Know Your Ice

LAND ICE
WATER VAPOR

SNOW
A precipitation of ice crystals, most of which are branched.

FIRMED
Old snow which has been transformed into a dense materials. It is not snow; its particles are joined. It is not ice; it has communicating air interstices.

ICE SHEET
A mass of ice and snow of considerable thickness and large are on rock or floating on water. An ice sheet of greater than 50,000 square km is called an ice cap.

GLACIER
A mass of snow and ice continuously moving from higher to lower ground, or if afloat, constantly spreading.

ICEBERG
A large mass of floating ice more than 5 meters above sea level that has broken away from a glacier.

BERGY BITS
A piece of floating ice less than 5 meters above sea level and not more than about 10 meters across.

GROWLER
A piece of floating ice smaller than a bergy bit, almost awash.

SEA ICE
SEA WATER

FRAZIL ICE
Fine spicules or plates of ice in suspension in water.

GREASED ICE
A later stage of freezing than frazile ice; coagulated spicules and plates.

SHUGA
An accumulation of spongy white lumps, a few centimeters across formed from slush or grease ice.

SLUSH
Snow, saturated with water floating after a heavy snowfall.

ICE RIND
A brittle, shiny crust formed on a quiet surface by direct freezing or from grease ice less than 5 centimeters thick.

NILAS
A thin elastic crust of floating ice bending on waves up to 10 centimeters thick.

PANCAKE ICE
A piece of new ice approximately circular, 30 centimeters to 3 meters across, with raised rims. formed from freezing together of grease ice, slush or shuga or the break up of ice rind or nilas.

FAST ICE
Sea ice which which remains fast along the coast where it is attached to the shore; an ice front, ice wall or over shoals or between grounded ice bergs.

PACK ICE
Any area of sea ice other than fast ice no matter the form or disposition

FLOE
A piece of floating ice other than fast ice or glacier ice.

There are five sizes:
Ice Cake - less than 10 meters across
Small - 10 to 100 meters across
Medium - 100 to 1000 meters across
Big - 1 to 10 kilometers across
Vast - Over 10 kilometers across

BRASH
Accumulation of floating ice made up of fragments not more than 2 meters across. The wreckage of other forms of ice.

SEA WATER

Sea Ice Keeps it Cool
Saltwater freezes at about -1.8 °C (28.8°F). Most Antarctic sea occurs annually meaning it forms in the winter and melts during the summer. Sea ice regulates exchanges of heat, moisture and salinity in the polar oceans. It insulates the warm ocean water from the cold polar atmosphere except in cases where the ice has cracks or leads. Here, the heat and water vapor from ocean exchange with the atmosphere in winter. The frequency of these leads determines where and how much heat and water are lost to the atmosphere, which affect local cloud cover and precipitation.