

ENGINEERING

- Make this interesting by handing each boy a certificate stating that they have won a grant for \$1,000,000 to design the next "Sega Enterprise" machine. It's the next generation - faster, better, almost real life. They have to design it, make it, etc. to receive the grant. How do they do this? They need a building to design it (Civil Engineer). A Design Engineer can do the original design work. An Electronics Engineer can help design the display and handsets, a Software Engineer can design the games, and a Manufacturing Engineer is needed to set up the manufacturing plant and assembly lines. A Production Engineer is needed to produce the parts with the right materials at the right time. A Quality Engineer is needed to make sure the Sega Enterprise works well, and a Safety Engineer is needed to make sure that there are no accidents to hurt anyone. And of course you need a Test Engineer to make sure it will sell! The boys will all want to Test Engineers! (req. #1)
- Houston Lighting and Power can come do a demonstration on how electricity works. (req. #4)
- Instead of drawing bridges - have boys make them! Use popsicle or craft sticks, wood, Styrofoam, etc. Have a contest to see whose can support the most weight. Try just plain paper holding a book, then "accordion pleat" the paper to see how much it can hold. See Leaders How-To Book, Chapter 7, page 4 (req. #5)
- Use craft sticks to make a catapult. Checkout Pack-o-Fun's webpage for directions. <http://www.pack-o-fun.com/projects/catapult.htm> (req. #7)
- Have the boys draw floor plans of their houses - don't forget the doors and windows. Combine this with Readyman by having them include fire escape routes. (req. #8)

Resources:

Museum of Natural Sciences 713-639-4629

NASA 281-483-0123

City Public Works & Engineering Dept. 713-754-9884

EPO (Electronic Parts Outlet) various locations

Houston Lighting do Power 713-207-7777