

Have you ever tried building a sandcastle on the beach? You'll notice that wet sand sticks together much better than dry sand. But why does this happen? Let's find out!

Sand is made up of tiny grains, and when the sand is dry, these grains are loose and don't stick to each other. But when you add water, something interesting happens: the water creates little bridges between the sand grains. These tiny water bridges are called **water films**.

Here's a step-by-step explanation:

1. **Dry sand grains:** They just sit next to each other with air in between, so they can move around easily.
2. **Adding water:** Water fills the small gaps between the grains.
3. **Water films form:** Thin layers of water create sticky bridges between sand grains, holding them together.
4. **Surface tension:** Water molecules like to stick to each other, which helps hold the sand grains tightly together.

This is why wet sand feels heavier and sticks together well, making it perfect for building sandcastles! Without water, sand stays loose and falls apart easily.

So, in short, water acts like a glue that sticks sand grains together using tiny water bridges and the water's natural stickiness called surface tension.