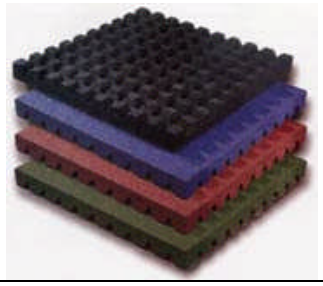
Loose Fill vs. Unitary Surfacing

Organic Loose Materials – Wood Chips, Bark Mulch, Engineered Wood Fibers, etc*	
ADVANTAGES	**DISADVANTAGES**
• Low initial cost. • Ease of installation. • Good drainage. • Less abrasive than sand. • Less attractive to cats and dogs (compared to sand). • Attractive appearance. • Readily available. 	• The following conditions may reduce cushioning potential: rainy weather, high humidity, freezing temperatures. • With normal use over time, combines with dirt and other foreign materials. • Over time, decomposes, is pulverized, and compacts requiring replenishment. • Depth may be reduced by displacement due to children's activities or by material being blown by wind. • Can be blown or thrown into children's eyes. • Subject to microbial growth when wet. • Conceals animal excrement and trash (e.g. broken glass, nails, pencils, and other sharp objects that can cause cut and puncture wounds). • Spreads easily outside of containment area. • Can be flammable. • Subject to theft by neighborhood residents for use as mulch.
Inorganic Loose Materials – Sand, Gravel	
ADVANTAGES	**DISADVANTAGES**
• Low initial cost. • Ease of installation. • Does not pulverize. • Not ideal for microbial growth. • Nonflammable. • Materials are readily available. • Not susceptible to vandalism except by contamination. • Gravel is less attractive to animals than sand. 	• The following conditions may reduce cushioning potential: rainy weather, high humidity, freezing temperatures. • With normal use, combines with dirt and other foreign materials. • Depth may be reduced due to displacement by children's activities and sand may be blown by wind. • May be blown or thrown into children's eyes. • May be swallowed. • Conceals animal excrement and trash (e.g. broken glass, nails, pencils, and other sharp objects that can cause cut and puncture wounds). • **Sand** – spreads easily outside of containment area. • **Sand** – small particles bind together and become less cushioning when wet; when thoroughly wet, sand reacts as a rigid material. • **Sand** – may be tracked out of play area on shoes; abrasive to floor surfaces when tracked indoors; abrasive to plastic materials. • **Sand** – adheres to clothing. • **Sand** – susceptible to fouling by animals. • **Gravel** – difficult to walk on. • **Gravel** – if displaced onto nearby hard surface pathways, could present a fall hazard. • **Gravel** – hard pan may form under heavily traveled areas.

Inorganic Loose Material – Shredded Tires	
ADVANTAGES	**DISADVANTAGES**
• Ease of installation. • Has superior shock absorbing capability. • Is not abrasive. • Less likely to compact than other loose-fill materials. • Discourages microbial growth. • Does not deteriorate over time. 	• Is flammable. • Unless treated, may cause soiling of clothing. • May contain steel wires from steel-belted tires. *Note: some manufacturers provide a wire-free guarantee.* • Depth may be reduced due to displacement by children's activities. • May be swallowed.
Unitary Synthetic Materials - Rubber Tiles, Poured-in-Place Rubber	
ADVANTAGES	**DISADVANTAGES**
• Low maintenance. • Easy to clean. • Consistent shock absorbency. • Material not displaced by children during play activities. • Generally low life cycle costs. • Good footing (depends on surface texture). • Harbors few foreign objects. • Generally no retaining edges needed. • Is accessible to the handicapped. 	• Initial cost relatively high. • Undersurfacing may be critical for thinner materials. • Often must be used on almost level uniform surfaces. • May be flammable. • Subject to vandalism (e.g. ignited, defaced, cut). • Full rubber tiles may curl up and cause tripping. • Some designs susceptible to frost damage.