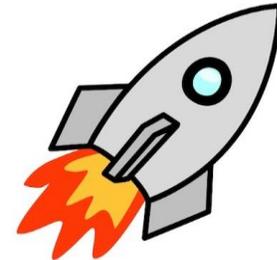


Name: _____ Date: _____ Class: _____

Density and Specific Strength Student Handout



Background: To ensure the safety of the astronauts during liftoff, the engine and engine turbines must successfully complete their jobs. As learned in the article, *RS-25: The Clark Kent of Engines for Space*, the four total engines on the Space Launch System (SLS) each include both high-pressure and low-pressure fuel turbo pump turbine blades. For this task, collect and calculate data for a given alloy and report this data on the class data table.

Determine roles: Agree within your team who will perform each of the four roles below:

| Role | Description | Fulfilled by |
|------------------------------|--|--------------|
| Senior quality engineer | Supports the principal aerospace engineer and senior aerospace engineer by recording the data in the task table. | _____ |
| Senior engineering manager | Converts data obtained by the principal aerospace engineer. Records the final data obtained by the principal aerospace engineer and the senior aerospace engineer on the class data table. | _____ |
| Principal aerospace engineer | Designates group members to determine the mass and volume of the sample. Calculates the density. | _____ |
| Senior aerospace engineer | Calculates the specific strength of the sample. Asks group members to verify accuracy. | _____ |

Task: Individually complete the procedure for your role, as described in the task table on page 2.

