Global Natural History Day

2016 Theme

BEHRING GLOBAL EDUCATIONAL FOUNDATION

Guanxi: Relationships in Nature

Heads or Tails! When playing a game, all points of views and ideas are relatively apparent. Simple and clear distinctions are set. However, our real world is so much more complex, with different connecting chains all influencing and impacting each other. When one chain on the system is broken, the entire ecosystem collapses.

Relationship, or Guanxi (in China), has been a very significant idea since the time of Confucius, usually used in the context of networking and building connections with influential people. But for this year's GNHD theme, you will be expected to use the idea of connections and relationship in a more innovative context, focusing more on the interconnectivity of things in the natural world. Our involvement in the world does not only affect us, but it also affects our environment, our community and our planet. This year's theme tries to explore in depth how different components of our ecosystem are closely connected to one another. A sample topic can be as specific as the relation between a bee and a flower, to as broad as the relationship between the Sun and our environment. As John Muir once aptly concluded: *"When one tugs at a single thing in nature, he finds it attached to the rest of the world."*

In nature, every organism is influenced by its surrounding organisms and environment. The 2016 GNHD program invites you to focus, study, and observe this phenomenon.

We hope to hear from many interesting stories through your exhibition or performance; which of these natural relationships are easy to see? Which are more hidden? And most importantly, how do these relationships influence the natural world?

Find a topic that you are excited about and research it; through this process, you should also verify the credibility of your sources, perform your own experiments, collect your own research, and make a hypothesis and evaluate its accuracy. This is the way we suggest you approach GNHD 2016, and is also the standard for GNHD judging.

Please keep in mind that we expect you to use your own ideas and writing to fully explain these relationships and to not just stay on the surface.

Let's see what types of relationships you could choose as your topic.

Firstly, you can find something that occurs every day alongside you. It can be something in the sky or something deep in the sea. It could be the simplest biological system -- the food chain.

“Survival of the fittest” is the most basic rule for our biological system. But if the lamb eats the grass and the wolf eats the lamb, what does the grass “eat”? Who “eats” the wolf? While there is a competition over life, there is also cooperation within life. *What exactly are the relationships in the food chain? How do those relationships influence nature?*

Let's see another example - the butterfly. Most butterflies have a pair of wings. The wings are thin and with a simple structure but can help the butterfly conserve its energy and the colors of the wing help the butterfly hide itself from enemies and dangerous situation or attract other butterflies. *Are variables like living environment, weather, predators, food, and so on, related to the color and lines on the wings of a butterfly?* There is one kind of butterfly in the middle of South America whose lines and colors on the both side of its wings are different from another side. *Why has this happened?*

How do bees speak to each other? When a bee flies around looking like it’s dancing, what does is it mean? How do bees separate their duties? How does the relationship differ between the queen bee and the worker bee from the male bee? How do these relationships and roles change when the queen bee dies? Does it mean there will not be a new generation of bees?

What is communication like for ants, dolphins, or fireflies?

In what ways do plants communicate each other?

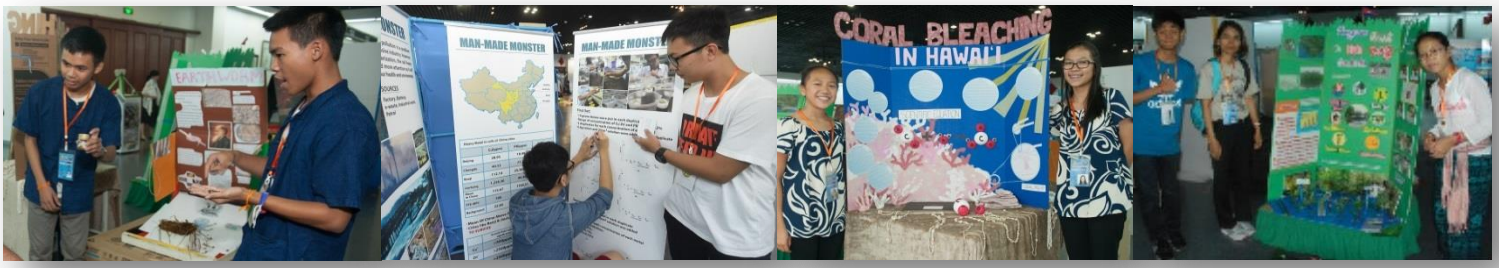
What kinds of wood are necessary for a mushroom to grow?

How is bird migration related to the temperature?

What is the relationship between pigeons and the Earth's magnetic field? Or the whale and ocean current? The earthworm and soil?

We are always taught to plant trees to protect the environment, but have you ever researched how the rainforest or carbon dioxide is tied to the global climate?

Why is the marsh called the "kidney" of the earth? Or the forest called the "lung" of the earth? How do they affect the natural world? Is it similar to the basic elements for human living?



Imagine that you are going to the park with your friends on a sunny day to have a picnic and you drink coke and eat hamburgers and potato chips. All of that food, whether meat or vegetables, is originally fueled by the sun. *What are the relationships between human and natural elements like the sun, water, or air? How do they affect each other?*

When the sun sets, the moon rises. What is the relationship between the sun, the earth, and the moon? Why is it the full moon only sometimes? How does the movement of the sun and moon them affect nature? If the moon is orbiting the earth, and the earth is orbiting the sun, which relationship affects the tide?

Cloud, fog, rain, snow, frost, thunder, lightning, rainbows - how are they created and how do they impact nature? Is it from a power that humans are not able to see?

Every phenomenon in nature does not occur alone. Everything is related and interconnected. We hope you are able to find a topic within this theme, which you find exciting and research it and pour your passion into the process. It will help you discover the world even more.

Ask a parent or teacher to register your team at the official Global Natural History Day website (www.gnhd.international). Each team must include one teacher/coach and two students. Once registered, your team will receive an official registration code to use when logging into the website and other identification purposes.

Good luck!