Student Directions

Dynamic changes sometimes occur at the interface where the Cryosphere and Hydrosphere interact. This is true for Western Antarctica where NASA Scientists are monitoring change of the ice sheets thickness. Warm ocean currents have spurred the rapid thinning of the Pine Island Glacier and Getz ice shelves in Antarctica as shown below.
The Getz Ice Shelf stands 200 feet above the ocean surface and, in places, lies more than 1,000 feet below.

1. Observe this photo below showing the interface of the Western Antarctica ice shelves and the Amundsen Sea. The ice shelves are indicated by the rainbow color. The shelves are
Warm ocean currents have spurred the rapid thinning of the Pine Island Glacier and Getz ice shelves.

2. Now review the visualization and answer the questions below:

3. What color do you see the most of along the edges of the ice shelves?
4. What do these data mean about the thickness of the ice sheets?
5. What factors may contribute to this phenomenon?

Teachers, these mini lessons/student activities are perfect "warm up" tasks that can be used as a hook, bellringer, exit slip, etc.

Teachers who are interested in receiving the answer key, please contact MND from your school email address at larc-mynasadata@mail.nasa.gov. We verify that requestors are teachers prior to sending access to the answer keys as we’ve had many students try to pass as teachers to gain access. To receive the keys please provide the following:

1. The link to the school/institution’s teacher directory where you are employed so we can verify that you are a teacher
2. Ensure that the school email address is provided in your response as we are unable to send to personal email accounts

indicated by the rainbow color; red is thicker (>550m), while blue is thinner (<200m).