Structural Materials

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| --- | --- | --- | --- | --- |
| Pros/Cons | Aluminum | Steel | Plastic | Wood |
| Weight | Light | Med – Heavy | Light | Light – Med |
| Cost | Inexpensive | Moderately expensive | Inexpensive | Inexpensive |
| Maintenance | Low | Med – high | Low-Med | High |
| Life Span | Indefinite and reusable | Depends on weather | - Forever It is not biodegradable  - Unless due to Polymer degradation (weather) | Depends on environment |
| Safety Concerns | Medium (can have sharp edges if not properly cared for) | Blunt object when spun | It shatters if hit with a car  No other concerns | Can catch fire |
| Strength | Strong | Very Strong | Strong | Med - Strong |
| Other | - Requires special welding  - Corrosion-resistant  - Nonmagnetic  - Environmentally friendly | - will rust | - Easily shaped | - Termites  - breakable  - comes in many varieties |

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| --- | --- | --- | --- | --- |
| Pros/Cons | Bamboo | Cardboard | Ceramic | Platinum |
| Weight | Light | Super light | Light – heavy | Heavy |
| Cost | Inexpensive - Expensive | Super inexpensive | Moderately expensive | Super Expensive |
| Maintenance | Medium | Super high | Medium | Little |
| Life Span | Depends on weather and panda attacks…or termites | Depends on weather | Depends on weather | Indefinite |
| Safety | Can act like a switch when spun  - can cause bruises, welts | Paper cuts | - Can shatter and become sharp  - also blunt object | - unsure |
| Strength | Vegetable Strong  - “when a V8 doesn’t cut” | Not very | Moderately strong | Not very |
| Other | - Pandas  - Vegetable steel  - can bend and shape | - gets wet and soggy in rain | - can be made into cool designs | - malleable |

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| --- | --- | --- | --- | --- |
| Pros/Cons | Gold | Iridium | Glass | Rubber |
| Weight | Heavy |  | Moderate | Light |
| Cost | Super Expensive | Extremely Expensive | Inexpensive - moderately expensive | Inexpensive – moderately expensive |
| Maintenance | Little (polish) | Little | Little | Little to none |
| Life Span | Depends when someone steals it | - Half-life of 73.827 days  - indefinite | Does not biodegrade | Polymer degradation  - weather |
| Safety | People will steal it | - brittle | - can shatter and become sharp  - brittle | Can become brittle and crack which could cause problems |
| Strength | Not very strong | Pretty hard | Moderately strong | Somewhat strong |
| Other | - super malleable | - most corrosion resistant | - easy to clean  - see through | - too much wobble |

Aluminum and plastic would be the two best options. Due to expense, strength, and maintenance.