

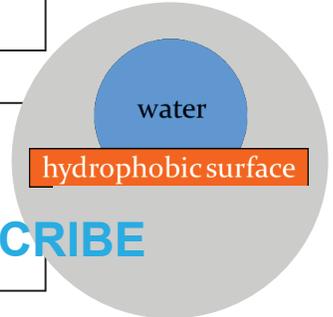
### DISCUSS & INQUIRY

- Ionic, Covalent Bonds
- Water as a Dipole Molecule
- Cohesive and Adhesive Forces

Properties of:

- The Sand
- The Surface

### OBSERVE & DESCRIBE



### STEM CONNECTIONS

- Hydrophilic vs. Hydrophobic
- Polymer coatings
- Forces and interactions

### DO

The Magic Sand activity utilizes properties found in water,  $H_2O$ , and surface characteristics to illustrate the concepts observed

- Change in the interaction
- Different surfaces
  - Different liquids

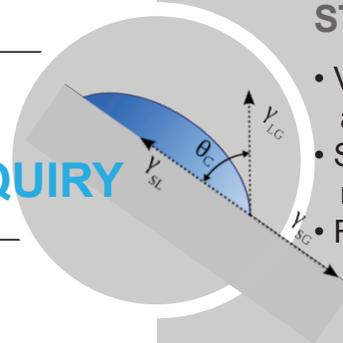
### OBSERVE & DESCRIBE

### INVESTIGATE

Variables are changed to challenge and to start the critical thinking process

- Degree of Hydrophobicity

### DISCUSS & INQUIRY



### STEM CONNECTIONS

- Various surface interactions with water
- Shapes found in nature, materials, etc.
- Forces and interactions

### STEM CONNECTIONS

- Possible applications
- \* How does this apply to biology, chemistry, physics?