You have decided to plan a diving trip for your next vacation. How does physics affect your trip? Create a planning guide in the form of a travel brochure that describes your trip and how physics is used to keep divers safe. Just think -- your planning guide could help other travelers!

**Your travel brochure must include:**

1. A specific location for your diving trip. Inform the audience of important details of your trip such as expected water depth, whether it is salt or fresh water and the amount of time you expect to be underwater. Describe the purpose of your trip.
2. Use Pascal’s Principle and the Pressure-Fluid-Height relationship to calculate the maximum pressure you expect to experience during your dive. Make sure you use the correct density for either fresh or sea water.
3. Describe the basic equipment you will need for your trip. Briefly explain why each piece of gear is needed from a physics perspective.
4. Explain how physics concepts affect your trip. Think about things like how you maintain neutral buoyancy during a dive, why there are limits on how fast you can ascend to the surface, and the effects of water pressure on divers.
5. Describe safety concerns for your trip.
6. You will need to use resources outside of this course to complete this assignment, so please submit a Works Cited document with your assignment submission. If you need assistance, visit the Developmental Module for information on citing any resources that you used.

**Suggested Resources:**

* [NASA: Neutral Buoyancy Laboratory](http://dx12.jsc.nasa.gov/site/index.shtml)
* [National Sea Grant Library: Diving Safety](http://nsgd.gso.uri.edu/dive.html)
* [United States Department of Labor: OSHA Commercial Diving Standards](http://www.osha.gov/SLTC/commercialdiving/index.html)

**Checklist:**

As you complete your radioactivity assignment, please review the checklist below to ensure that you have included all needed items.

|  |
| --- |
| ***Your assignment should include all of the criteria listed below to receive full credit.***  |
| **Included?** | **Item** |
|  | 1. A specific location for your diving trip. Inform the audience of important details of your trip such as expected water depth, whether it is salt or fresh water and the amount of time you expect to be underwater. Describe the purpose of your trip.
 |
|  | 1. Use Pascal’s Principle and the Pressure-Fluid-Height relationship to calculate the maximum pressure you expect to experience during your dive. Make sure you use the correct density for either fresh or sea water.
 |
|  | 1. Describe the basic equipment you will need for your trip. Briefly explain why each piece of gear is needed from a physics perspective.
 |
|  | 1. Explain how physics concepts affect your trip. Think about things like how you maintain neutral buoyancy during a dive, why there are limits on how fast you can ascend to the surface, and the effects of water pressure on divers.
 |
|  | 1. Describe safety concerns for your trip.
 |
| ***You will need to use resources outside of this course to complete this assignment, so please submit a Works Cited document with your assignment submission. If you need assistance, visit the Developmental Module for information on citing any resources that you used.*** |
| **Included?** | **Item** |
|  | For resources used outside of the course, a Works Cited document is submitted along with the assignment.  |