

Grand Canyon

National Park Service
U.S. Department of the Interior
Grand Canyon National Park
Arizona



The Guide

South Rim: March 1–May 24, 2008
Also available in Deutsch, Español, Français,
Italiano, 日本語, 中文



Welcome to Grand Canyon National Park

The Grand Canyon is more than a great chasm carved over millennia through the rocks of the Colorado Plateau. It is more than an awe-inspiring view. It is more than a pleasuring ground for those who explore the roads, hike the trails, or float the currents of the turbulent Colorado River.

This canyon is a gift that transcends what we experience. Its beauty and size humble us. Its timelessness provokes a comparison to our short existence. Its vast spaces offer solace from our hectic lives.

The Grand Canyon we visit today is a gift from past generations. Take time to enjoy this gift. Sit and watch the changing play of light and shadows. Wander

along a trail and feel the sunshine and wind on your face. Attend a ranger program. Follow the antics of ravens soaring above the rim. Listen for the roar of the rapids far below Pima Point. Savor a sunrise or sunset.

As the shadows lengthen across the spires and buttes, time passing into the depths of the canyon, understand what this great chasm passes to us—a sense of humility born in the interconnections of all that is and a willingness to care for this land. We have the responsibility to ensure that future generations have the opportunity to form their own connections with Grand Canyon National Park.



South Rim Map on
pages 8–9 and 16

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Where's the Visitor Center?

The Visitor Center is just south of Mather Point, but you cannot drive to the Visitor Center. Canyon View Information Plaza, including the new Visitor Center, was designed as the terminus for a mass-transit system that is not yet in operation. To get to the Visitor Center:

- **Park Your Vehicle**
Parking lots are shown on the map on pages 8–9.
- **Ride the Free Shuttle Buses**
Shuttle bus routes are shown on the map on pages 8–9.
or
- **Park at Mather Point**
Walk the 300 yards (275 meters) to the Visitor Center.
Accessibility shuttle available. See page 9.



Ride the free shuttle buses



To make your stay at Grand Canyon National Park less hectic and to reduce traffic congestion, use the free shuttle buses. The shuttles operate from before sunrise to after sunset, come by frequently, and the drivers never get lost. Read the article on page 4 and the map on pages 8–9 for more details.

Thinking about hiking?



Successful hikers:

- Read and follow the suggestions and regulations on pages 12–13.
- Plan their hike before they start and go prepared.
- Go slowly, rest often, and maintain the correct body temperature.
- Eat salty foods and drink water or sports drinks.

What time is it?

Most of Arizona, including Grand Canyon National Park, remains on **Mountain Standard Time** year-round. Beginning March 9, Arizona is on the same time as California and Nevada and is one hour earlier than the Navajo Reservation, Colorado, New Mexico, and Utah.

Emergency • 911

24 hours-a-day dial 911 from any phone, 9-911 from hotel phones.

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

Ranger Programs

During your visit the National Park Service encourages you to participate in the programs listed below. All programs are free.

Grand Canyon Village

Activity	Location	Time	Duration	Frequency
Cedar Ridge Hike 				
This program begins April 1				
With a ranger, descend 1140 feet (347m) below the rim on the unpaved South Kaibab Trail to Cedar Ridge to enjoy unparalleled views from within the canyon. This strenuous 3-mile (5 km) round-trip hike is not recommended for people with heart or respiratory problems or difficulty walking. Sturdy footwear and 1–2 quarts (1–2 liters) of water per person are required. Clothing appropriate for the weather and snacks strongly recommended. Hikers cannot drive to the trailhead. Ride the free Village Route shuttle bus to Canyon View Information Plaza and cross the plaza to the Kaibab Trail Route shuttle stop. Allow 45 minutes for total travel time. Program may be cancelled due to weather or trail conditions. No hikes May 6–8.	South Kaibab Trailhead	April 8:00 a.m.	3–4 hours	Daily
		May 7:30 a.m.	3–4 hours	Daily
Colorado River Talk  				
Enjoy the grandeur and power of the Colorado River as you explore and discuss the river's role in Grand Canyon. Program may include a short walk on a paved path. Parking may be limited; plan to arrive by the Village Route shuttle bus to the Yavapai Observation Station stop. No talks May 6–8.	Bicycle rack at Yavapai Observation Station	9:30 a.m.	30–45 min.	Daily
Introduction to Grand Canyon's Geology  				
Why is the Grand Canyon so deep, wide, and grand? Why does it exist only here in the world? Come and participate in this fascinating talk to learn how Grand Canyon was formed. Program may include a short walk on a paved path. Plan sufficient time to arrive at the Visitor Center by the free Village Route shuttle bus. No programs May 6–8.	Visitor Center at Canyon View Information Plaza	10:00 a.m.	30–45 min.	Daily
Fossil Walk: Remnant Impressions  				
This program given March 1–31 only				
Walk among brachiopods, sponges, and other marine creatures that thrived on this part of the continent 270 million years ago, before the age of the dinosaurs. This easy 1/2-mile (0.8 km) one-way walk explores an exposed fossil bed along the rim. Parking may be limited; consider parking in Lots C, D, or E or riding the free Village Shuttle to the Bright Angel Lodge stop.	Patio on rim side of Bright Angel Lodge	10:30 a.m.	1 hour	Daily
Ranger's Choice  				
Explore the world of Grand Canyon during this in-depth special program. Topics change daily; check at the Visitor Center for the day's subject. Possible programs include nature walks, Native American culture, or pioneer history. Plan sufficient time to arrive at the Visitor Center by the free Village Route shuttle bus.	Visitor Center at Canyon View Information Plaza	1:30 p.m.	30–45 min.	Daily
A Geo-Glimpse  				
Enjoy the new geology exhibits at Yavapai Observation Station and explore a selected aspect of the canyon's geology during these short talks. Talk may be moved inside during inclement weather. No programs May 6–8.	Bicycle rack at Yavapai Observation Station	2:30 p.m.	20–30 min.	Daily
The Human Story  				
For thousands of years, humans have been part of Grand Canyon. Join park staff outside of Kolb Studio to take a look at the history of the South Rim area. Programs may include tours of Kolb Studio or walks around the village historic district. Parking may be limited; consider parking at Lots C or D or riding the free Village Route shuttle bus to the Train Depot stop. No programs May 6–8.	Outside of Kolb Studio	3:00 p.m.	30–45 min.	Daily
Nature Walk   				
Learn more about the complexity and diversity of nature with a short hike along the rim. Topics vary and may include: animals and plants adapting to changing seasons, man's impact on nature, how nature inspires writers and poets, rare and endangered species, or Native American use of plants and animals. Parking may be limited; plan to arrive by the free Village Route shuttle bus to the Yavapai Observation Station stop. No programs May 6–8.	Bicycle rack at Yavapai Observation Station	3:30 p.m.	30–45 min.	Daily
Condor Talk: Wings over the Canyon  				
What highly endangered bird with a 9-foot wingspan is often spotted at Grand Canyon? The California condor! Learn about these majestic birds and their reintroduction in northern Arizona in a talk on the canyon's rim. Parking is limited; consider parking at Lots C or D or riding the free Village Route shuttle bus to the Bright Angel stop. No programs May 6–8.	In front of Lookout Studio near Bright Angel Lodge (Climbing stairs may be involved in getting to the program site.)	4:00 p.m.	30–45 min.	Daily
Evening Program   				
The perfect way to end your day at the Grand Canyon! Relax beneath the stars and enjoy a ranger presentation on a significant aspect of the canyon's fascinating natural or cultural history. For this evening's topic check the schedules posted around the park. Arrive by walking, driving, or riding the free Village Shuttle Bus. No programs May 14 and 21.	Shrine of the Ages auditorium (parking lot A, next to Park Headquarters)	March and April 7:30 p.m. May 8:00 p.m.	1 hour	Daily

We hope that learning more about Grand Canyon National Park and its resources will lead to a greater appreciation of your national park. Many programs, except the Evening Program, are cancelled May 6–8 to allow our rangers to attend training.

Special Programs

Activity	Location	Time	Duration	Frequency
Full Moon Walks and Star Talks				
During nights around the full moon and new moon, rangers will offer moon walks and star talks at the Mather Point overlook. Check bulletin boards at the visitor centers and campgrounds to see if these events are scheduled. Programs are presented 3 days around the new moon and the full moon and begin 1 hour after sunset (See page 4 for moon phase dates and sunset times).	Mather Point	See page 4 for sunset times	1 hour	See page 4 for moon phase dates
Spring Break Programs				
Throughout the day at the Visitor Center at Canyon View Information Plaza rangers offer a variety of short programs on geology, culture, and the flora and fauna of Grand Canyon. Check the bulletin boards at the Visitor Center to see what is on the menu for today. Check park bulletin boards for locations, times, duration and frequency.	Locations vary	Varies	Varies	Varies
Additional Special Programs				
As staffing permits, rangers will offer additional programs which may include Fossil Walks, Kolb Studio Tours, and condor programs as staffing is available. Look for signs in the Village area or at the visitor centers to confirm times and availability.	Locations vary	Varies	Varies	As staffing permits
Desert View—Tusayan Museum 3 miles (5 km) west of Desert View Point				
Glimpses of the Past				
Have you ever wondered how 800 years ago people found food, water, and shelter? Join a ranger to explore the remains of an ancestral Puebloan village. Envision a thriving community in this harsh and demanding environment. This entails a journey on a 0.1-mile (0.2-km) flat, paved trail.	Tusayan Museum, 3 miles (5 km) west of Desert View Point	11:00 a.m. 1:30 p.m.	30–45 min. 30–45 min.	Daily Daily
Phantom Ranch				
Ranger Programs				
These programs begin March 6				
Programs are given daily at Phantom Ranch, reachable only by hiking or riding the mules to the bottom of the canyon. Talks cover a wide range of natural and cultural history topics. Upon arrival, check the Bright Angel Campground bulletin board or the Phantom Ranch Canteen for program locations and subjects. Programs begin March 6. No programs May 5–9.	Phantom Ranch, reachable only by hiking or mule ride	4:00 p.m. 7:30 p.m.	45 min. 45 min.	Daily Daily

Note: All children must be accompanied by an adult on all programs.

These programs are wheelchair accessible with assistance. Wheelchairs are available for loan at the Visitor Center at Canyon View Information Plaza. For programs meeting at the Visitor Center, handicap access is by wheelchair or accessibility shuttle from Mather Point parking lot.

All outdoor programs are subject to cancellation due to inclement weather or when lightning danger is present.

These family-oriented programs are ideal for meeting the ranger program requirement for the Grand Canyon's Junior Ranger award. Any ranger program, however, will meet the requirement on page 2 of the *Junior Ranger Activity Booklet*.

Historic Kolb Studio Art Exhibits

March 6–30: Arts for Our Park—The Face of Our World

As residents of Grand Canyon National Park, local students from kindergarten through high school celebrate National Youth Art Month by taking a fresh look at the very special world in which they are privileged to live. Admission is free.

April 10–May 15: Paint the Parks 100

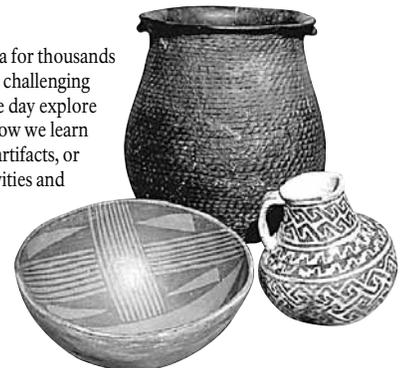
Paint the Parks 100 is America's leading competition designed to illustrate the beauty and significance of America's national parks. Paintings depict the diverse treasures—both natural and cultural that are preserved and protected by the National Park Service. Entries are juried by a panel of nationally recognized arts professionals and the top 100 paintings tour the nation for a year. Admission is free.



Archaeology Day at the Visitor Center Canyon View Information Plaza

Saturday, March 22

People have lived in the Grand Canyon area for thousands of years, learning to sustain themselves in a challenging environment. Presentations throughout the day explore some of the activities of past peoples and how we learn about them. You can make a pot, identify artifacts, or construct a replica split-twig figurine. Activities and presentations are suitable for all ages.



**March is Arizona's
Archaeology Month.**

Enjoying Grand Canyon

Information Centers (see pages 2-3 for ranger programs at these locations)



Canyon View Information Plaza

Visit the visitor center and bookstore at Canyon View Information Plaza—only accessible by free shuttle bus, a one-mile walk or bicycle ride from Market Plaza on the Greenway Trail, or a short walk from Mather Point. The Visitor Center is open daily 8:00 a.m. to 5:00 p.m. The bookstore is open daily 8:00 a.m. to 6:00 p.m. until April 14 and 8:00 a.m. to 7:00 p.m. starting April 15. Outdoor exhibits may be viewed anytime.



Yavapai Observation Station

How old is the canyon? How did it form? The new exhibits at Yavapai Observation Station answer these and other geology questions. The historic building, located one mile (1.6 km) east of Market Plaza, features expansive canyon views. The bookstore offers a variety of materials about the area. Open daily 8:00 a.m. to 5:00 p.m.



Kolb Studio

Once the home and business of the Kolb brothers, pioneering photographers at Grand Canyon, this building has been restored. Visit the free art exhibits in the auditorium, described on page 3, and shop in the bookstore. Kolb Studio is located in the Village Historic District at the Bright Angel trailhead. Open daily 8:00 a.m. to 6:00 p.m. and 8:00 a.m. to 7:00 p.m. beginning April 15.



Tusayan Museum

A visit to Tusayan Ruin and Museum provides a look into the lives of a thriving community as illustrated by its pottery, seashell bracelets, corncobs, and arrowheads. See 2,000-4,000 year old original split-twig figurines. Art from today's tribes provides a glimpse into their rich cultures. The museum, open daily 9:00 a.m. to 5:00 p.m., is located three miles (five km) west of Desert View. Free admission.



Desert View Bookstore/Park Information

The Desert View Bookstore, located at Desert View Point near the park's east entrance, offers a Passport Stamp cancellation station, an excellent selection of publications, and memorabilia. Open daily 9:00 a.m. to 5:00 p.m.

Superintendent's Greeting

Spring is a wonderful time to be at Grand Canyon. The days grow longer and warmer. Flowers show first at the bottom of the canyon and work their way to the rims. Hikers enjoy the improving trail conditions. Take time to enjoy your visit. Wander along the paved Rim Trail and watch the light and shadows. Stop by Yavapai Observation Station and use the new geology exhibits to understand the formation of the canyon. Attend a ranger program. Take in a sunrise or sunset.



This spring is going to be a busy time on the South Rim as a number of projects are under way. Construction at both the East and South Entrances may cause brief delays, but will result in shorter lines and quicker entry to the park. You may find portions of Hermit Road closed during your visit. The repaved road, improved overlook parking, and new multipurpose Greenway Trail will benefit future visits. The rehabilitation of Hermit Road continues into the fall.

In January, we celebrated the 100th anniversary of the designation of Grand Canyon National Monument by proclamation of President Theodore Roosevelt. A few years earlier he had stood before a crowd on the rim and implored them to "Keep this great wonder of nature as it now is . . . Keep it for your children and your children's children and for all who come after you, as one of the great sights which every American, if he can travel at all, should see." Today we welcome travelers from all around the world to this great wonder, but it is still our responsibility to preserve Grand Canyon for future generations.

Steve Martin

Steve Martin—Superintendent

The Canyon's Best Bargain

The Shuttle System

For more than 30 years the National Park Service has provided a free shuttle bus system on the South Rim. Visitors and residents have made 80,000,000 boardings. Many of the buses use compressed or liquefied natural gas, a much cleaner burning fuel. Some of the buses have provisions for improved accessibility. Riding the shuttles makes your stay more enjoyable, while reducing pollution and decreasing traffic congestion.



How do I use the free shuttle buses?

The map on pages 8-9 is the key. The map shows routes, stops, operating times, and route lengths. Park your vehicle in one of the parking areas, proceed to the nearest bus stop, and board the next bus. It is that simple. The buses come by every 15-30 minutes. There are no tickets to obtain, and you are free to get on and off at any stop. The routes are designed so you can ride to a stop, enjoy the view, shop at a gift store, or walk along the rim and then hop on a later shuttle.

Where do the shuttles go?

There are three shuttle routes. They do not overlap, although they interconnect. Buses are identified with a colored square near the boarding door.

Hermits Rest Route (red) The western-most loop winds along the rim for seven miles to Hermits Rest, stopping at viewpoints along the way.
Shuttle turns around at Hopi Point beginning April 1.

Village Route (blue) This loop connects the visitor center, lodging, restaurants, gift shops, and campgrounds. It may be the best way to get to many of the ranger programs.

Kaibab Trail Route (green) Leave from Canyon View Information Plaza and go to the South Kaibab Trailhead and viewpoints along the rim.

See pages 8-9 for a map with routes, stops, and times.

Sunrise & Sunset

Date	Sunrise	Sunset
March 9	6:47 a.m.	6:31 p.m.
March 16	6:37 a.m.	6:37 p.m.
March 23	6:27 a.m.	6:43 p.m.
March 30	6:17 a.m.	6:49 p.m.
April 6	6:07 a.m.	6:55 p.m.
April 13	5:57 a.m.	7:01 p.m.
April 20	5:48 a.m.	7:07 p.m.
April 27	5:40 a.m.	7:13 p.m.
May 4	5:32 a.m.	7:19 p.m.
May 11	5:26 a.m.	7:25 p.m.
May 18	5:20 a.m.	7:30 p.m.
May 25	5:16 a.m.	7:36 p.m.

Moon Phases

New Moon	Full Moon	Moon Rises
March 7		
	March 21	6:59 p.m.
April 5		
	April 20	7:49 p.m.
May 5		
	May 19	7:41 p.m.

All times are Mountain Standard Time.

Enjoying Grand Canyon

Personalize Your Grand Canyon Experience

Individual interests, available time, and the weather can all influence a visit. The following list of activities is provided to assist you in personalizing your Grand Canyon experience. To locate places mentioned below, refer to the maps on pages 8–9 and 16. An *Accessibility Guide* for visitors with limited mobility is also available at the Visitor Center at Canyon View Information Plaza and Park Headquarters.

Attend Free Ranger Programs

- Listed on pages 2 and 3
- Junior Ranger program described below
- Ride the free shuttle from the Village Route Transfer Stop
- Views of river at Hopi, Mohave, and Pima Points
- Visit Hermits Rest—historic landmark with view of river
- Closed to private vehicles. Ride the free shuttle buses.
- Tour by private vehicle or commercial bus
- Views of river at Moran Point, Lipan Point, Desert View
- May exit the park to the east—Cameron and Hwy. 89
- The park offers a variety of museums and information centers that house exhibits and provide park information
- See adjacent page for more information

Visit Scenic Hermit Road

7 miles one-way. Allow at least 2 hours roundtrip. Road closed at Hopi Point beginning April 1.

Visit Scenic Desert View Drive

25 miles one-way

Visit an Information Center or a Museum

Hiking at Grand Canyon:

- Walk Part of the Rim Trail

- See map pages 8–9; Rim Trail described on page 12
- Trail may be accessed at many locations along rim

- Day Hike into Grand Canyon

- See pages 12–13 for information on trails and safety
- It will take twice as long to hike up as it does to hike down
- Do not attempt to hike to the river and back in one day

- Backpack Overnight in Grand Canyon

- Permit and fees required (see page 13)
- Inquire at Backcountry Information Center (8:00 a.m.–12:00 noon and 1:00–5:00 p.m.)

Use Caution Near the Edge

Rock hopping outside the guard rails at Mather Point leads to a tragic fall. A man dies after he falls while trying to get to a rock outcrop for a photograph.

These tragedies are real. What was to be a memorable vacation, becomes a nightmare for the families and friends of the victims.

Such accidents are avoidable. Use caution anytime you are at the rim. Do not go beyond barriers. Be aware of your footing and the condition of the ground surface you are standing on.

There are many beautiful views of the canyon that you can enjoy without putting yourself at risk. Have the memorable trip you planned and enjoy the canyon safely.



Environmental Education Class Field Trips and Teacher Workshops

The Environmental Education staff invites teachers and students to take advantage of our free educational resources. We offer nine ranger-led field trip programs at the canyon covering geology, ecology, and history topics. Programs are designed for grades K–7, are curriculum based, and address Arizona academic standards. Advanced reservations are required. These programs are popular, so contact the park as soon as possible to schedule your trip. Rangers may be available for pre-visit classroom presentations.

Free teacher workshops cover suggested pre- and post-visit activities, as well as walk-throughs of the programs at the canyon. Park staff conducts workshops several times each year. For more information or to make reservations for either a park visit or a teacher workshop call (928) 638-7662 or visit www.nps.gov/grca/.

Interagency Annual Pass

If you are a frequent visitor to National Park Service or other federal agency sites that charge entrance fees, you may be interested in the new *America the Beautiful - National Parks and Federal Recreation Lands Pass*. The \$80.00 pass is valid for one year from the time of first use. Five federal agencies—National Park Service, Bureau of Land Management, Bureau of Reclamation, U.S. Fish and Wildlife Service, and U.S. Forest Service—participate in the pass.



The program also offers a lifetime senior pass (\$10.00) for U.S. citizens 62 or over and a free access pass for citizens with permanent disabilities. Those who already have a Golden Age or Golden Access pass do not need to obtain the new passes.

The interagency pass may be purchased at park entrance stations, Grand Canyon Association bookstores, or online at www.recreation.gov.

Let Wildlife Feed Themselves

By keeping your distance, you let wildlife be wild.

Spring is a special but precarious time for wildlife. The long winter is coming to an end and new foods are growing. Many animals will soon be giving birth.



Enjoy wildlife from a safe distance. What is a safe distance? If the animal obviously knows you are there, you are too close.

Seemingly tame squirrels, ravens, coyotes, deer, and elk, accustomed to human handouts, can turn aggressive without warning. You could be harmed! If wildlife approaches you, back slowly away and give them space.

It is unlawful to approach, feed, or harass wildlife in any way. Violators may be subject to fines or imprisonment.

Pets must be on a leash at all times. Loose or feral pets often disturb or kill wildlife or their newborns. Protective wildlife parents can be aggressive and could harm you or your pet. Keep wildlife and your pets safe by observing the leash law.

Would You Like to Be a Junior Ranger?

Grand Canyon National Park offers a free Junior Ranger program for children ages 4 and older.

To take part in the program, pick up a Junior Ranger booklet at the Visitor Center at Canyon View Information Plaza or Tusayan Museum information desk and complete the activities listed for the appropriate age level.

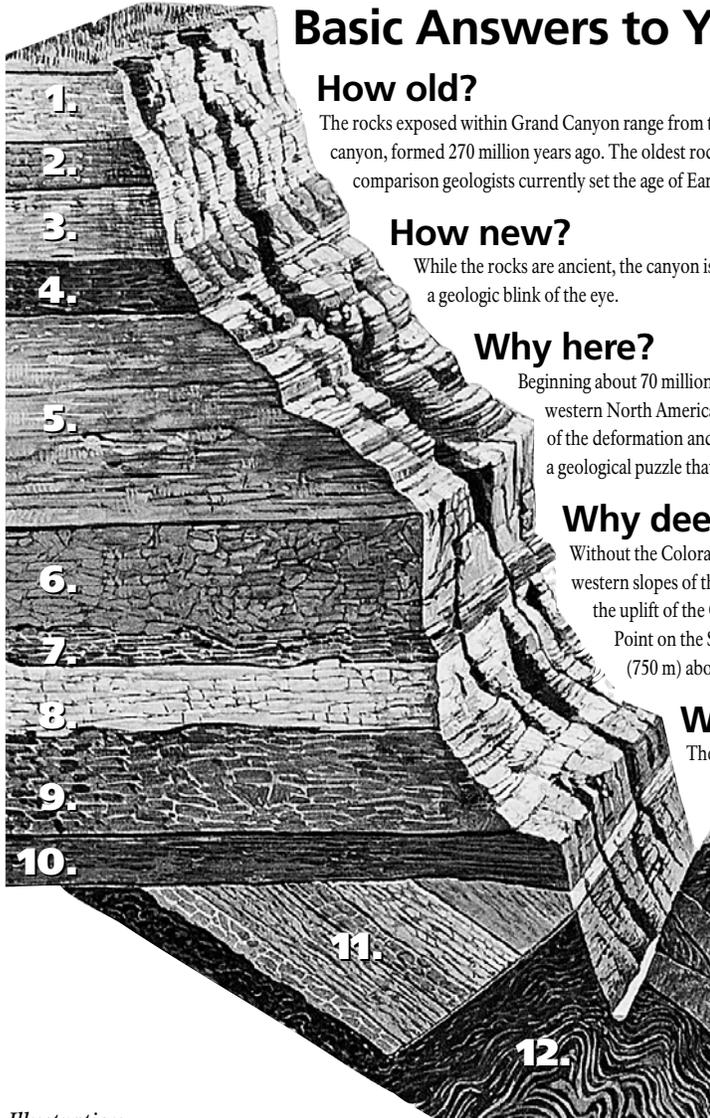
Once completed (don't forget attendance at one or more ranger programs) bring the booklet back to the Visitor Center at Canyon View Information Plaza or Tusayan Museum to receive an official Junior Ranger certificate and badge.



Park Science

There's Only One Grand Canyon

Basic Answers to Your Geologic Questions



How old?

The rocks exposed within Grand Canyon range from the fairly young to the fairly old (geologically speaking). Kaibab limestone, the caprock on the rims of the canyon, formed 270 million years ago. The oldest rocks within the Inner Gorge at the bottom of Grand Canyon date to 1,840 million years ago. For comparison geologists currently set the age of Earth at 4,550 million years.

How new?

While the rocks are ancient, the canyon is young. Geologists generally agree that canyon carving occurred over the last 5–6 million years—a geologic blink of the eye.

Why here?

Beginning about 70 million years ago, heat and pressure generated by two colliding tectonic plates induced mountain building in western North America. An area known as the Colorado Plateau was raised more than 10,000 feet (3,000 m), but was spared most of the deformation and alteration associated with the uplifting of strata. This high plateau, so critical to Grand Canyon's story, is a geological puzzle that researchers still seek to understand.

Why deep?

Without the Colorado River, a perennial river in a desert environment, Grand Canyon would not exist. Water draining off the western slopes of the southern Rocky Mountains carried sand and gravel, cutting down through the layers of rock. Without the uplift of the Colorado Plateau, there would not have been the thousands of feet of topography to sculpt. From Yavapai Point on the South Rim to the Colorado River is a change of 4,600 feet (1,400 m), yet the river still flows 2,450 feet (750 m) above sea level.

Why wide?

The width results from the rock layers collapsing around the river and its tributaries combined with the “headward erosion” of these side streams. Softer, weaker layers erode faster, undermining the harder, stronger layers above them. Without adequate support, the cliffs collapse. The relentless river carries this eroded material to the Gulf of California. Much of what is now southeastern California and southwestern Arizona is covered with material eroded from Grand Canyon.

Over its 277 river miles (446 km), the jagged Grand Canyon varies in width. Along the South Rim, it ranges between 8 and 16 miles (13–26 km) depending upon where you choose to measure.

Why Grand?

Often described as Earth's greatest geological showcase, the ensemble of stunning dimensions—the melding of depth, width, and length—sets Grand Canyon apart. Nowhere else features such a dazzling variety of colorful rock layers, impressive buttes, and shadowed side canyons. Grand Canyon is the canyon against which all other canyons are compared.

Illustration:

1. Kaibab Formation	.....270 million years
2. Toroweap Formation	.....273 million years
3. Coconino Sandstone	.....275 million years
4. Hermit Formation	.....280 million years
5. Supai Group	.....315–285 million years
6. Redwall Limestone	.....340 million years
7. Temple Butte Formation	.....385 million years
8. Muav Limestone	.....505 million years
9. Bright Angel Shale	.....515 million years
10. Tapeats Sandstone	.....525 million years
11. Grand Canyon Supergroup	.....1,200 million–740 million years
12. Vishnu basement rocks	.....1,840–1,680 million years

Want to know more?

The geologic story is rich in detail and mystery. Attending a free ranger program may move you from wonder to comprehension. Programs are described on pages 2–3.

Grand Canyon Association bookstores offer many geology related titles. Bookstore hours and locations are listed on page 3. To learn more about geology at Grand Canyon, take a look at:

- *Yardstick of Geologic Time*, Allyson Mathis
- *Introduction to Grand Canyon Geology*, Greer Price
- *Carving Grand Canyon*, Wayne Ranney
- *Grand Canyon: Solving Earth's Grandest Puzzle*, James Powell

Park Science

California Condors: Soaring to Success



Cautiously optimistic. That summarizes the outlook for the California condor, one of the largest and rarest birds in North America. The National Park Service at Grand Canyon National Park is pleased to be cooperating with the U.S. Fish and Wildlife Service, the Bureau of Land Management, and The Peregrine Fund in the reestablishment of a California condor population in Arizona. This is their story.

50,000–10,000 years ago: The Pleistocene world presented a different view of Grand Canyon. During the height of the Ice Age, the climate was cooler and wetter. Coniferous forests crept down the sides of the canyon; rich grasslands covered surrounding plateaus. Large herbivores—Shasta ground sloth, shrubox, mammoths, and horses—grazed on the abundant food supply. California condors scavenged on the carcasses. Condor bones discovered in Grand Canyon caves document their presence.

A.D. 1500: By the time of the coming of European explorers to North America, California condors existed only along the Pacific Coast, from British Columbia to Baja California, extending inland a few hundred miles. Some researchers estimate that the population consisted of a few hundred pairs. With the extinction of the large land mammals, the condors may have been surviving on the carcasses of whales and other marine mammals. Was the population decrease due to the loss of the large mammals as a food source or were the condors unable to compete in a changed world with smaller scavengers such as the related turkey vulture?

Late 1800s: Both population and range continued to decline. The large birds were tempting targets for those with firearms. Gold miners obtained condor wing and tail feathers to store gold dust in the hollow shafts. A Victorian Age egg-collecting fad reduced productivity. The

last active nest in Arizona occurred near Lees Ferry in the 1890s.

1924: The last condor sighting in Arizona was of a solitary condor near Williams, just south of the park.

1980s: Modern America presented new hazards for condors. Birds died flying into powerlines or from drinking spilled antifreeze from automobile radiators. Ingestion of bullets or pellets from carcasses resulted in lead poisoning. When the population of California condors reached a low of 22 individuals, biologists decided that the species' survival depended on capturing the remaining condors and initiating a captive breeding program. By 1987 all California condors were removed from the wild.

1996: The breeding program proved successful. The goal was to establish at least two wild populations in addition to the captive breeding condors. Central California and northern

Arizona presented the best combination of habitat and food sources. In December the first six condors in the Arizona reintroduction effort flew from the acclimation site atop the Vermilion Cliffs north of Grand Canyon. Further releases each year add to the population of free-flying condors.

Early 2000s: Most of the birds in the first releases were youngsters, only a year or two old. As they approached reproductive age, six or seven, they began to display courtship behavior. Not too surprisingly, the first nesting attempts were unsuccessful. Finally in 2003 a pair hatched and raised its young to fledging. Each spring since pair bonding and nesting has occurred—some successful, some not. The birds have had to learn the intricacies of living on their own.

Today: The condor program continues with more captive-raised birds released, additional nesting, and some disappointments. One bird

fledged from three nesting pairs in 2007. Lead poisoning continues to be a problem. Condors are exposed to lead when they ingest bullets or pellets from carcasses. To reduce this lead source, the Arizona Game and Fish Department provided hunters in northern Arizona with coupons for nonlead ammunition.

With successful hatchings both in the wild and at rearing facilities, the California condor population should pass the 300 mark this year. More than 50 condors now fly over northern Arizona, with a similar population in California. A few birds call Baja California home. The future of the California condor looks much more promising than it did just a few years ago. Ask a ranger about this year's nesting pairs.

You Can Assist the Condors

One partner of the condor reintroduction program still needs to be mentioned—YOU. You can take an active role in condor management. If you encounter a condor, please:

- Enjoy the birds from a distance. Do not attempt to approach them. Condors will bite.
- Do not feed them or leave out food for a condor.
- Never throw objects at a condor or otherwise harass them.
- If you observe anyone harassing or harming a condor, immediately notify a park ranger.

Want to know more?

For more information on California condors, attend the *Condor Talk: Wings over the Canyon* ranger program described on page 2 or go to www.peregrinefund.org for recent field reports. Grand Canyon Association bookstores feature several condor titles, including:

- *Condor: To the Brink and Back*, John Nielsen
- *California Condors* (children's book), Patricia A. Fink Martin
- *Condor's Egg* (children's book), Jonathan London
- *Condors in Canyon Country*, Sophie Osborne

Park News

Living along the Colorado River

On a hot day in October 2007, an archaeologist lifted a slab from the floor of an ancient room, revealing a perfectly intact pot. People who lived here centuries ago used this large corrugated vessel for cooking or food storage. Now, it quickly drew a crowd of archaeologists and their assistants. On an archaeological excavation, every artifact is an important part of the story that finally emerges, but a discovery like this was thrilling even for those who had spent years working in the field.

This dig was part of an exciting project designed to increase our knowledge of Grand Canyon's human past before it disappears. Many of the sites where people once lived along the Colorado River have been buried by windblown sand from the river's sandy beaches, leaving them hidden but protected. Today, Glen Canyon dam traps most of the river's sediment. As a result, the sand dunes and the sites themselves are beginning to erode away.



Archaeological sites are a non-renewable resource. When they disappear—whether through erosion, vandalism, or simply the passage of time—they are gone forever along with the knowledge they hold. Grand Canyon National Park, working with the Museum of Northern Arizona and eleven affiliated Native American tribes, has embarked on the largest excavation project seen in the park in nearly forty years. Beginning in 2007 and ending in 2009, the park will excavate nine of the most endangered sites along the river corridor.

National Park Service archaeologists discovered the pot in a large ancestral Puebloan site

along the banks of the river. As the archaeologists dug carefully through the rooms, the artifacts they uncovered provided clues to the people's daily lives. The rooms held stone-lined hearths for cooking fires, storage pits in the floor, and mealing bins where people once ground corn for their dinner.

Other objects found at the site indicate that the canyon was not a barrier but a home that the people traveled through, gathering resources from different areas. The inhabitants grew corn nearby, but piñon nuts, juniper berries, and rabbit bones demonstrate that people along the river used resources

from higher in the canyon and on the rims. The source of a bison femur is still a mystery! Varied potsherds, of different origin, show that pottery was traded back and forth across the canyon as well as made locally.

Detailed study of the rooms reveals a complex and fascinating story. The ancestral Puebloans occupied this site off and on for a span of centuries. Each room showed layer upon layer of separate occupations. People came, built homes, stayed a generation or two farming along the river, and then left. Each time they left, they or others later returned to this familiar place.

Archaeology is a dynamic science. The final lab analysis of this project will provide a deeper understanding of the lives of the people who made this beautiful place their home. As this exciting series of excavations progresses, we will continue to refine and reshape our knowledge of Grand Canyon's human history. There is still much to learn and discover. If you find an artifact, do your part to preserve it by leaving it where it is and reporting its location to a park ranger. To learn more, and to see artifacts like the beautiful pot, visit Tusayan Museum and Ruin along Desert View Drive.



Preserving Our Cultural Heritage

Thousands of people have called Grand Canyon home during the past 12,000 years. During your visit, you may come across remnants of cultures from long ago. You may see evidence left by miners and explorers of the early twentieth century or the remains of prehistoric Native American dwellings, rock art, or artifacts such as pottery.

These ruins and artifacts are a fragile, irreplaceable legacy. The National Park Service preserves these special places and federal law prohibits the excavation, injury, destruction, or removal of any artifact or archeological site. When visiting a site,

DO:

- Take pictures.
- Try to imagine what life was like in the past at Grand Canyon.
- Contact a ranger if you see archeological sites defaced or witness someone removing artifacts.



DON'T:

- Walk or lean on walls.
- Touch rock art or granary walls.
- Move artifacts or modify walls.
- Eat or camp within the site.

If you would like to enjoy a cultural site visit:

- Tusayan Ruin on the South Rim
- Bright Angel Ruin at Phantom Ranch
- Hilltop Ruin, Nankowep Granaries, and Unkar Delta along the Colorado River
- Walhalla Glades Ruin, Transept Trail Ruin, and Cliff Springs Granary on the North Rim
- Rock art sites along the Bright Angel Trail
- Horseshoe Mesa Historic District on the Grandview Trail

Park News

Pardon our Construction



How do more than four million visitors annually enter, explore, and enjoy this wonderful national park? For more than a century, the National Park Service and its concessionaires have attempted to provide the facilities and services that make your visit a memorable one.

As you entered the park through either the east or south entrances, you may have encountered some delays or detours due to the work on the entrances. At the east entrance near Desert View, new stone-walled booths replace the inadequate

shelters used previously. The south entrance near the gateway community of Tusayan has long been a bottleneck during the busy summer. The addition of new entrance lanes and widening of the road leading to the booths should reduce the time necessary to get into the park.

Hermit Road, extending west from Grand Canyon Village, needs extensive rehabilitation. The Santa Fe Railroad built the first road to Hermits Rest around 1910. The National Park Service and the Bureau of Public Roads paved the current alignment in 1934-1935. After more than 70 years, the road is too narrow for today's buses and the pavement is disintegrating. Construction includes widening and repaving the road. Parking areas and shuttle bus stops near many of the overlooks will also be upgraded. A new multi-user Greenway Trail will follow the original 1910 alignment from west of The Abyss to near Hermits Rest. Hikers, bicyclists, and visitors with wheelchairs can use the paved trail to enjoy a section of the rim away from the traffic on the road. Construction should be finished by November.

From March to November visitors wishing to experience the viewpoints along Hermit Road must ride the free shuttle buses. This construction requires the closure of Hermit Road from Hopi Point west beginning April 1. The closure also includes the Rim Trail west of Hopi Point. The shuttle buses will continue to run as far as Hopi Point.

Use of Hermit Trail is restricted during the construction. Day hikers and backpackers should check with the rangers in the Backcountry Information Center before attempting to get out on Hermit Trail. Grandview Trail and other trails between Grand Canyon Village and Desert View provide alternatives for descending into the canyon on less developed trails.

Your entrance fees fund these improvements. Other projects accomplished with the entrance fees include the free shuttle bus system, the visitor center and restrooms at Canyon View Information Plaza, the rehabilitation of Yavapai Observation Station including the new geology exhibits, and new restrooms at several locations on the South Rim. Not as easily seen, but just as important, are the new maintenance facility, the rehabilitation of the historic Ranger Operations building, and the remodeling of the Backcountry Information Center. Not all of the entrance fees stay at Grand Canyon National Park. Approximately twenty percent of each entrance permit is redistributed to National Park Service areas that do not collect fees.

The National Park Service thanks you for your support. If you plan to visit other park service areas, you may want to purchase the *America the Beautiful-National Parks and Federal Recreational Lands Pass*. You can apply your current Grand Canyon entrance permit toward the purchase of the interagency pass.

Invasive Plants in Grand Canyon National Park



What is an invasive plant? An invasive plant is similar to a weed, a plant that does not naturally occur in the area or is growing in an area where it is unwanted. A weed is considered invasive when it competes with native plants and invades an area through fast growth and spread. In Grand Canyon National Park the National Park Service removes the most aggressive invasive plants so that natural habitats remain intact.

Why are resource managers concerned about them? Invasive plants undermine the integrity and function of ecosystems by out-competing native plants for sunlight, water, and nutrients. During this extended drought period, native plants need all the help they can get to survive. Many invasive plants

are not palatable to wildlife, nor provide good habitat. A field of Scotch thistle is much less inviting than a thriving native ecosystem. Some invaders produce chemicals that discourage the growth of native species. Invasive species such as cheatgrass, which is now common throughout the West, encourage frequent wildfires by growing as a fine, closely spaced grass that dries out by early summer, providing fuel. The spread of invasive plants is one of the greatest threats to biodiversity and the preservation of intact, native ecosystems.

How did they get here and how can you help?

Sometimes visitors bring more than luggage from their home. Weed seeds can "hitchhike" on socks, shoes, clothes, camping gear, pets, cars, and trains. Historically, many invasive species were planted or brought to the area to serve as windbreaks, ornamentals, or cattle forage. Since 1996, the number of invasive plant species documented in the park has increased fifty percent, from 116 to 187. The increase reflects new arrivals and an increased effort by park managers in surveying park lands. You can help Grand Canyon by removing seeds from your camping gear, shoes, and clothes before you enter the park. Also, brush your pet to remove seeds that may be stuck to their coat. Staying on established trails keeps any invasive seeds you missed out of pristine areas of the park.

What can you do at home? Check your belongings before you leave the park to ensure you do not bring unwanted plant seeds back home. You can also protect your home from invasive plants by landscaping with native plants. Finally, you

can help your local area by volunteering for invasive plant removal projects.

How do we control invasive plants? Volunteers! Grand Canyon's Vegetation Program relies on wonderful volunteers to keep our park beautiful and our native ecosystems intact. A group of volunteers can pull thousands of invasive plants in one day, many times more than the Vegetation Program staff could do alone. If you are interested in lending a hand, visit the websites www.gcvolunteers.org or www.volunteer.gov/gov or call the Grand Canyon Trust at 928-774-7488.

Want to know more?

For more National Park Service invasive plant information, go to <http://www.nps.gov/plants/alien/>

Many books cover the canyon's flora. Take a look at:

- *Introduction to Grand Canyon Ecology* by Rose Houk
- *A Natural History Guide: Grand Canyon* by Jeremy Schmidt

Day Hiking



Before You Go . . .

Plan Ahead

As a day hiker no permits are required. You are entirely on your own. Your descent into the canyon, however brief, marks your entry into a world in which preparation, self-reliance, and common sense are crucial.

Know the Weather

Spring weather varies. Snowstorms on the rim are common in March and can occur as late as May. Late April and May can be windy. By mid-May temperatures along the river in the inner canyon may approach 100° F (40°C).

Double Your Calories, Double Your Fun

Salty snacks and water or sports drinks should be consumed on any hike lasting longer than 30 minutes. Food is your body's primary source of fuel and salts (electrolytes) while hiking in the canyon.

If you do not balance your food intake with fluid consumption, you run the risk of becoming dangerously debilitated and severely ill. For every hour hiking in the canyon, you should drink 1/2 to 1 quart (liter) of water or sports drinks.

Your best defense against illness and exhaustion is to eat a large breakfast, a full lunch, a snack every time you take a drink, and a rewarding full dinner at the end of the day. This is not a time to diet.

Watch Your Time

Plan on taking twice as long to hike up as it took to hike down. Allow 1/3 of your time to descend and 2/3 of your time to ascend.

Mules and Hikers

Encounters between hikers and mules have resulted in injuries to packers and the death of some mules. To ensure safety for yourself, other trail users, and mule riders, when encountering mules on the trails:

- Step off the trail on the uphill side away from the edge.
- Follow the directions of the wrangler. Remain completely quiet and stand perfectly still.
- Do not return to the trail until the last mule is 50 feet (15 m) past your position.

Hiking Tips

- 1. Be Prepared:** Know your route. Know the weather forecast. The weather can change quickly and dramatically. Carry a map, flashlight, and extra clothing including wind and rain protection. Instep crampons may be necessary on icy trails in early spring.
- 2. Stay Comfortable:** Dressing in layers is the key to comfortable hiking. This allows you to adjust for the changing conditions as you go up and down the trails. And as Mother always said, "Don't forget your hat!" It is important to stay dry and protected from the wind.
- 3. Go Slowly:** If you can carry on a conversation, you are hiking at the right pace. If you find yourself out of breath, your legs and digestive system are not getting enough oxygen. Lack of oxygen can cause fatigue, heavy legs, and exhaustion.



- 4. Rest Often:** Sit down, prop your legs up, and take a 10-minute break at least once every hour.
- 5. Eat and Drink Frequently:** Balance your food and water intake. Salty snacks help replace electrolytes lost through perspiration. No matter what the temperature, you need water and energy to keep going.

Hiking Chart

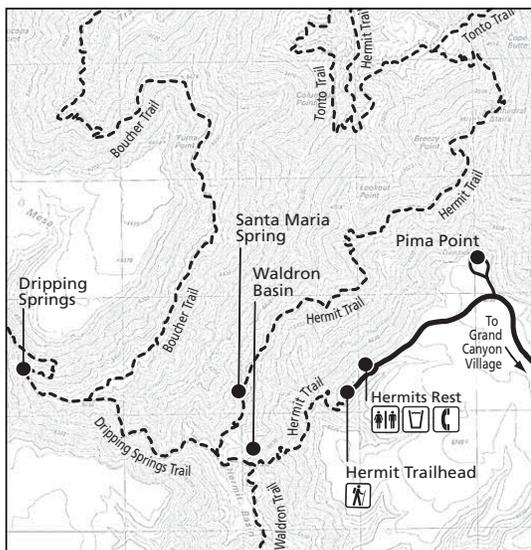
WARNING: It is recommended that you do not attempt to hike from the rim to the river and back in one day. There are no loop trails for day hikes; you will be hiking on the same trail in both directions. **Remember! You are responsible for your own safety and the safety of those in your party.**

Trails

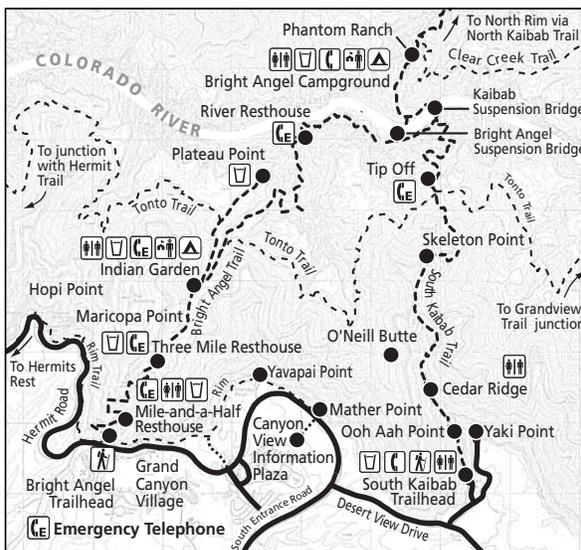
Trails	Destination	Distance Round Trip	Approximate Time Round Trip	Elevation Change	Notes
Rim Trail Begin from any viewpoint in the village or along Hermit Road. The Rim Trail offers excellent walking for quiet views of the inner canyon and for visitors who desire an easy hike. See the map on pages 8-9. No water west of Bright Angel Lodge.	Along the Village Rim	Your Choice	15 min.–1 1/2 hours	200 feet (60 m)	Paved. Best easy walk. Passes historic buildings.
	Along Hermit Road	Your Choice	15 min.–all day	200 feet (60 m)	Becomes unmarked dirt path west of Maricopa Point. Detour around Orphan Mine.
	Rim Trail closed at Hopi Point April 1.				
Bright Angel Trail (Steep) Trail begins just west of Bright Angel Lodge. Some shade, seasonal water subject to pipeline breaks; check at the Visitor Center at Canyon View Information Plaza for status. Upper portion may be extremely icy in early spring. Use crampons for safe walking.	1 1/2-Mile Resthouse	3 mi. (4.8 km)	2-4 hours	1,131 feet (345 m)	Restrooms. No water until May.
	3-Mile Resthouse	6 mi. (9.6 km)	4-6 hours	2,112 feet (644 m)	No water until May.
	Indian Garden	9.2 mi. (14.8 km)	6-9 hours	3,060 feet (933 m)	Restrooms. Water.
Plateau Point hike is extremely strenuous.					
	Plateau Point	12.2 mi. (19.6 km)	8-12 hours	3,195 feet (974 m)	No water. View of river 1 1/2 mi. beyond Indian Garden
South Kaibab Trail (Steep) Trail begins south of Yaki Point on Yaki Point Road. Best views for a relatively short hike. Steep trail, no water, little shade. Access trailhead via shuttle bus. Upper portion may be extremely icy in early spring. Use crampons for safe walking.	Ooh Aah Point	1.8 mi. (2.9 km)	1-2 hours	600 feet (183 m)	No water. First view east.
	Cedar Ridge	3 mi. (4.8 km)	2-4 hours	1,140 feet (347 m)	Restrooms. No water. First hitching rail.
	Skeleton Point	6 mi. (10 km)	4-6 hours	2,040 feet (622 m)	No water. Second hitching rail. First view of river.
 Express hikers' shuttles directly from Bright Angel Lodge and the Backcountry Information Center to the South Kaibab trailhead depart daily at: March —7:00 a.m., 8:00 a.m., and 9:00 a.m.; April —6:00 a.m., 7:00 a.m., and 8:00 a.m.; May —5:00 a.m., 6:00 a.m., and 7:00 a.m.					
Hermit Trail (Steep) Unmaintained steep trail requires caution. Begins 500 feet west of Hermit's Rest. Water from springs must be treated before drinking. For experienced desert hikers. Hiking boots recommended. Access to the trailhead restricted beginning April 1.	Waldron Basin	3 mi. (4.8 km)	2-4 hours	1,240 feet (380 m)	No water.
	Santa Maria Spring	5 mi. (8 km)	5-8 hours	1,760 feet (540 m)	Treat water.
	Dripping Springs	7 mi. (11 km)	6-9 hours	1,400 feet (430 m)	Treat water. Use extra caution along narrow sections.
Grandview Trail (Very Steep) Unmaintained steep trail requires caution. Begins on canyon side of retaining wall at Grandview Point on Desert View Drive (12 miles east of village). For experienced desert hikers. Hiking boots recommended. May be extremely icy in early spring.	Coconino Saddle	2.2 mi. (3.5 km)	1-2 hours	1,190 feet (360 m)	No water. Use extra caution along narrow sections.
	Horseshoe Mesa	6 mi. (9.6 km)	6-9 hours	2,600 feet (793 m)	Toilet. No water. Use extra caution along narrow sections.

Hiking and Camping Below the Rim

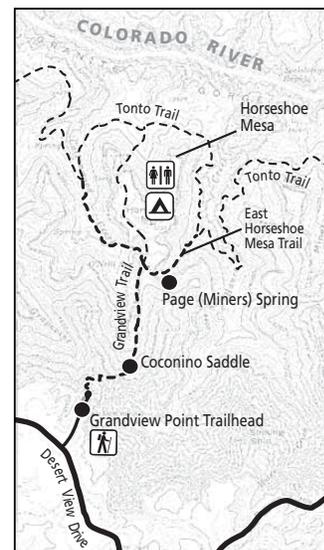
Hermit Trail Access to Hermit Trail restricted beginning April 1.



Corridor Trails Bright Angel and South Kaibab



Grandview Trail



Health Hazards

Moderation is the key to having an enjoyable hike. Hike within your ability, maintain proper body temperature, balance your food and water intake, and rest often. Emergency situations include:

Heat exhaustion is the result of dehydration due to intense sweating. Hikers can lose one to two quarts (liters) of water per hour. Rangers at both Phantom Ranch and Indian Garden treat as many as twenty cases of heat exhaustion a day in summer.

Symptoms: pale face, nausea, cool and moist skin, headache, and cramps

Treatment: drink water, eat high-energy foods, rest in the shade, cool the body.

Heat stroke is a life-threatening emergency where the body's heat-regulating mechanisms become overwhelmed by a combination of internal heat production and environmental demands. Every year two to three Grand Canyon hikers experience heat stroke.

Symptoms: flushed face, dry skin, weak and rapid pulse, high body temperature, poor judgment or inability to cope, unconsciousness. Victim is in danger!

Treatment: find shade, cool victim with water, send for help!

Hypnatremia is an illness that mimics the early symptoms of heat exhaustion. It is the result of low sodium in the blood caused by drinking too much water, not eating enough salty foods, and losing salt through sweating.

Symptoms: nausea, vomiting, altered mental states, and frequent urination

Treatment: have the victim rest and eat salty foods. If mental alertness decreases, seek immediate help!

Hypothermia is a life-threatening emergency where the body cannot keep itself warm due to exhaustion and exposure to cold, wet, windy weather.

Symptoms: uncontrolled shivering, poor muscle control, and a careless attitude

Treatment: put on dry clothing, drink warm liquids, and protect from wind, rain, and cold.

Leave No Trace



Leave No Trace is a nonprofit organization dedicated to promoting responsible outdoor recreation through education, research and partnerships. While enjoying your visit, please consider the following principles to minimize your impact and help protect Grand Canyon for future generations.

1. Plan Ahead and Prepare
2. Travel and Camp on Durable Surfaces
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimize Campfire Impacts
No campfires in Grand Canyon National Park backcountry.
6. Respect Wildlife
7. Be Considerate of Other Visitors

For more information visit www.lnt.org

Backpacking Permits

Overnight backpacking in Grand Canyon provides a degree of solitude, wildness, and silence that is increasingly difficult to find. A backcountry permit is required for all overnight backpacking, except for guests of Phantom Ranch. The majority of permits are reserved up to four months in advance. A fee of \$10 per permit plus \$5 per person per night is collected. The permit program helps to limit impacts to the natural resource while providing a greater degree of solitude for hikers.

Individuals arriving without a permit may be able to obtain one through a daily waiting list. Inquire early in the

morning at the Backcountry Information Center, open daily 8:00 a.m. to noon and 1:00 p.m. to 5:00 p.m. For more information, pick up a *Backcountry Trip Planner* at the Backcountry Information Office or the Visitor Center at Canyon View Information Plaza.

Backcountry Information Center
P.O. Box 129
Grand Canyon, AZ 86023

Tel: (928) 638-7875
(1:00 p.m. to 5:00 p.m. Mon.-Fri.)
www.nps.gov/grca

Want to know more?

Grand Canyon Association bookstores offer many books and maps on hiking. Bookstore hours and locations are listed on page 3. A few items to consider include:

- *Official Guide to Hiking Grand Canyon*, Scott Thybony
- The Grand Canyon Trail Guides series: Bright Angel, Grandview, Havasu, Hermit, North Kaibab, South Kaibab, South and North Bass
- *Grand Canyon National Park Trails* topographic map

Lodging and Services

Food

Dining Listed west to east (approximately) along the rim.

Hermits Rest Snack Bar
Open daily 9:00 a.m.-5:00 p.m.

Maswik Cafeteria
Located in Maswik Lodge at the west end of the village. Open daily 6:00 a.m.-10:00 p.m. Sports Lounge open daily 5:00 p.m.-10:00 p.m.

Bright Angel Restaurant
Located in Bright Angel Lodge. Open daily. Breakfast 6:30 a.m.-10:45 a.m. Beginning May 1 open at 6:00 a.m. Lunch 11:15 a.m.-4:00 p.m. Dinner 4:30-10:00 p.m. Lounge 11:00 a.m.-11:00 p.m.

Bright Angel Coffee House
Located in the Bright Angel Lodge. Open daily 5:30 a.m.-10:00 a.m.

Bright Angel Fountain
Until March 14 open weekends only 11:00 a.m.-5:00 p.m., Beginning March 15 open daily 10:00 a.m.-6:00 p.m.

The Arizona Room
On the rim in the Bright Angel Lodge. Open daily. Lunch 11:30 a.m.-3:00 p.m. Dinner 4:30 p.m.-10:00 p.m. Reservations are not accepted.

El Tovar Dining Room
Located on the rim. Open daily. Breakfast 6:30 a.m.-10:45 a.m. Lunch 11:30 a.m.-2:00 p.m. Dinner 4:30 p.m.-10:00 p.m. Dinner reservations are required: (928) 638-2631 ext. 6432. Lounge: 11:00 a.m.-11:00 p.m.

Delicatessen at Marketplace
Located in the General Store. Open daily. March 8:00 a.m.-6:00 p.m. April-May 8:00 a.m.-7:00 p.m.

Yavapai Cafeteria (Coyote Cafe)
Located at Market Plaza. Open daily 6:30 a.m.-9:00 p.m.

Desert View Trading Post Snackbar
Open daily 9:00 a.m.-8:00 p.m. Beginning May 17: 8:00 a.m.-7:00 p.m.

Groceries

Canyon Village Marketplace
The General Store is located in Market Plaza. March 1-16 8:00 a.m.-7:00 p.m. March 17-May 22 8:00 a.m.-8:00 p.m. Beginning May 23 7:00 a.m.-9:00 p.m.

Desert View Marketplace
March-April 9:00 a.m.-5:00 p.m. May 9:00 a.m.-6:00 p.m.

Lodging

In the Park

All prices are subject to change. For same-day reservations, call (928) 638-2631. For advance reservations, call (888) 297-2757 or write to: Xanterra Parks & Resorts, 6312 South Fiddlers Green Circle, Ste. 600N, Greenwood Village, CO 80111; www.xanterra.com.

Bright Angel Lodge
On the rim. \$66-\$166.

El Tovar Hotel
On the rim. \$166-406.

Kachina Lodge
On the rim. \$162-172.

Thunderbird Lodge
On the rim. \$162-172.

Maswik Lodge
West end of village. \$86-162.

Yavapai Lodge
Market Plaza. \$102-146.

Phantom Ranch
Located at the bottom of the canyon. Overnight dormitory and cabin space. Advance reservations are required. Call for prices (see above).

North Rim
Reservations for lodging on the North Rim can be made at (877) 386-4383 or www.grandcanyonlodgenorth.com

Outside the Park

Grand Hotel
Tusayan. (928) 638-3333

Grand Canyon Squire Inn
Tusayan. (928) 638-2681

Holiday Inn Express
Tusayan. (928) 638-3000

Quality Inn
Tusayan. (928) 638-2673

Red Feather Lodge
Tusayan. (928) 638-2414

Camping

Camping is only permitted in designated campsites in Grand Canyon National Park. Violators are subject to citation and fine.

In the Park

Mather Campground
Operated by the National Park Service. No hookups are available, but there is a dump station. Maximum vehicle length: 30 feet. Campsites are \$18 per night. Some sites may be available on a first-come, first-served basis. Check at the campground entrance. For advance reservations contact (877)-444-6777 or visit www.recreation.gov.

Trailer Village
Trailer sites with hookups are located next to Mather Campground. \$27.00 per site per night for two people. \$2.00 for each additional person over age 16. Campers may register at the entrance to Trailer Village. Reservations may be made with Xanterra Parks & Resorts. For same-day reservations, call (928) 638-2631. For advance reservations, call (888) 297-2757 or write to Xanterra Parks & Resorts, 6312 South Fiddlers Green Circle, Ste. 600N, Greenwood Village, CO 80111; www.xanterra.com.

Desert View Campground
Located near the East Entrance, 25 miles from Grand Canyon Village. Self-registration is on a first-come, first-served basis. \$12 per site per night. Opens mid-May.

Outside the Park

Camper Village
Commercial campground located one mile (1.6 m) south of park entrance in the town of Tusayan. Hookups and coin-operated showers are available. Call (928) 638-2887 or visit www.grandcanyonentrance.com

Ten-X Campground
Operated by Kaibab National Forest. Located two miles south of Tusayan. \$10 per site per night. No hookups or showers. Group sites available by reservation. Information: (928) 638-2443. Opens May 1, weather permitting.

Services

Laundry and Showers
Located near Mather Campground. March 1-March 27: 8:00 a.m.-6:00 p.m. - Last laundry load: 4:45 p.m. March 28-April 4: 7:00 a.m.-9:00 p.m. - Last laundry load: 7:45 p.m. Beginning April 25: 6:00 a.m.-11:00 p.m. - Last laundry load: 9:45 p.m.

Chase Bank and ATM
Located at Market Plaza. Open: Mon.-Thurs.: 9:00 a.m.-5:00 p.m. and Fri.: 9:00 a.m.-6:00 p.m. Accepts travelers checks and major credit cards. 24-hour ATM. Telephone: (928) 638-2437. ATM also available in Maswik Lodge lobby.

Post Office
Located at Market Plaza. Window service: Mon.-Fri.: 9:00 a.m.-4:30 p.m. and Sat.: 11:00 a.m.-1:00 p.m. Lobby open: 5:00 a.m.-10:00 p.m. Stamps are available in the lobby. Telephone: (928) 638-2512.

Kennels
Open daily: 7:30 a.m.-5:00 p.m. Telephone: (928) 638-0534. For retrieval after 5:00 p.m., contact Fire and Safety: (928) 638-2631.

Lost and Found
For items lost or found in hotels or restaurants, call (928) 638-2631. For all other lost items call, (928) 638-7798. Please take found items to the Visitor Center at Canyon View Information Plaza.

Garage Services
Located east of Grand Canyon National Park Lodges general offices. Open daily 8:00 a.m.-noon and 1:00 p.m.-5:00 p.m. Garage provides emergency repairs such as tires, belts, batteries, fuses, hoses, etc. Tow service provided to Williams or Flagstaff for more advanced repairs. After hours emergency service available. (928) 638-2631

Camping Equipment
Camping, hiking, and backpacking equipment may be purchased or rented at General Store Marketplace. Limited repair services are also available.

Community Library
Open Mon.-Fri. 10:30 a.m.-5:00 p.m., Sat. 9:00 a.m.-2:00 p.m., closed Sun. and holidays. Children's story time Thurs. 11:00 a.m. Internet access available. Call (928) 638-2718 for directions to library.

Child Day Care
The Kaibab Learning Center is available for day care of infants through 12 year olds if space is available. Immunization records must be provided. Open Mon.-Fri. 7:30 a.m.-5:30 p.m. Call (928) 638-6333 for more details.

Books/Gifts

Listed west to east (approximately).
Hermits Rest 9:00 a.m.-5:00 p.m.
Closes April 1

Maswik 7:00 a.m.-10:00 p.m.

Kolb Studio 8:00 a.m.-6:00 p.m.

Beginning April 15 8:00 a.m.-7:00 p.m.

Lookout Studio 9:00 a.m.-5:00 p.m.

Beginning May 15 8:00 a.m.-Sunset

Bright Angel 7:00 a.m.-10:00 p.m.

El Tovar 7:00 a.m.-10:00 p.m.

Hopi House 9:00 a.m.-5:00 p.m.

Beginning May 15 8:00 a.m.-8:00 p.m.

Verkamps Curio

Until March 14 9:00 a.m.-6:00 p.m.

March 15-April 14 9:00 a.m.-6:30 p.m.

Beginning April 15 9:00 a.m.-7:00 p.m.

Yavapai Curio

March 1-May 14 8:00 a.m.-8:00 p.m.

Beginning May 15 7:00 a.m.-10:00 p.m.

Books & More at Canyon View

Information Plaza 8:00 a.m.-6:00 p.m.

Beginning April 15 8:00 a.m.-7:00 p.m.

Yavapai Observation Station 8:00 a.m.-6:00 p.m.

Beginning April 15 8:00 a.m.-7:00 p.m.

Tusayan Museum 9:00 a.m.-5:00 p.m.

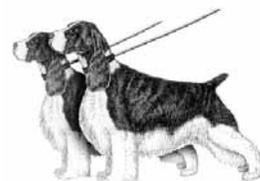
Desert View Bookstore/Park Information 9:00 a.m.-5:00 p.m.

Desert View Trading Post 8:00 a.m.-6:00 p.m.

Beginning May 15 8:00 a.m.-Sunset

Desert View Watchtower 8:00 a.m.-6:00 p.m.

Beginning May 15 8:00 a.m.-Sunset



Pets must be leashed at all times.

Leashed pets are allowed on trails throughout the developed areas of the South Rim, but not below the rim. The only exception is service animals.

Persons wishing to take a service animal below the rim must check in first at the Backcountry Information Center. Kennels are available. Telephone: (928) 638-0534.

Organizations and Services

Religious Services

Religious services are offered in the park and the surrounding community. The National Park Service does not endorse any group or message.

Current schedules are posted at Mather Campground (near the check-in station), Shrine of the Ages, the information kiosk near the post office, and the Visitor Center at Canyon View Information Plaza.

Community Easter Sunrise Service

March 23, 6:20 a.m. Located at Mather Point. Shuttle service available from Market Plaza. Open to all.

A Christian Ministry in the National Parks

(928) 638-2340.

Grand Canyon Community Church (interdenominational)

Jared Long, Pastor. (928) 638-2340.

The Church of Jesus Christ of Latter-Day Saints

Don Kiel, Branch President. (928) 638-9426.

El Cristo Rey Roman Catholic

Father Eugene Cagoco, D.S., (928) 638-4050.

Grand Canyon Assembly of God

Brian and Debbie Fulthorp, Co-pastors, (928) 638-9415.

Grand Canyon Baptist Church

Rick Wiles, Pastor. (928) 638-2790.

Jehovah's Witnesses (Tusayan)

Borden Miller, (928) 635-4166.

Service Organizations

Alcoholics Anonymous

AA meets Monday, Wednesday, and Friday at 7:00 p.m. in the Kachina Room, Kachina Lodge. Meetings are open and nonsmoking. The Al Anon Family Group meets Friday at 8:15 p.m. also in the Kachina Room.

Grand Canyon Rotary Club

Meets Thursdays at noon at El Tovar dining room. Meets in the Thunderbird Room beginning March 13.

Lions Club

Meets twice monthly on the first and third Wed. at 7:00 p.m. at the Grand Canyon Quality Inn in Tusayan. For information call (928) 638-0666.

Tours and River Trips

Air Tours

Fixed-wing and helicopter tours of the Grand Canyon region originate daily from Grand Canyon Airport. A list of air tour operators is available upon request at the Visitor Center at Canyon View Information Plaza or consult the local telephone directory.

Bus Tours

Tours within the park to Desert View and Hermits Rest, as well as sunrise and sunset tours, are available daily. Wheelchair-accessible coaches are available by prior arrangement. Contact any transportation desk for information or call (928) 638-2631. Tour to Hermit Rest discontinued April 1 due to construction.

Mule Trips

One- and two-day trips into the canyon depart in the morning and may be available on a waiting-list basis. Call (928) 638-2631 or contact the Bright Angel Lodge Transportation Desk for further information. www.xanterra.com

Horse Rides

Trail rides and twilight wagon rides are available from Apache Stables at the north end of Tusayan. Rides are offered as weather permits. For information and reservations call: (928) 638-2891.

White-Water Raft Trips

White-water trips through the canyon last 3-21 days and require reservations well in advance. Ask at the Visitor Center at Canyon View Information Plaza for a *Trip Planner* with a list of approved river trip operators.

Smooth-Water Raft Trips

Half-day trips on the Colorado River from Glen Canyon Dam to Lees Ferry are provided by Colorado River Discovery. (888) 522-6644; www.raftthecanyon.com. All day tours from the park including the smooth-water raft trip can be arranged at any lodging Transportation Desk.

Hiking and Backpacking

Grand Canyon Field Institute (GCFI) offers a wide variety of educational programs throughout the park. These single and multi-day "classes" led by expert instructors share the wonder of Grand Canyon with participants of all ages and backgrounds. For more information call (866) 471-4435 or visit www.grandcanyon.org/fieldinstitute. GCFI is a program of the nonprofit Grand Canyon Association.

Transport

Bus Service

Greyhound Bus Lines offers service from Flagstaff and Williams, Arizona, to points nationwide. (See shuttle service below for road transport to the park.)

Railroad

Grand Canyon Railway offers service between Williams, Arizona, and Grand Canyon. Call (800)-THE-TRAIN for information and reservations. The Railroad Express offers bus service to take only a one-way trip on the vintage train. To ride on the train one-way in the morning, contact any transportation desk. To ride on the train one-way in the afternoon, contact the Grand Canyon Railway at (800)-THE-TRAIN (800-843-8724). www.thetrain.com

Taxi Service

Service is available to the Grand Canyon Airport, trailheads, and other destinations. 24-hour service daily. Call (928) 638-2822 or (928) 638-2631, ext. 6563.

Transportation Desks

Information about Phantom Ranch facilities, mule trips, horseback riding, air tours, one-day float trips, and motor-coach tours (including wheelchair-accessible vehicles) is available at the lodge lobbies (hours vary seasonally). Call (928) 638-2631, ext. 6015.

Maswik Lodge

Times vary based on seasonal demand.

Bright Angel

6:00 a.m.-6:30 p.m. March 1-31.
6:00 a.m.-8:00 p.m. Starting April 1.

Yavapai Lodge

Times vary based on seasonal demand.

Rim to Rim Shuttle

Daily round-trip transportation between the North Rim and South Rim is provided by Transcanyon Shuttle. One trip each way daily. Scheduled service begins May 15. Reservations required: (928) 638-2820.

Shuttle Service

Two companies provide shuttle service between Flagstaff, Williams, and Grand Canyon twice daily. They also serve Phoenix as well as other points in northern Arizona.

Flagstaff Express

(800)563-1980
(928)225-2290
www.flagstaffexpress.com

Open Road Tours

(877)226-8060
(928)226-8060
www.openroadtours.com

Additional Out-of-Park Services

The following facilities are located in Tusayan, outside the park's south entrance on U.S. Highway 64 South.

For additional services not listed, consult the local telephone directory. Area code (928) for all numbers listed below.

Fuel

Conoco Service Station 638-2608

Food

Cafe' Tusayan 638-2151
Canyon Food Mart 638-2608
Canyon Star 638-3333
General Store 638-9228
McDonald's 638-2208
Mexican Kitchen 638-8423
Pizza Hut 638-4629
Quality Inn 638-2673
RP's Stage Stop 638-3115
Squire Inn Restaurant 638-2681
Tusayan Steakhouse 638-2780
We Cook Pizza, Etc 638-2278
Wendy's 638-6484

Internet Access

Grand Canyon Tourist Center .638-2626
Quality Inn 638-2673
Jennifer's Internet & Bakery
Cafe 638-3433
Red Feather Lodge 638-2414
RP's Stage Stop 638-3115

Beauty Salon

Grand Canyon Squire Inn 638-8413

Western Union

Canyon Food Mart 638-2608

Kaibab National Forest

Tusayan Ranger District 638-2443

News & Weather

KNAU 90.3 (800) 532-5628

Hualapai Skywalk

The Hualapai Skywalk at Grand Canyon West is on the Hualapai Indian Reservation, not in Grand Canyon National Park. The Skywalk at the west end of Grand Canyon is approximately 250 miles from the South Rim—50 miles east of Highway 93 between Kingman, Arizona and Las Vegas, Nevada.

Stop by the Visitor Center at Canyon View Information Plaza for a handout with more details and a map. For additional information or to make reservations telephone (877)716-9378 or (702)878-9378 or visit www.destinationgrandcanyon.com.

Accessibility

Programs, services, and facilities that are fully or partially accessible to persons with physical disabilities are noted in *The Guide* by the following symbol:  Wheelchair accessible with assistance.

Day-Use Wheelchairs

The National Park Service provides temporary day-use wheelchairs at no charge. A wheelchair is available at the Visitor Center at Canyon View Information Plaza.

Accessibility Permit

An accessibility permit, allowing access to some areas closed to public traffic, is available at the entrance gates, the Visitor Center at Canyon View Information Plaza, Park Headquarters, Kolb Studio, El Tovar concierge desk, and the Transportation Desks at the Bright Angel, Yavapai, and Maswik Lodges.

Accessible Tours

Wheelchair-accessible tours are available by prior arrangement. Contact any lodge transportation desk or call (928) 638-2631 for information. TDD telephones are available to hotel guests in the park.

Accessibility Guide Available

The Grand Canyon National Park *Accessibility Guide* is available upon request at the Visitor Center at Canyon View Information Plaza, Kolb Studio, Tusayan Museum, Desert View Information Center, and the park entrance stations.

Medical

24-Hour Emergency Care

Dial 911 (From hotel rooms dial 9-911).

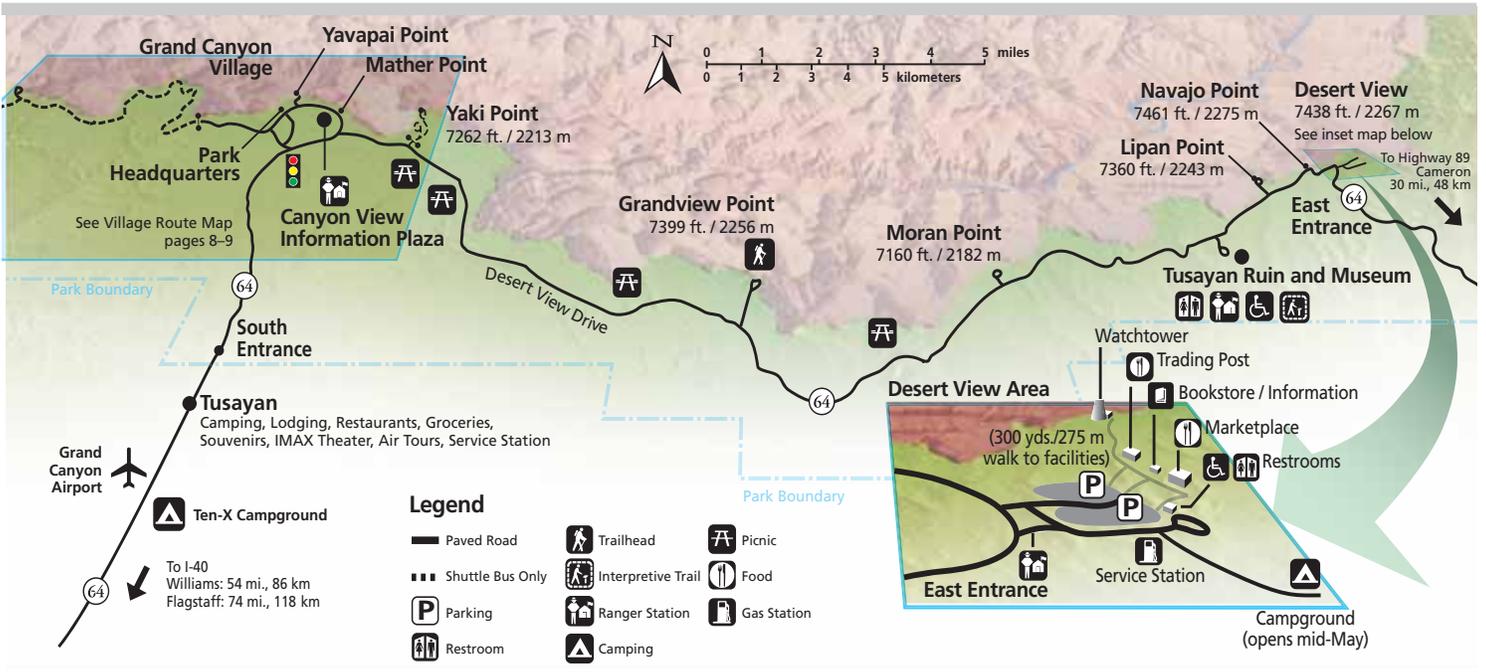
North Country Grand Canyon Clinic

March 1-March 31
Monday - Friday: 8:00 a.m.-5:00 p.m.
Beginning April 1
Daily: 8:00 a.m.-6:00 p.m.
Telephone: (928) 638-2551

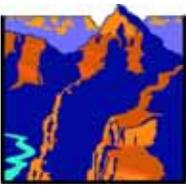


Arizona Highway Information 511
or (888) 411-ROAD or www.az511.gov

South Rim



Bookstores



GRAND CANYON ASSOCIATION

Enriching Experience through Knowledge

When you shop at Grand Canyon Association (GCA) bookstores, your purchase supports Grand Canyon National Park. GCA is a nonprofit organization created in 1932 to cultivate knowledge, discovery, and stewardship for the benefit of Grand Canyon National Park and its visitors. Since then, GCA has provided over \$29.2 million in financial support.

When you visit our bookstores, ask how you can support Grand Canyon National Park's educational programs and scientific research by becoming a member of the Grand Canyon Association. In addition to supporting the park, you will receive a 15% discount at all GCA bookstores, including our online bookstore at www.grandcanyon.org.

Member discounts are also available for most classes offered by the Grand Canyon Field Institute, GCA's outdoor education program. For more information about GCFI, visit www.grandcanyon.org/fieldinstitute.

For GCA bookstore locations, see page 4. In addition to the South Rim, GCA operates bookstores at the North Rim Visitor Center and the Kaibab Plateau Visitor Center at Jacob Lake.

Teachers can take advantage of GCA's *Travelin' Trunk* program, which brings the Grand Canyon to your classroom. For more information contact (800) 858-2808 ext. 7142 or outreach@grandcanyon.org

Shop online: www.grandcanyon.org or call toll free (800) 858-2808, ext 7030.

North Rim



The average distance across Grand Canyon "as the raven flies" is 10 miles. However, getting from the South Rim to the North Rim by automobile requires a five-hour drive of 215 miles.

During winter months, the road to the North Rim entrance is closed due to snow. Lodging and camping are available at the canyon's North Rim from May 15 through mid-October. Reservations are strongly recommended. Additional facilities are available in the surrounding Kaibab National Forest, the Kaibab Lodge area, and Jacob Lake.

A separate *Guide* issue is published for the North Rim and includes details about facilities and services, as well as program and hiking information. Inquire at the Visitor Center at Canyon View Information Plaza on the South Rim.

Desert View Services

Chevron Service Station	Staffed March 29	9:00 a.m.-5:00 p.m.
	24-hour credit card access year round.	
Desert View Marketplace	March-April: 9:00 a.m.-5:00 p.m.	
Open daily	May: 9:00 a.m.-6:00 p.m.	
Bookstore/Park Information	9:00 a.m.-5:00 p.m.	
Open daily		
Trading Post Snack Bar	9:00 a.m.-5:00 p.m.	
Open daily	Beginning May 15: 8:00 a.m.-7:00 p.m.	
Trading Post Gift Shop	8:00 a.m.-6:00 p.m.	
Open daily	Beginning May 15: 8:00 a.m.-Sunset	
Watchtower Gift Shop	8:00 a.m.-6:00 p.m.	
Open daily	Beginning May 15: 8:00 a.m.-Sunset	
Watchtower Stairs	8:00 a.m.-5:30 p.m.	
Open daily	Beginning May 15: 8:00 a.m.-1/2 hour before Sunset	
Desert View Campground		
Opens mid-May or sooner, weather permitting		

National Park Service
U.S. Department of the Interior

Grand Canyon National Park
Post Office Box 129, Grand Canyon, AZ 86023

For the latest information updates, visit Grand Canyon National Park's website at: www.nps.gov/grca

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