**Design Engineering Student Worksheet Answers**

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|  **Sink** –rectangle; waterproofed cement; circular metal drain; mold had inset or walled mold to prevent filling  | **Lion head** – part of 3D architecture; cement; one-pieced mold with varied shapes and depths  | **Nanotechnology beads -**spheres 3D; metal; hollow and solid spheres possible  | **Road barriers –** cement; mold  | **Car** – varied shapes and materials for parts put together in a high-fidelity prototype on top of squared flooring  | **Wall** – cement; different shapes from different mold and placed together; no materials in center due to mold  |
| **Scientific and Biomedical containers for delivering liquids** – plastic molds; precision of molds important  | **Respiratory Ventilation Process** – numerous parts on exterior and interior of varied shapes and materials; high-fidelity prototype  | **Drain pipe** – cement; open cylinders; varied diameters/thickness and ends  | **Nanotechnology** – computer part; varied materials made from separate molds and assembled into prototype  | **Ceiling trussle** – architectural wood with metal corners in triangle; supports weight of ceiling distributed and also decorative  | **Chair** – resin/plastic; different parts assembled together  |
| **Nanotechnology** – microchip; varied conductive and non-conductive materials assembled together  | **Scientific glassware** – precision mold; varied sizes relate to volume capacities  | **Hot tub** – large plastic mold with cut-ins; final prototype contains numerous plastic parts assembled together on exterior  | **Mausoleum** – constructed of cement rectangles from molds assembled together; interior hollow  | **Nanotechnology** – spheres and discs from different molds attached together; silicon  | **Face mask** – consistency in template and material pores important  |