

ANSWER

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Round: 6B

1. The use of satellite technology for weather forecasting is the responsibility of which two (2) federal agencies?

NOAA (1 pt) and NASA (1pt)

2. Remotely sensed satellite data can be used to determine several oceanographic or biological parameters. Name four (4) different biological or oceanographic parameters that can be obtained from satellite observations of the sea surface.

Any four (4) of the following (1 pt each; 4 pts total):

- *chlorophyll a concentration*
- *sea surface temperature*
- *sea ice cover*
- *current patterns or eddies*
- *sea surface height*
- *ocean color*
- *salinity*

3. Name the one variable that satellites can observe about the ocean through thick cloud cover.

Sea surface height (2 pts)

4. How do researchers using the SeaWIFS ocean color satellite data determine the difference between phytoplankton and suspended sediments in the water?

The answer must contain reference to different wavelengths of light reflected by these materials (4 pts)

5. Why is it important that SeaWIFS is able to tilt 20 degrees, especially at equatorial latitudes?

The reflection of sunlight (or glint) (2 pts) from the ocean can obscure the color of the water (2 pts) and affect measurements

6. What is the approximate resolution of the SeaWIFS satellite?

1.0 km (2 pts)

7. Why is the current mission status of SeaWIFS listed as 'out of service'?

The spacecraft carrying SeaWIFS stopped communication with data stations on Earth (2pts)