4th GRADERS: 2011 Elementary Rocket Launch Worksheet

Directions: This worksheet is optional. All 4th graders who are participating in the Elementary Rocket Launch may do these 2 worksheets. They need to be 100% completed and handed in at the Elementary Rocket Launch Event. Both of these worksheets are found on the ‘Rockets for Schools’ website; click on the Elementary Tab. Make sure you print off the 2 diagrams. Use the descriptions below of the rocket parts to help you label and color your diagrams. If you need assistance to help you to do the diagrams, refer to the icon: Apogee Rockets. Mht. It is an Apogee Component entitled: ‘Parts of a Rocket’ by Tim Van Milligan.

*Make sure you write your name, address, school’s name, and your grade on the diagrams when you hand it in. Otherwise, I will not know who the worksheet belongs to. You may print off the material when you do the worksheet. Make sure you print off the 2 diagrams: ‘External: Parts of a Rocket’ and ‘Internal: Parts of a Rocket’. These worksheets are your entry to win a ‘free’ rocket kit.

Worksheet: Both Diagrams

Questions:

A. External Parts of the Rocket
1. This part of the rocket reduces drag as the rocket goes through its flight. Label this part on the diagram with its proper name. Color this part of the rocket purple.

2. This part of the rocket has many jobs. This part is like the ‘frame’ of the rocket. It’s jobs includes holding the ‘stuff’ inside, keeping the ‘stuff’ from coming out of the rocket, and separating the drag –reducing nose cone from the fins. Label this part on the diagram with its proper name and color it Blue.

3. When you place the rocket on the launch pad, this part holds the rocket on the launch pad and guides the rocket in the direction you want it to go until the fins begin to become effective. Label this part of the rocket with its proper name and color it Black.

4. This part of the rocket provides the restoring force necessary to keep the rocket in heading in the right direction. The size of this part depends on the size of the rocket. Label this part on the diagram with its proper name and color it Dark Green.

B. Internal Parts of the Rocket
5. This device/instrument helps slows down the rocket on its decent, so the rocket lands on the ground softly. A parachute or a streamer is used, based on the weight of the rocket and the rate of it decent. Label this part on the diagram with the proper name and color it orange. Label the ‘Suspension Lines’ or ‘Parachute String’ on the diagram.

6. This cord keeps the entire rocket together during the decent flight. It is attached to the inside of the body tube and the nose cone. Label this part on the diagram with its proper name.
7. This part is made of a tissue material. This tissue is ‘treated’ with a special chemical to make it ‘fire-proof’. This tissue protects and insulates the parachute/streamer from melting into a plastic wad. Label this part on the diagram with its proper name. Color it **Pink**.

8. This part of the rocket aligns the tubes inside the rocket and prevents parts from moving around during flight. Label the part with the proper name and color it **Light Green**.

9. This part of the rocket holds the motor engine inside of the rocket. Label it with the proper name. **DO Not Color it!**

10. This part is glued into the motor tube and is ahead of the rocket motor. It prevents the motor from sliding up into the Body Tube while the engine produces the thrust. Label this part on the diagram with its proper name. Color it **Light Blue**.

11. This metal piece helps insert the rocket motor into the engine motor mount. It prevents the motor from sliding backwards out of the rocket when the motor’s ejection charge blows forward. Label this part with the proper name. Color it **Silver**.

*Make sure you write your **name, address, school’s name, and your grade** on the diagrams when you hand it in. Otherwise, I will not know who the worksheet belongs to.*