## Question title: Temp Change

At lower latitudes, the surface water is warmer than the abyss, the temperature gradient
separating these regions is the

## Question title: Density Change

At lower latitudes, the surface water is lighter than the dense abyssal water, the density gradient separating these regions is the $\square$

## Question title: Scaling for the thermocline depth

Under different forcing and parameters, the thermocline depth may vary either by a diffusive or an advective scaling.


True False

## Question title: Ventilated thermocline

The ventilated thermocline theory hangs on the assumption that the water after subduction conserves both potential and potential


## Question title: Figure $\mathbf{1 6 . 1 5}$

Figure 16.15 is unrealistic largely because the isopycnals are vertical--which does not occur if baroclinic eddies are allowed to form.True $\bigcirc$ False

Question title: Water Mass


## Response Summary

| Answer | Value | Frequency |  |
| :--- | :--- | :--- | :--- |
| process, water, imprinted, surface, retained | $0.00 \%$ | $2(8 \%)$ |  |
| process, surface, imprinted, water, retained | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 2 ( 8 8 \% )}$ |  |
| process, surface, retained, water, imprinted | $0.00 \%$ | $1(4 \%)$ |  |

## Question title: T-S diagram

A T-S diagram like figure 5.4 in Tomczak and Godfrey is useless for distinguishing water masses.

## Question title: The ocean and climate change

There are signs that climate change may be changing the ocean temperature, salinity, and sea level, but it is crucial to remember that ocean timescales are very long when compared to the duration of the observational record

