Bryce Canyon
Junior Ranger Field Book

THIS BOOK BELONGS TO:

1. Complete the Activities Inside!
   
   *Your age is the number of activities you’ll do.*
   
   Example: If you are 9 years old, do 9 activities.
   
   25 and older, complete entire book.

2. Green activities are good for young rangers!

2. Attend a Ranger Program, Watch the Park Movie, or Visit the Museum and write something you learned:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

Ringtail
*Bassariscus astutus*
(Related to raccoons)
Using Your Map

A Jr. Ranger knows how to read a map and knows where they’ve been in the park. Use the park map below to circle every place you go during your visit. Below, write your favorite place that you visited.

My favorite place

Get Ready Bingo

A Jr. Ranger is prepared! Cross off all the items that you have with you today. Can you get five in a row?
**What’s Happening Today?**

*Knowing what’s happening outside is an important part of planning a day at Bryce Canyon!*

What is the weather like today? ________________________________

<table>
<thead>
<tr>
<th>High Temperature</th>
<th>F or C</th>
<th>What time is sunset today?</th>
<th>P.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Temperature</td>
<td>F or C</td>
<td>What time is sunrise tomorrow?</td>
<td>A.M.</td>
</tr>
</tbody>
</table>

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**I Hiked the Hoodoos!** *Complete this activity and receive a special reward!*

Hike a minimum of 3 miles / 4.8 km and find the benchmarks. Take a photo or a pencil rubbing (back page) of the benchmarks you find. If you are completing the entire book, this activity is optional.

- Mossy Cave (0.8 mi / 1.3 km)
- Rim Trail (2.5 mi / 4.0 km)
- Queen’s Garden (1.8 mi / 2.9 km)
- Tower Bridge (3.0 mi / 4.8 km)
- Navajo Loop (1.3 mi / 2.2 km)
- Peekaboo Loop (4.9 mi / 7.8 km) *from Sunset Point*
- Bristlecone Loop (1.0 mi / 1.6 km)
- Sheep Creek (4.0 mi / 6.4 km)
- Peekaboo Loop (5.5 mi / 8.8 km) *from Bryce Point*
I Spy!
Warm up your observation skills by finding these five items in your book. Write the page number where you find them.

Sensing Your Park
How does it feel to be here?
Go anywhere in the park and record your experience below.

Location: __________________________

I hear: _____________________________

I see: _____________________________

I smell: ____________________________

I imagine: _________________________

I wonder: _________________________

I wish: ____________________________
Prairie Dog Word Tunnels

Prairie dogs have a very complex language that they use to protect themselves and their colony. Use your own word skills and solve the clues to connect all three burrow entrances!

Across Clues
1. This person helps protect the park and keep prairie dogs safe
2. These venomous reptiles with noisy names are predators of prairie dogs; watch your step in the summertime!
3. This room is where prairie dogs can hear the world above
4. This sleepy time usually lasts from November to March
5. This scientific field of study includes prairie dogs and all other animals in the park (except humans)
6. This is the fastest land animal in North America, often found grazing near prairie dog habitat
7. The sego lily and evening primrose are examples of this
8. Male and female prairie dogs do this every spring to make more of 9-Across
9. What we call young prairie dogs

Down Clues
8. This is the name of the park’s summer rainy season
11. This room is where you’ll find the youngest prairie dogs
12. This room helps keep the rest of the burrow clean
13. This group of mammals, which includes squirrels, mice, and prairie dogs has front teeth that never stop growing
14. This plant has rough leaves and red bark; in Spanish its name means “tiny apple”
15. This large bird with an expensive sounding name is a common predator of prairie dogs
16. Like real dogs, what we call the sound prairie dogs make
17. Number of adult males in a prairie dog clan
18. Cars that are prepared to do this can save prairie dog lives
19. This hoofed animal with long ears grazes near prairie dogs

The Utah Prairie Dog is an endangered species. They were once expected to go extinct by the year 2000, but are now thriving thanks to federal protections in places like Bryce Canyon.
Lifecycle of a Hoodoo

Place the hoodoo stages in the correct order (1 to 4) and answer the questions on the next page!
Tip: Start by finding the four stages in the background illustration.

Options:
- Window
- Rounded Hill
- Wall or Fin
- Hoodoo

Create a Hoodoo

Find a favorite hoodoo and draw it below.
Don’t forget to give it a name!

My hoodoo’s name
How would you describe a hoodoo to someone that had never seen one?

3 forces that weather & erode our rocks:
1. 
2. 
3. 

Know Your Layers

Draw lines to match the rock layer to its description and fill in all of the missing words!

The hoodoos of Bryce Canyon are part of the ___________ formation, which is around 50 million years old. This formation is also called the Pink Cliffs, which is the very ___________ step of the “Grand Staircase”. Bryce Canyon contains the most hoodoos on Earth, but it’s not really a canyon because it has no ______________.

- Dolomitic Limestone
  - This layer is ___________ than others, so it erodes away more quickly. Look for the skinniest parts of a hoodoo.

- White Limestone
  - Magnesium makes this layer ___________ than others. It forms a “hat” layer that erodes more slowly than others.

- Red Limestone
  - These layers are formed of nearly pure calcium carbonate that settled at the bottom of a fresh-water ___________.

- Mudstone
  - These layers have calcium carbonate and other sediments rich in the element ___________, which gives a red color.
Plants of Bryce Canyon

Plant Safari

Find at least two of these seven plants in the park. Be sure to fill out the entire tag!

1. Ponderosa Pine
   - Clue: Tiny seeds on hair-like branches
   - Location: Shared Use Path
   - Smell between the plates of its bark
   - Some only grow 1 inch per century

2. Quaking Aspen
   - Clue: Look for their white bark
   - Location: grows in colonies; grows quickly in burned areas
   - Some only grow 1 inch per century

3. Bristlecone Pine
   - Clue: Needles in bunches of five, look like fox-tails
   - Location: Leaves of change from summer green to winter purple

Plant Facts

Choose from the plants above to complete these plant descriptions!

The oldest ____________________________ in the park was found to be around 1,600 years old.

Small red berries give ____________________________ its name, which means “tiny apple” in Spanish.

______________________________ grows in groups, and may have arrived here over 10,000 years ago.

Along with the pinyon pine, ____________________________ defines the park’s lowest elevation zone zone.

The spaces between the bark of ____________________________ smell like vanilla or butterscotch.

Along with the spruce tree, ____________________________ defines the park’s highest elevation zone zone.

Edible seeds have made ____________________________ an important grain for native peoples.

Leaves of ____________________________ change from summer green to winter purple.
Mystery Plant

Draw a plant you find, and fill out the tag. If you can’t find its name later, make one up!
Circle the names of animals you see.
Never feed a wild animal, and always keep your distance!

Rufous Bobcat
Leaves no claw marks in track

Ringtail
Five toes on both feet

Common Raven
Does not digest fur or bones

Pygmy Nuthatch
Our smallest nuthatch

Downy Woodpecker
About the size of a robin

White-breasted Nuthatch
Descends trees head-first

Coyote
Claw marks in tracks

Mule Deer
Leaves pellet scat

Brown Creeper
Ascends tree head-first

Desert Cottontail
Rear track is larger

Golden-mantled Ground Squirrel
White eye-ring, shreds pine cones

Utah Prairie Dog
Lives in underground colonies

Bobcat
Leaves no claw marks in track

Who left it?

Who left it?

Who left it?
Track yourself!

Your hand can be a great way to measure tracks. Trace your hand below, then choose an animal track (at left) and draw it on top of your hand to show how their sizes compare.

Example: A Bobcat track would be this large on a hand with a 2 inch palm.
What Parks Mean To Us (Interview)

National parks exist all around the world, and they mean different things to different people. Ask someone visiting the park today these questions, and write their answers below.

Which was the first national park you ever visited? When did you visit?

________________________________________________________________________

What do you remember about that experience? If Bryce Canyon is your first, why did you come?

________________________________________________________________________

________________________________________________________________________

What do national parks mean to you?

________________________________________________________________________

Of all the national parks you’ve visited, which was the most special to you? Why?

________________________________________________________________________
Naming the World Around You

Many names in and around the park come from the language of the Southern Paiute people, who still live in this area today. Their language describes places by things that happened there, who lives there, or what it looks like. Think about what makes this place unique as you complete this activity.

PAUNSAUGUNT Plateau: Place of the Beaver
PARIA: Muddy Water
YOVIMPA: Ponderosa Pine Tree Water
PANGUITCH: Fish Water
UNKA TUMPI WUN-NUX TUNGWATSINI XOOAKICHU ANAX (BRYCE CANYON):
Red Rock Standing Like a Man in a Hole

What is most special about this place to you?

If it had no name, what would you call this place?

Being a Good Steward

Settlers from The Church of Jesus Christ of Latter Day Saints arrived here in the 1860s. Bryce Canyon’s name comes from one of these settlers, named Ebenezer Bryce. This faith teaches the importance of caring for all of the life that exists on this planet. You can help take care of this land too by picking up at least 10 pieces of litter you find during your visit. Cross off a trash can for every piece you find!
The North Star

At this latitude, the stars that circle the North Star (Polaris) are always visible, so you can see them at any time of year. Complete this page to learn three ways you can find the North Star tonight.

Cassiopeia looks like an M, E, W, or 3 depending on its rotation. Think of it as two triangles, with Shedir and Ruchbah at their tops. Draw two lines, one from each star, through the middle of their triangle. The North Star will be near where these lines meet.

The Big Dipper is one part of a larger constellation called the Great Bear. The stars Dubhe and Merak are known as the “Pointer Stars”, because they point to the North Star. Draw a line through these two stars to find the North Star.

The Little Dipper is dimmer than the Big Dipper, but is just as important because it contains the North Star at the end of its handle. Circle the North Star and write “Polaris” next to it.

Paiute stories describe the sky as a world above us, with plants, animals, and mountains pointing back at us. Na-gah, the mountain sheep, climbed the tallest mountain in that world, and became stuck. Food began to run low, so as an act of mercy, na-gah was turned into a star. Other mountain sheep trying to climb up from below became the Big and Little Dippers. This is why the North Star never moves, and the other constellations circle it.
Just a Phase

It takes about 28 days for the moon to orbit Earth and go through all of its phases. Some phases are better for stargazing than others. Shade in the missing phases, and answer the questions below!

Getting "bigger" ("Waxing") Bright area looks like the letter D

Getting "smaller" ("Waning") Bright area looks like the letter C

New Moon Rises at sunrise
Waxing Crescent Rises a few hours after sunrise
First Quarter Rises around noon
Waxing Gibbous Rises mid-afternoon
Full Moon Rises at sunset
Waning Gibbous Rises a few hours after sunset
Last Quarter Rises around midnight
Waning Crescent Rises a few hours before sunrise

Which phase is the moon in tonight?

Will tonight be a good night for stargazing? Why or why not?

Losing the Night

For a few days a month the moon can make it difficult to see the stars, but in most places artificial light now makes it difficult to see stars every night of the year. One of the best things you can do to help bring back the stars is to “shield” the lights around your home.

Draw a shield on the left lightbulb and draw lines to show how a shield directs the light.

Unshielded Light creates light pollution by allowing light to shine in all directions, including the sky, where dims the stars.

Light pollution not only makes it difficult to see the stars, but confuses animals, plants, and our bodies, all of which are carefully adapted to the brightness of the day and the darkness of the night.

Red light can help preserve night vision, so it’s the best light for stargazing.
What Comes After a Fire?
Wildfire is nature’s way of keeping house. When no fire occurs, forests become dense and overcrowded, making them less healthy and vulnerable to larger, more destructive wildfires. After a fire, grasses take advantage of lots of sunlight on the forest floor. Then shrubs arrive, providing berries and more for animals to eat. Finally, tall trees return to the area, providing more food and shelter. The order that plants return after fire is called “succession”. Use the plant clues on Page 8 and 9 to put these plants in the correct order (1 to 4) of succession.

A Changing Climate
Rapid increases in global temperature and CO₂ are one of the greatest challenges affecting your national parks. Complete this activity to imagine how a changing climate might affect Bryce Canyon.

A Freeze/Thaw cycle is when rain or melted snow freezes at night and then melts during the afternoon. This currently happens about half the nights of the year here. Frequent Freeze/Thaw Cycles shape rocks bit by bit, and create tall, narrow hoodoos like Thor’s Hammer.

Higher global temperatures will mean fewer Freeze/Thaw cycles, and possibly more rain here than snow and ice. Hoodoos formed in this environment could look very different than what you see today. Write or draw how more rain-shaped hoodoos might look.
Deciding the Future of Your Parks

Climate Change? Overcrowding? Cell Phones? Lack of interest? Try and think of one challenge the national parks will face in your lifetime. Below, write something you think that you and the National Park Service can do to better face that challenge.

A challenge facing the national parks is...

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Something the National Park Service can do to help is to...

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Something that I can do to help is to...

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
The Maze of Decisions

Complete the maze by making the best decisions at each situation. For Situation #11, draw or write a good decision you made while visiting a national park, and then find the correct path to the end.
Your Junior Ranger Field Book is all you need for this activity.

6. Call a friend to tell them everything as you hike, turn on your boom box & howl like a wolf, or share your enthusiasm quietly within your group.

7. Someone is carving into the aspen! Add your name, build a nearby cairn to alert the next hiker, or ask them to stop or tell a ranger.

8. Wow! Great finds! Leave 'em or keep 'em.

9. Brr! Build a fire on the Rim trail, put on a layer, or build a fire on the Queen's Garden Trail.

10. People are using telescopes ahead! Turn your headlamp to the red light setting, sneak up on them in the dark and make scary animal sounds, or wave your flashlight at them to say hello!

11. Hint: Make the “right” choice!

12. You made it! Write the Park to tell us about your experience!

Bryce Canyon National Park
PO Box 640201
Bryce, UT 84764
I Hiked the Hoodoos (page 3)

Use this space to make pencil rubbings of benchmarks!

As a Bryce Canyon Junior Ranger...
I promise to do all I can
to help protect
my national parks.
I will collect litter
when I’m out exploring
and show respect for nature
by not disturbing anything wild.

JR. RANGER PLEDGE

JR. RANGER’S NAME

PARK STAMP

Artwork by Kadi Franson
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