van Milligan

Over the past few weeks, I've been doing some research into the educational aspects of model rocketry. It has been an emotional roller coaster ride of sorts.

First, I started out by looking at my own past articles and booklets on rocketry education. I was surprised at how much stuff I had written in the past, and how little of it actually made it to my Apogee Components product line. I certainly had forgotten about most of it. And upon review, I was fairly pleased with the information, and how it was presented. I was certainly glad that it was significantly different from; yet that it built upon the foundation of the old articles produced by Estes in the 70's, 80's and 90's. Because it was different, I am still hopeful that teachers will find it useful in their own classrooms.

Then I did a web search looking for sites that had a rocketry education theme. Here is where I was disappointed. There are very few web sites that I could find using the search engines that specifically used model rockets as a teaching tool.

Most of the ones that I found pointed to the NASA educational site's. In my opinion, the authors of the NASA web sites must have a very dim opinion of model rocketry. The incredible safety record and educational accomplishments of model rockets has been pushed aside. In its place, they seem to favor water rockets, and little cheesy alka seltzer film-can rockets. Man... what a let-down. If NASA doesn't support rocketry, where will teachers get the information they need to run their own model rocket programs?

There were a couple of sites that were referenced as being oriented to model rocketry education. I was glad to see that. But, unfortunately, the information on these sites was mostly a re-hash of the Estes Educator web site (http://www.esteseducator.com). What was disappointing? While the material presented on these web sites was technically sound, it is a bit dated. Shouldn't we expect more than Newton's Laws of Motion? After-all, teachers have been using rockets to teach that aspect of science since the 1960's.

Yet the good news about this "re-hash" of Estes information is that basic rocketry information is actually becoming more widely available via the internet. Better yet, it is forcing some changes within Estes. The old publications that Estes used to sell, are now given away freely on their web site. This is good for the teachers and the rocketeers looking for technical information.

I also think that it will force other modelers to think up some new ideas on how to use rocketry in the classroom. It has certainly forced me to rethink some of my future plans. We can't keep presenting the same information and expect teachers to see it in a different light.

Getting back to my search, I was slowly beginning to realize that the search engines were leading to a dead end. After all, my own web site which has lots of great educational information is listed in 81'st place on one of the major search engines.

Then, I started going to individual web sites of rocketeers. While this was much more time consuming than using a search engine to dredge up information, it was slowly starting to pay a lot of dividends. I found out that there is a lot of excellent information available to teachers on the internet!

The only problem is that the information is scattered across hundreds (if not thousands) of web sites. Therefore, it would be difficult for teachers to gain access to it; especially since the search engines aren't finding it.

What was needed was a topic-specific directory page. That way, the teachers only need to go to one web site, and then catch a link to a site that had information about a specific rocketry education. For example, if a teacher wanted to do a study about rocket stability, he might scroll down to the list of links in the "stability" section of the directory.

So... That is what my rocketry education project turned

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out to be. I created a directory of rocket education web sites. More specifically, it is arranged by topics, so that teachers can find information quickly.

While the educational directory isn't finished yet, it is far enough along to let readers of this e-zine to get a sneak peek. The url is: http://www.apogeerockets.com/education

There was another benefit to my search for rocketry education sites. I discovered that besides great technical background and "how-to build rockets" sites, there were a number of obscure sites where teachers have gone to the trouble to list their lesson plans. So I've also created a little directory of those web sites too.

The final benefit of this educational directory is that it will force us modelers to post new and unique information about rocketry on our web sites. Because if we keep re-hashing the same old information, we won't get many visitors to our web pages. As an example, I found four web sites that had rocketry glossaries. How many more of these glossary pages do we need? The same goes for "how do rockets work" and "equations of rocket motion."

If you get a chance to visit the new educational directory, please give me your thoughts. More importantly, I realize that this page is far from being "all-inclusive." I know I probably haven't stumbled onto some great educational or technical sites yet. So if you know of any that aren't listed in the directory, please let me know. I'd love to add a link to those pages too. I want teachers to have information in this centralized location, so they can see the benefits of teaching with model rockets.

In conclusion, I think the state of rocketry education has a brighter outlook. The model rocket educational directory is a good first step in showing teachers how to tap into the power of model rockets. We now just need to spread the word so teachers will learn about this important resource.

About the Author:

Tim Van Milligan is the owner of Apogee Components (http://www.apogeerockets.com) and the curator of the rocketry education web site: http://www.apogeerockets.com/education. He is also the author of the books: "*Model Rocket Design and Construction*," "*69 Simple Science Fair Projects with Model Rockets: Aeronautics*" and publisher of the FREE e-zine newsletter about model rockets. You can subscribe to the e-zine at the Apogee Components web site, or sending an email to: ezine@apogeerockets.com with "SUBSCRIBE" as the subject line of the message. This article may be reprinted as long as this paragraph is included with the text.

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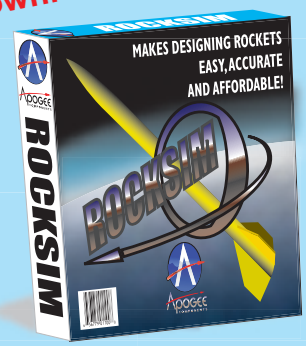

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