Sand Sculpture Basics

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**Introduction**

Believe it or not there are people who feel the same way about sand sculpture that others feel about football or golf or “Dancing with the Stars”. I’m one of them. I’ve been a sand sculpture fanatic for nearly 30 years now, and have been traveling around the planet building them professionally for about 25 of those years.

If you decide to give sand sculpture a spin try to get a group of people together to do it. Friends, workmates, family, just get them to the beach. Small local competitions are a great place to start.

With that, I can think of no better way to open this venture than with a short course in sand...

**2. Sand 101**

All sand is not created equal. Although sand sculpture can be done with many types of sand, nothing will discourage you quicker than trying to build with bad sand. Good quality sand makes a dramatic difference on your experience and the quality of the finished piece. So the importance of first locating a beach with an enjoyable sand can't be stressed enough.

The general rule is, finer sands and angular grained sands are best. Pretty simple.

Assuming you intend to play on a beach, look for ones that feel packed hard when you walk along the waterline. Beach sand can change drastically in a matter of yards, especially around rivers, jetties or any obstacle to the prevailing ocean currents. So walk around, and dig down occasionally. Many times the surface sand looks course and unusable when in reality it is an inch or two of bad sand on top of fine, smooth dream-sand. Try to avoid any sand that contain large quantities of rocks, shells or other debris as these items tend to lead to flailing, rants and colorful language during the sculpting phase.

A quick effective sand test is to simply pack a golf ball size wad of wet sand into a ball. Flatten your palm with the ball of sand in the middle and carefully move your hand in a circular motion allowing the ball to roll. If the sand hangs together, you have found your spot.

**3. The Site**

Before you build, get acquainted with the tide in your area. Nothing can be more frustrating than having the tide wash into your sculpture before you are through with it. You can usually look around and recognize where the high tide has been recently. Building above this line is safe as long as there are no wild swings in the high tide.

The best thing to do is to check out the tide tables for your area. If the tide is coming up, build a little higher than the previous tide, but not too far up the beach. Trust me. You don't want to haul buckets of water up the beach any farther than you have to.

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4. Stack 'n Pack

Materials:
- **Shovel** - If you plan on making anything taller than your kneecaps, this is a must.
- **Buckets** - The 5 gallon plastic buckets used by paint stores and restaurants are best.
- **Casting Bucket** - Quick, fun.

Compaction is the 'glue' that makes the magic possible. Uncompacted sand can be used for low items but if you want to build anything with height, steep faces, carve deep undercuts, arches, etc., compaction is necessary. Compacting the sand is simply the best way to achieve maximum height with a minimum of shoveling. Three compaction techniques we will be covered in The Basics, they are commonly called "volcano method", "hand pack" and "casting buckets". Each method will be linked to a brief illustration.

Note: Compacting sand involves shoveling. Be careful. Do not hit or be hit with a shovel. It hurts. Always stick a shovel blade in the sand, standing up when not in use. Accidentally kicking a shovel blade also hurts.

**The Volcano Method** - This method builds up a compacted mound of sand by piling sand in layers (about 6" the 8” deep), flatten out each layer, but leave a small berm around the perimeter to contain the water. Flood the layer with water and then pack it with your feet. When you pack the sand, be careful not to step to close to the edge or it will break off. The sand on the outer layer of the volcano is usually not compacted well, and gets sliced away when you start carving. This process is repeated until you reach the desired height. Little equipment is needed with the Volcano method. Shovel, buckets and feet are about all you need. For subject matter that has a broad base and isn't very tall this method is a great way to pack sand.

![Volcano Method Illustration](image)

**Hand Pack** - This method can be used to create a complete sculpture, but it is typically used to add smaller objects to one of the other compaction methods. One of the best way to do a 'hand pack' is to half fill a bucket with water and then add sand until the bucket is just about full. Reach into the bucket with both hands and grab a lump of "saturated sand" and quickly place it where you want it. I say "quickly" because you want to retain as much water as possible. Now place the sand where you want it and pack the sand by rapidly patting the top of it flat until it resembles a sandy hamburger patty. There is no need to pat it hard, it's more about sending a brisk vibration through the wet sand. Repeat this process layer upon layer until you reach the desired height.

Hand packing requires a bit of experimentation. Each sand has its limitations. You can only go so high for a given width of the base. You have to find these limits and work within them. Very Zen, I know.
4. Stack 'n Pack (cont.)

**Casting Bucket** - Casting buckets and other simple forms are the quickest way to make a well compacted block of sand with the least amount of effort. The 5 gallon plastic buckets used by paint stores and restaurants are best.

![Casting Bucket](image)

- The bucket is flipped upside down on the beach and filled with 4 inch layers of sand. Water is poured in to the bucket until the sand layer is slightly submerged and then you reach in and pack the sand down with your hand, foot or a short piece of 2X4. Repeat this process - 4” of sand in standing water - Pack. Stop when you’re about an inch or two from the top. Now place your hand on either side of the bucket and smack all around the bottom of the bucket simultaneously with both hands (like your clapping your hands with a bucket between them). Next, grab the rim on the top of the bucket and pull straight up. Time to carve!

**Using a Casting Bucket** - The bucket is flipped upside down on the beach and filled with 4 inch layers of sand. Water is poured in to the bucket until the sand layer is slightly submerged and then you reach in and pack the sand down with your hand, foot or a short piece of 2X4. Repeat this process - 4” of sand in standing water - Pack. Stop when you’re about an inch or two from the top. Now place your hand on either side of the bucket and smack all around the bottom of the bucket simultaneously with both hands (like your clapping your hands with a bucket between them). Next, grab the rim on the top of the bucket and pull straight up. Time to carve!

1. Place bucket upside down
2. Fill with 4” of sand and flood with water
3. Pack vigorously with a 2X4 or fist
4. Repeat steps 2 and 3 until bucket is full.
5. Briskly tap around the bottom of the bucket with your hands and lift.

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5. Sculpting

Sculpting tools- Many kitchen, masonry and garden tools will work for this. You can use spoons, spatulas, melon ballers, pallet knives, clay loops, you name it. Some sculptors shun tools altogether preferring to use only their hands. Use whatever is most comfortable for you.

It's a good practice to paint your tools bright colors. They will be easier to find. And get into the habit of sticking your tools (handle up) in the sand. Tools laying flat on the sand get buried and lost. Or worse, someone steps on it.

These tools are a couple of my personal favorites and are staples in professional circles. Both are inexpensive:

**Margin trowel** (Marshalltown #56) 2" x 6". Marshalltown trowels are by far the best. The blades are thinner, making for cleaner cuts, and they practically last forever.

**Baker's spatula** (Ateco 1385) - These are available at any kitchen shop. Should be under $3.

A few basic sculpting rules:

- Always carve from the top down. As you carve, you generate waste sand. You do not want waste sand falling on finished portions of the sculpture below you.

- For crisp edges always carve into the mass of the sculpture. Pulling the blade off the edge of a sculpture can cause edges to break off (see detail below).

- Immediately get rid of any sand that you're sure doesn't belong. Getting the rough shapes established first is what we call "blocking out", or "massing". This makes it much easier to visualize what you need to do next.

- Bring a spray bottle. It's much easier to carve a crisp edge in damp sand.

It might be a good idea to bring pictures of a castle, an animal, or anything else you might have an interest in and try to duplicate it. Remember, this is a time of learning, do not become discouraged. Things are going to fall. This happens to everyone, and is a very important learning tool. These events teach you volumes if you pay attention. Try to figure out why it fell, and try it again. Quality of the sand, level of compaction, water content, and undercutting the sand too far, are all factors.

Practice makes perfect. It sucks but it is true. Everyone's first sculpture is humble at best. But the good news is that anyone can produce awesome sculpture with practice. Now get out on the beach and have fun.