The New7Wonders of Nature
Project Ideas

New7Wonders encourages teachers to integrate topics addressed by the New7Wonders of Nature campaign in their classes. With a dedicated New7Wonders of Nature Project Day, students will have fun learning about nature and the world around them, can develop their ability to work independently either alone, with a partner or as part of a group, and can learn to present their work with pride. We welcome you to submit any work to the New7Wonders website by sending us an email at kids@n7w.com.

1. About Project Days

1.1. What is a Project Day?

A project day is the result of a one to two-week project on a special topic. On Project Day, students present what they have researched. These special projects help students examine and understand complex topics, and gain an in-depth knowledge of a particular subject. This kind of project is one of the most action-oriented teaching methods, and it demands a great deal of independence from the students.

1.2. What should an in-depth project for Project Day include?

- It should be relevant to the class
- It should address the interests of all participants
- It should be based on good organization, planning and responsibility
- It can cross over into several different subjects (e.g. biology and history)
- Some kind of interactivity is often very good for all involved

1.3. Project Day planning

- **Preparation phase:**
    - Set timing: how long will the students have to work on the project;
    - Teachers select topics;
    - Identify related topics, integrate other subjects;
    - Determine how the project will be presented (there can be several options)—on a computer, create a website or a Powerpoint presentation using handmade models, with a spoken presentation, with music, with lighting, etc.;
    - Identify what resources the students can use;
    - Set time limits if the projects are going to be presented in class;
    - Examine other organisational questions.
- **Main phase**:
    - Outline the individual project phases:
        - When do students choose their topics?
        - Do students choose how their project will be presented?
        - At set fixed times, students meet with the teacher to discuss how the project is going.
    - Can include group work and individual work
- **Final phase**:
    - **Project Day!**

2. Ideas for a New7Wonders of Nature Project Day

Let students brainstorming topics, in addition to the suggestions below.

2.1. The 14 New7Wonders of Nature categories

Subjects: Science, Biology

There are 14 categories for the New7Wonders of Nature nominees. These categories reflect what nature has created, and they all have a very specific history with special characteristics.

The 14 categories are:

- Animal reserve
- Cave or Grotto
- Coastline or cliff
- Canyon or fjord
- Forest or wood
- Geological site
- Glacier
- Mountain, cliff or volcano
- Nature conservancy
- Oasis or desert
- Prehistoric natural site
- Water, sea, lake or river
- Underwater world or reef
- Waterfall

Let's think about this:

- What categories share elements, such as water, air (wind), fire or earth? For example: Look at the cycle of water and see how it passes through many categories. In fact, even deserts are affected by water—by lack of water, or they have huge, hidden lakes under their surface!
- How else do the categories overlap?
- What role do humans play for each category? For example, which categories are most endangered by human activity? Which ones find most human activity in them or their area?
- What natural sites in which categories are close to your school? Why are these there and not sites that belong to other categories?

Project ideas:

- Find examples of your favorite category on different continents, in different climate zones, in the Southern and Northern Hemisphere. Write an essay on each of them and then one comparing them. You can build models to accompany your essays.
- Build models of each of the 14 categories, with typical features, out of papier maché, dough or clay.
- Make a collage of photos you find of spectacular natural sites that belong to the 14 categories, write the main characteristics around each category.
- Divide the class into 14 groups, assign each group one category and have it recreate a New7Wonders of Nature nominee in the classroom or in the science lab.

2.2. The cycle of water

Subjects: Science, history, social studies

The cycle of water affects almost everything on our planet. We humans need water to live and our bodies are made up mostly of water. It often dictates where we can live, what crops we can grow and what animals inhabit the region and that we sometimes use and hunt. It shapes what the landscape around us looks like.
Use the New7Wonders of Nature "Tell Me Why" fact sheet to find out more about where the cycle of water can be found at work in many of the New7Wonders nominee categories.

Let's think about this:

- Where does water come from in our world? Springs, glaciers, clouds and rainfall are all places where the water cycle becomes apparent.
- How does water get back to the ocean?
- Why is some water salty and some fresh (not salty)? What impact does this have on the animals, plants in the water, and the rocks and other solids around it?
- How can water be strong enough to create canyons?
- Where does water play an important role, even though we do not necessarily see it? For example, as dampness in forests or animal reserves.
- How has water played a role in where people have lived and formed civilizations? For example, on islands, near lakes or rivers, near the coast, near an oasis.

Project ideas:

- Make a canyon out of a flat tub of sand or dirt by having a river of water rush through it so it wears it down or erodes it.
- Create your own cycle of water, or a part of it, by building a model. You can use an aquarium or even a plastic bin and build the parts with modelling clay or other modelling stuff. For example, you could use ice cubes for glaciers and you could even color a glacial lake bright blue with food coloring, or a swamp brownish with tea leaves.
- If you live near water, document with photos or drawings what stages of the water cycle you can see happening, and where. This would also be a good research paper.

2.3. How the axis of the earth affects nature

Subject: Science

The earth turns on what we call its axis, which is tilted. Scientists say that this tilt was caused by a meteorite, which is a large rock flying through space, hitting the earth millions of years ago. This tilting, or leaning, is what causes our planet to have seasons. It exposes the surface of the earth at different angels towards the sun at different times in the cycle of one year.

There are four seasons in the year: **spring, summer, fall or autumn and winter**. The places on the planet that are close to the equator, which runs around the earth at its exact middle between North and South, have almost no differences between the seasons, while places far away from the equator have hugely different seasons. This

is because, as the earth spins, different parts of the world are facing the sun at a different angle.

The distance of a place from the equator is described by its latitude. Towns or sites at the equator are at 0° latitude, while the South Pole is at 90°S (ninety degrees south) and the North Pole is at 90°N (ninety degrees north). Generally, the higher a latitude, the more extreme it will be affected by the change of the seasons.

In most places, summer is warmer than spring, fall and winter, because the sun's rays hit that part of the planet at a more direct angle than at other times during the year. The days in that place are longer because it is more exposed to the sun. During the winter, the days are shorter and the temperatures drop because these places are not as directly exposed to the sun. In the northern hemisphere, the seasons proceed from winter to spring, summer and fall, and then back to winter, while the southern hemisphere has exactly the opposite cycle since it is at the opposite angle to the sun, and the calendar year goes from summer to fall, winter and spring, ending during the summer

Some people think that the seasons are caused by changes in the distance to the sun. But, since the earth's orbit around the sun is almost a perfect circle, the distance between a point on the earth and the sun is basically the same all year long.

Let's think about this:

- Which of the New7Wonders of Nature categories are most affected by seasonal changes?
- Choose a New7Wonders of Nature category and find nominees in this category that are at different latitudes. How does their latitude affect the seasons there? How has this affected the history and characteristics of this site?
- The earth's tilt was caused by a meteorite hitting the planet. Have any other New7Wonders of Nature nominees been affected by such an event?

Project ideas:

- Choose four New7Wonders of Nature nominees and describe how one or more seasons have significantly affected them, both during their history and today. In an essay or presentation, outline how seasonal influences have played a major role in creating or shaping the site?
- Make a globe (if you want, you can make it 3D with mountain ranges, lakes, rivers, etc), draw the main lines of latitude on it and place your favorite 7 or more N7W of Nature nominees on the globe. Then, you can recreate them in 3D around the globe.
- Draw pictures or make models of your favorite New7Wonders of Nature nominees during the various seasons that affect them. This could also be a good computer presentation.

2.4. Erosion—the force of wind, water and ice

Subject: Science

While you might think that water, wind and ice could certainly pose no danger to high mountains, thick forests or massive cliffs, the truth is that these natural forces, over time, have the power to erode, or wear down, rock and soil. Erosion has played, and continues to play, a great part in shaping the world around us.

There are three main kinds of erosion. Erosion is responsible for creating some of the most impressive features at many New7Wonders of Nature nominees, from towering canyons and bizarre rock formations to desert and beach dunes. To find out more about the three kinds of erosion, **water, wind and ice erosion**, look at the New7Wonders "Tell me why" sheet at www.new7wonders.com.

Let's think about this:

- Which of the New7Wonders of Nature categories are most affected by erosion? By which types of erosion?
- How long does it take for the different kinds of erosion to shape the landscape? Why are some kinds of erosion faster than the other kinds?
- What kind of erosion can you watch happening in your backyard? In your neighbourhood?
- Is there any natural landmark near you that was created by a kind of erosion? How long ago did this happen?
- Erosion is a natural phenomenon, but it can be affected by what people do (like cutting down trees). How do you think that people's habits could affect erosion, and what could happen as a result? How can this be stopped or reduced?

Project ideas:

- Choose a New7Wonders nominee and show, in pictures or with models, how erosion shaped it. This can also be a computer-based project.
- In a tub, use sticks, soil, sand and water to create a coastal landscape. Use your hands, shovels or spoons to make currents that erode the sand, taking it from one place to another. For a more advanced project, make the landscape more sophisticated by planting plants, and maybe use a small motor to power the current—this can be left to erode over a few weeks. See what happens to the sand!
- Research how human activity contributes to erosion on all continents, and present a) the dangers that this creates to nature and b) what can be done to fix the situation. Look at a place near your school as an example.

2.5. Earthquakes

Subject: Science

Earthquakes have been happening on our planet for millions of years. They are natural events that release tension or stress that has been building up in a part of the hardened earth's outer surface. Earthquakes have contributed in a very important way to the distribution of the land masses, or continents, in the oceans. They are natural events that still occur today. For lots more super-interesting information about earthquakes, print out the New7Wonders "Tell me why" fact sheet at www.new7wonders.com!

Let's think about this:

- Which of the New7Wonders of Nature categories have been and are most affected by earthquakes?
- Could any New7Wonders of Nature nominees be affected by an earthquake in the water?
- Why are there only 6 land continents and about 20 continental plates?
- Do you live near any natural sites or landmarks that were caused by earthquakes?

Project ideas:

- See how continental shift occurs and can create an earthquake by using a piece of wood, a pencil, or a length of cardboard to represent a continental plate. Put the "plate" on a raised surface, such as a pile of erasers. Now hold the left-hand part of the wood or cardboard steady in your left hand, while you use your right hand to simulate another continental plate shifting past. Push down gradually with your right hand on the wood or cardboard. First, it will bend. Then, when the force and the stress on the wood or cardboard is too much, it will break—causing an earthquake! In the case of your continental shelf, you would have to glue it together again, but the earth fixes itself quickly, with soil, rock, water and perhaps hot, molten (liquid) rock coming to fill the gap created by the break.
- Make one continent break into two by having an "earthquake" pull two pieces apart. You can make your original continent out of cardboard, clay, papier maché or even cake or cookie! Decorate with trees, rivers, lakes, and see what happens when the earthquake shakes it all and makes it into two separate continents.
- Make a tsunami happen in a tub of water, and if you have islands in the water, see what happens to them.

2.6. Mountains, from rolling hills to volcanoes

Subject: Science

Mountains are one of the most impressive features on our earth, on every continent and even under water. Many of the New7Wonders of Nature nominees are either mountains, parts of mountains, or have been influenced by mountains. Our planet's diversity and richness has been helped by the presence of mountains, which, can give shelter, provide different habitats for animals and plants, stock water in form of snow, hide glaciers and springs which provide fresh water, and many other important functions. For some more information on mountains, please read the New7Wonders "Tell me why" sheet that you can find at www.new7wonders.com

Let's think about this:

- Which of the New7Wonders of Nature categories are either on, part of, or affected by mountains? Some of the categories can be on mountains, but are not always—why? Are some in places that used to be mountains?
- Why are mountains so important to our ecosystem, to preserving the ecological diversity in our world?
- Which New7Wonders of Nature nominees belong to or are near mountain ranges?
- Why are some mountains harder to climb than others—is it only a question of height?
- Are mountains or features of mountain life in danger because of the changing climate?
- How many cities in the world are on high mountains? How do mountains change the way a region or a country develops?
- Do you live near a hill, mountain or mountains? How does this mountain affect your life? How did it affect your culture, your national history?

Project ideas:

- With your parents or teacher supervising, can you make a volcano erupt—maybe a cake volcano that has chocolate sauce come out as lava?
- Choose a mountain range and make it out of papier maché, adding trees and lakes. Note the altitudes of the peaks. Trace the different "life zones" at the different altitudes and note, either on a poster or on the base of the project, which animals and plants are found in which zones. Are there any endangered animals or plants in your mountain range? Do people live here? Where does the water here come from?
- Choose 7 differently shaped mountains from the New7Wonders of Nature nominees and either draw them, make models out of papier maché or clay, or make computer graphics of them. Explain why they have different shapes.

2.7. Wonders under water

Subject: Science

Many of the New7Wonders of Nature nominees are under water, which means that it is much harder for us to see and experience them. However, three-quarters (3/4) of our earth is under water, so the underwater world is evidently a very important part of our planet. Check out many fascinating underwater features, from deep, dark submarine trenches to colourful reefs close by the surface, to bright blue or green glacial lakes, in the New7Wonders of Nature "Tell me why" fact sheet at www.new7wonders.com.

Let's think about this:

- Which of the New7Wonders of Nature categories are underwater, or part underwater? Are there some that can be underwater and above water?
- Do you think that the animal and plant life of the New7Wonders of Nature nominees that are near water or underwater are particularly important, compared to the nominees that are not underwater?
- Have you ever visited or experienced any of the features that are typical of some of the New7Wonders of Nature nominees that are near water or underwater?
- Are there more nominees that feature salt water or fresh water? Why?
- Have any of the New7Wonders of Nature nominees that are near or underwater played an important role in human history? In natural history?
- How do the tides affect different areas of the world? Which New7Wonders of Nature nominees are affected by tides? How has this been important to people, to plants and to animals in these places?

Project ideas:

- Compare the animal and plant life of three different water-based New7Wonders of Nature nominees in three different categories, for example a river, a lake and an island. You can make models of them and show why they provide the right conditions for different kinds of fauna and flora. What can be dangerous for these places? What happens during the changing seasons?
- Mixing categories, compare a New7Wonders of Nature nominee that is in the ocean with one that is on a mountain—see what affects them most, how they were formed, what kind of life they have on them.
- Investigate what role reefs play in the ocean. How do they provide a barrier between different parts of an ocean? Why do they have so many different fish

and plants that live on them? What are the biggest reefs and what are the most important ones, what are the differences between reefs in the Pacific and the Atlantic Oceans? You can build a model of a reef in a tank, and even fill it with the right kinds of fish!

- Pretend that you are in a submarine under the water and show (as a computer presentation or with drawings) what you see as you travel the underwater world and occasionally come up to the surface.

Get involved in the New7Wonders of Nature campaign!

Please encourage kids, with their classmates, friends and family, to learn as much as they can about your favorite New7Wonders of Nature nominees. They can support them by spreading the word, for example by sending emails, putting up posters or handing out flyers (which they can make them themselves!).

This is the second-ever global election, and anyone over the age of 6 can vote. New7Wonders wants as many kids and adults as possible from around the world to join together and celebrate the beauty and magic of nature. Help us bring people together to appreciate the wonders of our natural world!

Last but not least, New7Wonders welcomes any comments from teachers, school administrators and educational officials. Please email us at kids@n7w.com if you have any thoughts about how we can better reach out to the educational community across the globe. Thank you!