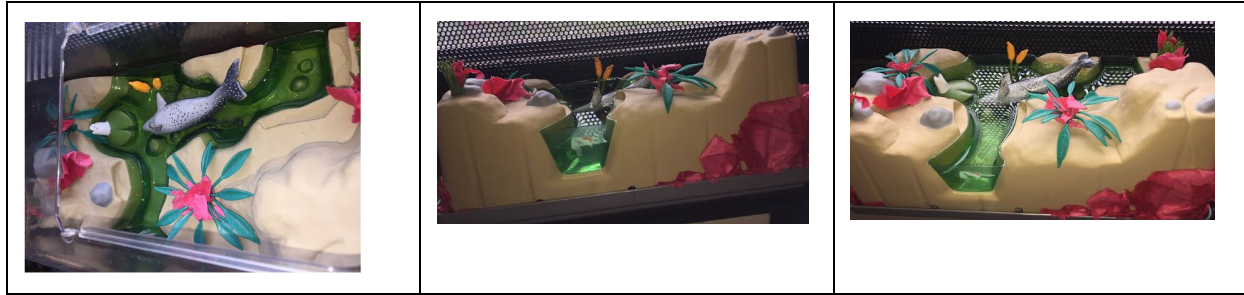


Natural Disasters and Earth System Research (Individual submission!)



(Our Project)

Questions	Atmosphere	Geosphere	Hydrosphere	Cryosphere	Biosphere
Do wildfires affect the system?	<p>The US Forest Service says “Open fires contribute about 40% to the global carbon monoxide budget. This strongly affects the reactive gas chemistry of the atmosphere.”</p> <p>The atmosphere is polluting the air with admissions is harmful to human health.</p>	<p>The geosphere is considered the inner portion of the Earth system including, rocks, minerals, landforms and the processes that shape the Earth's surface.</p> <p>It causes the interior structure to catch on fire and things be burned down into ashes, such as trees and lands.</p>	<p>Wildfires do affect the Hydrosphere.</p> <p>The hydrosphere is the water component of the world. These water components include such things as lakes, rivers, etc.</p> <p>( Note: The hydrosphere just like the atmosphere is always in motion)</p>	<p>The cryosphere is the solid (frozen) water on the Earth.</p> <p>So The heat from the wildfires can cause the cryosphere to melt. Wildfires can cause greenhouse gases which traps heat in the air.</p>	<p>The biosphere covers all of earth’s biomes and ecosystems.</p> <p>Different biomes are affected in different ways by wildfires; some are more likely to appear in certain climates. The most common example is how the fire affects the forests, as the trees provide it with fuel to keep going.</p>

<p>Does it mainly affect it a positively or negatively? How ?</p>	<p>The Atmosphere affects it in negative ways because it puts carbon dioxide and having too much of it can affect our respiratory system in the long run.</p>	<p>Positive way the burnt ashes of the trees, has minerals and vitamins in it to make the ground even richer.</p>	<p>The Hydrosphere is negatively affected by wildfires. The fire can lead to change in water temperature since water acts as a natural fire break. The results of the fire of less vegetation results in flooding.</p>	<p>The Cryosphere is the icy part of Earth. Cryosphere is intertwined with all the other parts of the Earth's systems. If anything happens to the Cryosphere it affects the whole Earth. The melting of the Cryosphere can cause climate change. It increases the chances of globbing warming. So it impacts negatively.</p>	<p>Fire itself can affect different biomes in different ways. Most of the time, wildfires are dangerous, destroy habitats, and can harm people and animals. However, in some cases fire is beneficial to certain trees. Some species, such as the eucalyptus tree, require fire in order for their seeds to sprout. Trees such as this are known as saprophytes.</p>
<p>What causes it?</p>	<p>The wild fires mostly start on land and not in the Atmosphere.</p>	<p>Extreme heat from the sun and humid heat coming together and cause fires to start. Also lightning strikes hitting trees causing fires to start. According to <u>pacific bio</u> "Approximately 90% of fires in the last decade have been human-caused, either through negligence, accident or</p>	<p>90 percent of wildfires are caused by humans, That includes discarded cigarettes, unattended campfires, and even the burning of debris. The other 10 percent is caused by lightning ( the lightning), and lava.</p>	<p>Humans are the number one cause of wildfires. But hot weather can cause it, droughts. Also, sparks from railroad/cargo trains.</p>	<p>Many of the causes of wildfires are related to humans. Examples of this are littered cigarettes, campfires that were not properly put out, car crashes, fireworks, and arson(people starting fires on purpose). Some natural causes of wildfires are lightning and</p>

		<p>intentional arson. Some of the fires caused by accidents and negligent acts are through unattended campfires, sparks, irresponsibly discarded cigarettes and burning debris. The remaining 10% of fires are caused by lightning strikes, which are especially prevalent in the Western United States and Alaska.”</p>			<p>volcanoes. The weather can also play into causing a natural fire.</p>
<p>How can we prevent it?</p>	<p>Check local air quality reports. ...  Consult local visibility guides. ...  Keep indoor air as clean as possible if you are advised to stay indoors. ...  Avoid activities that increase indoor pollution. ...  Prevent wildfires from starting.</p>	<p>We can prevent it by being more careful when we are in the wilderness with fire, make sure you put out your fires. Be careful with extreme heat or any campfire, makes sure we don't have it catch anything flammable on fire. Don't throw away any waste that cause an instant combustion.</p>	<p>One way to prevent wildfires is to educate ourselves. One can visit a national park and do the following</p> <p>Attend a ranger-led fire ecology hike  Explore a self-guided fire ecology trail if one is available  Take a wildflower walk or view wildlife from a safe</p>	<p>Make sure your cigarettes are completely out before disposing of them. Make sure to have a shovel, water and a flame retardant near. Try to avoid BBQ or using in fire in windy conditions.</p>	<p>The best way to prevent wildfires is to be careful with flammable objects, campfires, and anything that may cause a spark. Make sure that if you are using fire, you know how to control it and properly put it out. Pay attention to the weather and also the laws regarding fire in your area. Dispose of all cigarettes properly. If you are unsure if</p>

			<p>location in a recently burned area</p> <p>See a prescribed fire in progress from a safe distance</p> <p>Read other materials about local fire ecology</p> <p><sup>1</sup></p>		<p>something will cause a wildfire, don't do it. Ask for help from a professional.</p>
Sources	<p><a href="https://phys.org/news/2014-05-impact-atmosphere.html">https://phys.org/news/2014-05-impact-atmosphere.html</a></p> <p><a href="https://www.fs.fed.us/pnw/research/fire/fire-effects.shtml">https://www.fs.fed.us/pnw/research/fire/fire-effects.shtml</a></p>	<p><a href="http://www.pacificbio.org/initiatives/fire/fire_ecology.html">http://www.pacificbio.org/initiatives/fire/fire_ecology.html</a></p>	<p><a href="https://www.nps.gov/fire/wildland-fire/learning-center/fire-in-depth/wildfire-causes.cfm">https://www.nps.gov/fire/wildland-fire/learning-center/fire-in-depth/wildfire-causes.cfm</a></p>	<p><a href="https://scied.ucar.edu/longcontent/climate-and-ice">https://scied.ucar.edu/longcontent/climate-and-ice</a></p> <p><a href="https://academic.oup.com/bioscience/article/62/4/405/243859/The-Disappearing-Cryosphere-Impacts-and-Ecosystem">https://academic.oup.com/bioscience/article/62/4/405/243859/The-Disappearing-Cryosphere-Impacts-and-Ecosystem</a></p>	<p><a href="https://www.csun.edu/science/courses/595g/yellowstone/index.html">https://www.csun.edu/science/courses/595g/yellowstone/index.html</a></p> <p><a href="https://www.britannica.com/list/5-amazing-adaptations-of-pyrophytic-plants">https://www.britannica.com/list/5-amazing-adaptations-of-pyrophytic-plants</a></p> <p><a href="http://www.conserve-energy-future.com/causes-effects-and-solutions-of-wildfires.php">http://www.conserve-energy-future.com/causes-effects-and-solutions-of-wildfires.php</a></p>
Cool fact	<p>One of the largest fires in recent history was in 1825 when a fire tore through Maine and New Brunswick, Canada,</p>	<p>“Fire regime refers to the patterns of fire that occur over long periods of time, and the immediate effects of fire in the ecosystem in which it occurs.”</p>	<p>Volcanos cause wildfires ( they are part of 10% of causes)</p>	<p>90% of all wildfires are started by humans.</p>	<p>There are two types of lightning: cold and hot lightning.</p>

<sup>1</sup> “Wildland Fire: Effects of Fire | U.S. National Park Service.” *National Parks Service*, U.S. Department of the Interior, [www.nps.gov/fire/wildland-fire/learning-center/fire-in-depth/effects-of-fire.cfm](http://www.nps.gov/fire/wildland-fire/learning-center/fire-in-depth/effects-of-fire.cfm). Accessed 19 Sept. 2017.

	burning 3 million acres of forest.				
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