



## Join the Corps of Exploration as a data logger! Get started here:

1. Print out Data Logging Activity Sheets for everyone in your group.
2. Visit [www.NautilusLive.org](http://www.NautilusLive.org) to watch Ocean Exploration Trust's 24/7 exploration live stream from the deep sea. If ROVs are not currently diving, check out expedition highlight videos.
3. Begin watching and logging your sightings! Listen to scientists, engineers, and communicators explain what they're observing to add details like species names, measurements, and behavior to your logs. Send in your own questions!
4. Compare logs with fellow data loggers -- How are your log entries similar? How are they different? Compare your own logs from different dives or regions.
5. Share your sightings with #NautilusLive on Facebook, Twitter, & Instagram! Follow us on Facebook (Nautilus Live) & Twitter (@EVNautilus) to see dive alerts and highlights.



## Why is data logging important? What is it like to be a data logger on *Nautilus*?

Data Loggers on Exploration Vessel (E/V) *Nautilus* have the important role to document as much information as possible from the depths during remotely-operated vehicle (ROV) exploration dives. Scientists and interns who serve as Data Loggers work with the science team onboard and ashore to make scientific observations, summarize dives, and later preserve physical samples. Accurate and detailed data logs help scientists globally learn about deep sea environments long after the dive is over, enabling research into the distribution and abundance of organisms, and how individual species interact with their habitat. Exploring the seafloor, ROV *Hercules* becomes the eyes in the deep sea for the team to observe and document deep sea organisms and ecosystems, who take careful data logs of every animal sighting, unusual geologic feature, and changes in ROV operations.

Deep sea sampling is a complex process -- sometimes an art! The process begins with a full watch team operating inside the *Nautilus* control van. When scientists identify a sample they would like to collect, pilots carefully maneuver ROV *Hercules*' two manipulator arms which combine with a wide range of tools, including a gripper claw, suction hose, push core, and scoop to collect samples. Once collected, all samples are stowed in compartments onboard *Hercules* to be brought back up to the surface. On the ship, samples are moved by scientists to the onboard wet lab for processing. All samples are carefully preserved, labeled, and cataloged to be shared with research partners onshore, where scientific investigation continues for months to years.

## Take a deeper dive into ocean exploration:

- Learn how *Nautilus* scientists collect and process samples: <http://nautl.us/1GQTPSf>
- See some of the tools that ROV *Hercules* uses to collect samples: <http://nautl.us/2e5YNYy>
- Check out the data logging sheets used by scientists aboard *Nautilus*: <http://nautl.us/2s2U3sO>

## Educator/Facilitator Tips:

- Use the log as a class warm-up or exit activity. Students can discuss their observations and the expedition in small groups or as a class.
- Encourage students to log their observations while watching outside of the classroom. This is a great activity students can do with their family.
- Incentives can be offered individually such as stickers or small prizes, or have an inter-class competition to see which group can log the most sightings in a week, month, etc.