

## Card 1

**Place name and Location:** Mount Everest

**Real World:** 29,028 feet

**Classroom:** 2 ft, 5 in

**Resource Dispute Overview:** Mount Everest rests in both Nepal and Tibet. The Mount Everest area in Nepal is preserved in Sagarmatha National Park. In this park there are 11 endemic plants, and several endangered mammals such as musk deer and Tibetan wolves. Dozens of bird species are also unique to this region. Sagarmatha National Park has become a popular tourist destination, attracting increasing numbers of travelers each year. Visitors are attracted to Nepal because of its natural beauty, extraordinary cultural heritage, rich ethnic diversity, artistic heritage, and the Himalayan Mountains, particularly Mount Everest.

**Resource Dispute Pro Position of Supporting Environmental Protection:** Sagarmatha National Park visitor numbers have increased over the years providing many employment opportunities. Over 75% of the local people (Sherpa) are engaged in the tourism business as porters, guides, climbers, and hotel, lodge and tea-shop owners. About 400,000 tourists visit the area each year and supply about \$300,000 to the area's economy. Volunteer aid agencies and tourism has greatly improved living standards with better health care, education, and building structures.

**Resource Dispute Con Position of Supporting Tourism Growth:** The growing number of visitors over the decades has increased environmental destruction of this fragile mountain area. There is widespread agreement that too many tourists degrade this beautiful area. Environmental impacts include pollution of water, destruction of vegetation, cutting down trees for fuel, destruction of local food-growing capacity, and loss of wildlife. Congestion is inescapable with ever-growing traffic, disturbance and crowding in this mountain region. Tourism also creates changes to the traditional social customs of local Sherpa.

## Card 2

**Place name and Location:** Mount McKinley, Alaska

**Real World:** 20,320

**Classroom:** 1 ft, 8 in

**Resource Dispute Overview:** The Alaska National Interest Lands Act set aside approximately 100 million acres of land and resources to protect Alaska. It tripled the size of Mt. McKinley National Park, and the area was renamed Denali National Park and Preserve. However, local rural people have long used the land in Denali to fish and hunt. This set up a conflict between the National Park Service, devoted to preservation, and local rural people who have long lived on the land.

**Resource Dispute Pro Position of Making Sure that All National Parks are Dedicated to Preserving the Land:** Ever since the creation of the first national park at Yellowstone, National Parks have become places that reflect the values of preserving land and wildlife. Hunting doesn't occur in National Parks, because visitors should get to see wildlife that exists as naturally as possible. Allowing people to use natural resources, simply because they want to live locally, does not make sense in terms of the purpose of the National Park Service. National Parks are for conservation, not for use. Also, the national park has a large number of summer visitors who engage in outdoor activities that could put them at risk of a firearm related injury when locals try to hunt.

**Resource Dispute Con Position of Allowing Locals to Use Resources in Denali National Park:** Local residents who lived in the area before it became a national park want to continue their traditional subsistence activities. These people believe that subsistence ways of life differ from region to region. In Denali, local residents believe the National Park Service should promote local involvement in managing local resources. Locals believe there must be good communication and mutual understanding of subsistence and park purposes. In order to avoid hazards associated with firearm use, local users could be limited to specific hunting areas and visitors could be told where hunting is occurring.

### Card 3

**Place name and Location:** Grand Canyon Village, Arizona (South Rim)

**Real World:** 6880 feet

**Classroom:** 0 ft, 7 in

**Resource Dispute Overview:** There is a great need to manage growing crowds of visitors at national parks. This is especially true at the Grand Canyon where the number of visitors has doubled since the mid-1980s to about 5 million a year. Crowding at the South Rim is so great that drivers circle parking spaces as they would at a busy mall, and airplanes buzz overhead with tourists every few minutes. How do you give people the chance to visit the Grand Canyon, but still protect national parks from being destroyed by the crush of people?

**Resource Dispute Pro Position of Managing the Flow of People:**

Officials at Grand Canyon National Park advocate a plan to limit the number of people and limit their impact. The idea is to build a light-rail system and limit car traffic at the South Rim of the Grand Canyon. Outside the south entrance, developers would build a giant complex of hotels and shops, and people would visit by rail. The idea is to limit the number of visitors and the number of cars. Proponents of management argue that the millions of visitors destroy the canyon's inspiring solitude. Thoughts of building cell-phone towers and expansion of the two-lane road to four-lanes make the wilderness advocates very upset.

**Resource Dispute Con Position Allowing Everyone into the Parks:**

While almost everybody wants to protect the natural grandeur of the Grand Canyon from civilization, opponents of the government plan say that we should not restrict access to the people that own the park. The supporters of open entry into the park often cite President Theodore Roosevelt when he welcomed Grand Canyon into the National Parks system. Roosevelt stated that we must keep it "for your children, your children's children and for all who come after you, as the one great sight which every American should see".

## Card 4

**Place name and Location:** Humphreys Peak, Arizona

**Real World:** 12,633 feet

**Classroom:** 1 ft, 1 in

**Resource Dispute Overview:** Humphreys Peak, Arizona, is part of the San Francisco Peaks outside of Flagstaff. Humphreys Peak and other peaks in the area are sacred to many Native American tribes, who strongly object to any development on any of the San Francisco Peaks. At the same time, the forests and mountains have long attracted hikers and skiers. In the 1930s, a ski lodge was built at the present location of Snowbowl Ski Resort, along with a road. A full-scale ski resort was proposed in 1969 but was opposed by Native American tribes. After 10 years of community debate and legal action, the U.S. Forest service approved a new lodge, 4 new ski lifts and 50 new trails of skiing. Native Americans protested, claiming that the expansion would interfere with religious rights. Their appeals to this decision went as far as the Supreme Court but were denied.

### **Resource Dispute Pro Position to Further Develop Snowbowl Ski**

**Resort:** Arizona experiences periodic droughts. In these years, people want to ski but can't because there is no snow. Snowbowl wants to install equipment to make artificial snow during the November to February ski season. Because water is scarce in the area, Snowbowl proposes to use reclaimed water. This is water that has been used by people and then cleaned in wastewater facilities. The cleaned water would be piped 14 miles to Snowball to give people the chance to ski even in a drought year. Snowbowl also wants to add additional ski trails to support growing interest in skiing.

**Resource Dispute Con Position:** The San Francisco Peaks have special spiritual and resource importance to Native Americans, especially Hopi and Navajo. Both Native American nations claim religious rights to the mountain. In the Hopi view, Katsinas (spiritual beings bringing rain and maintaining order) live on the mountain. To the Navajo, Humphreys Mountain is part of a manifestation of sacred forces and home to spiritual beings. Both tribes believe the San Francisco Peaks should only be used for ceremony or collection of medicinal plants. To use the area for personal entertainment or making money contaminates this sacred place. The idea of putting impure water on this sacred place is very upsetting to Native Americans.

## Card 5

**Place name and Location:** Mt Hood, Oregon

**Real World:** 11, 239 feet

**Classroom:** 1 ft, 0 in

**Resource Dispute Overview:** Mt Hood is part of the Cascade Volcanoes. This volcanic chain runs from northern California into British Columbia and includes Mt Lassen, Mt Saint Helens, Mt Ranier, and Mt Baker. The volcanoes are called "composite" volcanoes, because they erupt many different types of volcanic materials. Some eruptions can be very violent and dangerous, while other eruptions do not pose much danger to the surrounding areas. The controversy is whether people should live very close to these volcanoes.

**Resource Dispute Pro Position of Allowing People to Live Close to Cascade Volcanoes:** Mt Lassen in California erupted during World War I. Then, the volcanoes slept peacefully for more than 60 years before Mt Saint Helens erupted in 1980 in Washington. The areas around the Cascade volcanoes are growing in population. Seattle suburbs push up against Mt Rainier. Portland is edging out towards Mt Hood. Why should people have to stay away from living close to such beautiful places? If people understand the danger, why shouldn't people be allowed to live where they want? Two major volcanic eruptions in the last 100 years should not be a reason to stay away from living in beautiful places.

**Resource Dispute Con Position of Enacting Laws to Prevent the Growth of Cities into a Zone of Volcanic Hazard:** About 500 years ago, Mt Rainier erupted. The snow and glacier ice atop the mountain melted quickly and mixed with ash on the volcano's side. Mudflows oozed down the mountain and filled up river valleys that are now covered with Seattle suburbs. Mt Hood has had more than a dozen major eruptions in the last ten thousand years, with some mudflows reaching downstream far enough to endanger places where development stretching from Portland is now planned. Mt Baker in the far north of Washington could send dangerous mudflows that could reach such towns as Bellingham. Even though volcanoes erupt only a few times in a thousand years, their damage can destroy lives and property. Why not establish zones of "no building" in places that could be destroyed by a volcano? In addition to saving lives, these open spaces could be appreciated by everybody, not just by those who develop the land.

## Card 6

**Place name and Location:** Four Peaks, Arizona

**Real World:** 7657 feet

**Classroom:** 0 ft, 8 in

**Resource Dispute Overview:** The Four Peaks area experienced one of the largest fires in Arizona history. In April of 1996 two campers left a campfire smoldering. Their lack of care resulted in the Lone Fire that burned thousands of acres of brush-covered slopes. Ponderosa pines, hundreds of years old, burned. This monster fire raged over the Four Peaks Wilderness for eleven days. More than 61,000 acres burned and was the largest fire to have occurred in Arizona up to that time. After four years of drought, even larger fires have burned on the Mogollon Rim in Arizona. These major fires have led to a dispute over how to handle forests in Arizona.

### **Resource Dispute Pro Position of Thin the Forest through Small**

**Fires:** Back in the 1920s, 30s, 40s, we believed that forest fires were bad. We thought fire destroyed timbers and killed animals. Smokey the Bear ads told us to stop all fires in our forests. This high level of fire suppression contributed to the buildup of organic materials (fuels) on the forest floor. Also, preventing small fires helped the growth of young trees in older stands, providing fuel to help burn the entire forest. As a result, there are larger fires and fires that are more catastrophic than in the past. In the past, before we suppressed fires, small fires killed pine tree seedlings encroaching into forest meadows. So in the past, there were many more grasslands that helped grazing animals. Frequent fires are more natural. Prescribed fires are those deliberately set and controlled to reduce fuel on forest floors (dead trees, brush, limbs). If done properly, prescribed burns would prevent giant large wildfires. If we have periodic controlled burns, giant wildfires would be less common.

**Resource Dispute Con Position Avoid Prescribed Fires:** In the past, before fire suppression, frequent fires maintained an open forest structure in Arizona's forests, and prevented tree invasion into mountain meadows and grasslands. But frequent fires are a big danger to people living close to forests. A giant fire at Los Alamos in New Mexico started with a small, prescribed fire. The fire got out of control. It cost millions of dollars to put it out and resulted in millions of dollars in property damage. An alternative to setting prescribed fires is to encourage livestock grazing and careful thinning of small trees. Grazing removes grass fuels that carry surface fires; also roads and grazing trails created fire breaks to reduce fire frequency and size.

## Card 7

**Place name and Location:** Caspian Sea

**Real World:** -92 feet

**Classroom:** 0 ft

**Resource Dispute Overview:** The environmental health of the Caspian Sea is in danger. Supported by multinational oil companies, Kazakhstan, Uzbekistan and Azerbaijan have large-scale drilling efforts in the shallow waters of the Caspian Sea. Oil spills are destroying the Caspian Sea's ecosystems. Uzbekistan is pursuing intensive cotton production based on massive use of fertilizers and pesticides, just as it did under the Soviet system. Pesticides and fertilizers enter the Caspian Sea, further polluting its water.

**Resource Dispute Pro Position of Develop Resources to Help Reduce Poverty:** Oil exploration around the Caspian Sea began in the mid-1870s. By the end of the twentieth century, oil from this region provided about 10% of the world's total oil supply. The former Soviet Union's Republic of Kazakhstan began to exploit oil along the Caspian in 1979. Since then, estimates of oil and natural gas reserves have grown sharply. Today, several foreign oil and gas companies have entered into various arrangements with the local countries for exploration, production and transport of oil and gas resources with the hope of being able to export large quantities to markets around the globe. These oil and gas supplies provide desperately needed income to local people.

**Resource Dispute Con Position to not Develop Resources to help Preserve the Caspian Sea:** It is important to maintain environmental quality, not only for the present, but also for future populations of the region. An example of short-term benefit is what has happened to the sturgeon fish population. Supplies of sturgeon and their eggs (caviar) have provided income to the inhabitants of the Caspian Sea for years. However, sturgeon supplies dwindled sharply in the 1980s and 1990s because of over fishing. Taken for the export value of their highly valued caviar, sturgeon numbers have been pushed to such low levels that the Caspian sturgeon may go extinct. With oil spills and pesticides, this many people fear for the long-term future of the entire Caspian Sea.

## Card 8

**Place name and Location:** Dead Sea

**Real World:** -1312 feet

**Classroom:** -1 in

**Resource Dispute Overview:** The Dead Sea is the lowest point on Earth. It is the saltiest large body of water in the world. Along its shores are ancient sites that are sacred to Christians, Jews and Muslims. The ecosystem of the area is unique. Leopards, ibexes and several threatened birds live in this region. Its unique minerals are used for health treatments. Its potash is important for a major chemical industry and its beauty attracts thousands of tourists. The sea has been shrinking for decades because much of the water from the Jordan River has been diverted for use in the region. Unless something is done, in the next 50 years the Dead Sea will lose 1/3 of its total area.

**Resource Dispute Pro Position to Build Pipeline:** Israel and Jordan both would both suffer if the Dead Sea dried up any more. So both have proposed a \$800 million pipeline to take sea water from the Red Sea, over 190 miles away, to the Dead Sea. The pipeline would halt the decrease in water level in the Dead Sea. Both countries hope that this pipeline will be the start of a larger plan to build a canal and plan to desalinate the sea water to provide fresh water for the desert region. This larger project would cost \$3 billion.

**Resource Dispute Con Position:** Terrorists wanting to destroy the Israel-Jordan peace could easily destroy a pipeline or canal. These people do not want to believe that Israelis and their neighbors can cooperate and understand and share resources. Given the threat of terrorism, it would be a waste of money to try to build such an expensive pipeline. Another problem with this pipeline is that it will allow plants and animals from the Red Sea to could contaminate the unique ecosystem of the Dead Sea.



# Teacher Check Sheet--Class Wall Chart

(Check the box when the elevation has been posted on the wall chart)

<b>Location</b>	<b>Real World</b>	<b>Class Wall Chart</b>		
Mt. Everest	29,028	2 ft	5 in	<input type="checkbox"/>
K2	28,251	2 ft	4 in	<input type="checkbox"/>
Aconcagua	23,034	1 ft	11 in	<input type="checkbox"/>
Mt. McKinley	20,320	1 ft	8 in	<input type="checkbox"/>
Mt. Kilimanjaro	19,335	1 ft	7 in	<input type="checkbox"/>
Popocatepetl	17,887	1 ft	6 in	<input type="checkbox"/>
Matterhorn	14,690	1 ft	4 in	<input type="checkbox"/>
Mt Whitney	14,494	1 ft	3 in	<input type="checkbox"/>
Mauna Loa	13,677	1 ft	2 in	<input type="checkbox"/>
Humphreys Peak	12,633	1 ft	1 in	<input type="checkbox"/>
Mt Fuji	12,389	1 ft	1 in	<input type="checkbox"/>
Mt. Hood	11,239	1 ft	0 in	<input type="checkbox"/>
Telescope Peak	11,049	0 ft	11 in	<input type="checkbox"/>
Four Peaks	7,657	0 ft	8 in	<input type="checkbox"/>
Mexico City	7,328	0 ft	8 in	<input type="checkbox"/>
Grand Canyon (South Rim)	6,880	0 ft	7 in	<input type="checkbox"/>
Superstition Mountain	5,057	0 ft	5 in	<input type="checkbox"/>
South Mountain	2,690	0 ft	3 in	<input type="checkbox"/>
Grand Canyon (Phantom Ranch)	2,500	0 ft	3 in	<input type="checkbox"/>
Sun Devil Stadium	1,150	0 ft	1 in	<input type="checkbox"/>
Ocean Beaches	0	0 ft	0 in	<input type="checkbox"/>
Lake Eyre	-38	0 ft	0 in	<input type="checkbox"/>
Caspian Sea	-92	0 ft	0 in	<input type="checkbox"/>
Peninsula Valdes	-181	0 ft	0 in	<input type="checkbox"/>
Death Valley	-282	0 ft	0 in	<input type="checkbox"/>
Dead Sea	-1,312	0 ft	-1 in	<input type="checkbox"/>
Ocean Floor next to Hawaii (Mauna Loa) Big Island	-26,250	-2 ft	3 in	<input type="checkbox"/>
Japan Trench	-28,000	-2 ft	10 in	<input type="checkbox"/>
Challenger Deep in Marianas Trench	-35,810	-3 ft	6 in	<input type="checkbox"/>

**Mt. Everest**

**K2**

**Aconcagua**

**Mt. McKinley**

**Mt. Kilimanjaro**

**Popocatepetl**

**Matterhorn**

**Mt Whitney**

**Mauna Loa**

**Humphreys Peak**

**Mt Fuji**

**Mt. Hood**

**Telescope Peak**

**Four Peaks**

**Mexico City**

**Grand Canyon**

**(South Rim)**

**Superstition Mts**

**South Mountain**

**Grand Canyon**

(Phantom Ranch)

**Sun Devil Stadium**

**Ocean Beaches**

**Lake Eyre**

**Caspian Sea**

**Peninsula Valdes**

**Death Valley**

**Dead Sea**

**Ocean Floor**

next to Hawaii (Mauna Loa), Big Island

**Japan Trench**

**Marianas Trench**

Challenger Deep

## Summary Chart of Elevations

Location	Elevation (feet)
1. Mt. Everest	29,028
2. K2	28,251
3. Aconcagua	23,034
4. Mt. McKinley	20,320
5. Mt. Kilimanjaro	19,335
6. Popocatepetl	17,887
7. Matterhorn	14,690
8. Mt Whitney	14,494
9. Mauna Loa	13,677
10. Humphreys Peak	12,633
11. Mt Fuji	12,389
12. Mt. Hood	11,239
13. Telescope Peak	11,049
14. Four Peaks	7,657
15. Mexico City	7,328
16. Grand Canyon (South Rim)	6,880
17. Superstition Mountain	5,057
18. South Mountain	2,690
19. Grand Canyon (Phantom Ranch)	2,500
20. Sun Devil Stadium	1,150
21. Ocean Beaches	0
22. Lake Eyre	-38
23. Caspian Sea	-92
24. Peninsula Valdes	-181
25. Death Valley	-282
26. Dead Sea	-1,312
27. Ocean Floor next to Hawaii (Mauna Loa) Big Island	-26,250
28. Japan Trench	-28,000
29. Challenger Deep in Marianas Trench	-35,810

Name \_\_\_\_\_

## Hi-Lo Worksheet

Instructions: Calculate the **difference** in elevation between the places listed below.

Places	Difference
Mount Everest and K2	
Mount Everest to Popocatepetl	
Matterhorn to Mexico City	
Mexico City to Lake Eyre	
South Mountain to Badwater	
Sun Devil Stadium to Ocean Floor next to Hawaii (Mauna Loa) Big Island	
K2 to Japan Trench	
Mt McKinley to Ocean Beaches	
Ocean Beaches to Dead Sea	
Mauna Loa to Big Island Ocean Floor	
Mt Fuji to Japan Trench	
Mt Everest to Challenger Deep in Marianas Trench	

Describe how you found the difference between two positive elevations.

Describe how you found the difference between a positive elevation and an elevation below sea level.

## HiLo Worksheet **Answer Key**

Instructions: Calculate the **difference** in elevation between places listed below.

Places	Difference in Feet
Mount Everest and K2	777
Mount Everest to Popocatepetl	11,141
Matterhorn to Mexico City	7362
Mexico City to Lake Eyre	7366
South Mountain to Badwater	2972
Sun Devil Stadium to Big Island Ocean Floor	27,400
K2 to Japan Trench	56,251
Mt McKinley to Ocean Beaches	20,320
Ocean Beaches to Dead Sea	1312
Mauna Loa to Ocean Floor next to Hawaii (Mauna Loa) Big Island	39,927
Mt Fuji to Japan Trench	40,389
Mt Everest to Challenger Deep in Marianas Trench	64,838

Describe how you found the difference between two positive elevations. I subtracted the lower elevation from the higher elevation

Describe how you found difference between a positive elevation and an elevation below sea level. I added the two numbers together and my answer(s) were positive.



## Notes for Group Oral Presentation

What is the location of your controversy?

What is the controversy?

What are the two sides (pros and cons) to the controversy?

What did your group decide was the best answer to use of resources in this location?

## Scoring Guide for Oral Presentations

Group Members:

Criteria	Points Possible	Points Earned
Presented pros to the controversy	10	
Presented cons to the controversy	10	
Sequenced ideas logically	10	
Used pertinent facts and details	20	
Maintained eye contact	10	
Spoke clearly and loudly	10	
Gave group's decision	10	
Worked cooperatively	20	
Total Points	100	

## Scoring Guide for Oral Presentations

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Total Points	100	