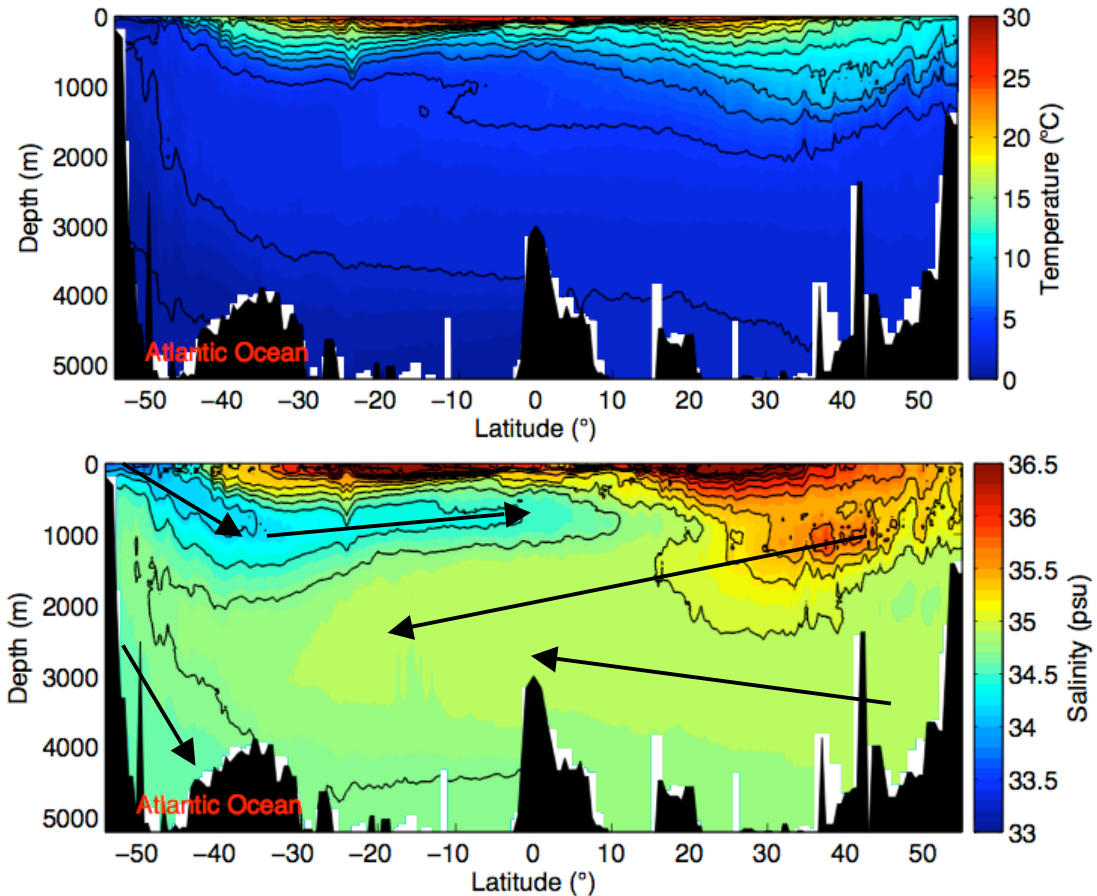


## Ocean Layering: Density, Salinity, Temperature, and Circulation

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### Global Layers Activity - Sample Answers



Both pictures show a slice through the Atlantic Ocean. The top picture is temperature and the bottom picture is salinity.

1. At 50°S, estimate the temperature at the surface and at the bottom.

Surface temperature: 0-5°C

Bottom temperature: 0-5°C

2. At 10°S, estimate the temperature at the surface and at the bottom.

Surface temperature: 25-30°C

Bottom temperature: 0-5°C

3. Is water more likely to sink near 10°S or near 50°S? Why?

It is more likely to sink near 50°S because the water at the surface is cold there. It is the same temperature as the water on the bottom. At 10°S it is too warm and too light to sink.

4. Looking at the picture of salinity, describe the different vertical layers you see.

There is a fresh patch in the south at 1000 m depth, and a salty patch in the north and south below this. The surface layer is salty in the north and south.

It is ok if they just describe one feature of the picture. They should be able to see that salinity is layered.

5. On the picture of salinity, draw arrows where you see evidence that the water is moving horizontally or vertically. See figure above.