



National Parks Lesson Plan

The objective of this deck and lesson plan is to introduce your students to some of the National Parks found in North America by comparing their characteristics. There are so many fascinating natural structures and fun facts to be uncovered.

- Grade range recommended: 1st through 6th grade (adapt lessons as needed.)
- Materials: Recommended one pack per six children.

Introduction:

- Ask children to name any national parks that they are familiar with or they have visited.
- Tell them that in these lessons they are going to learn about some of the national parks and play a fun game called TOP Trumps to compare them.

Suggested lesson procedure:

Lesson 1:

This lesson will familiarize the students with national parks as well as introduce some of the important topics covered.

- Begin by asking general questions to get the students engaged and involved:
 - What is a national park? Who takes care of these parks (funding, cleaning, etc)?
 - Why are these parks important? Why are they protected?
- Introduce key terms that will be useful when studying this topic using the TOP Trumps deck:
 - Types of ecosystems: forest, grassland, desert, tundra, freshwater, marine.
 - Words to Define: elevation, square miles, basin, subtropical, glacial/glacier, ecosystem, erosion, craters, creosote, Permian, canyons, volcanoes, temperate rainforests.
- Divide the class into groups of 3-6 students.
- Give a pack of the TOP Trumps **National Parks** cards to each group.
- Ask the children to look through the cards and make a note of how this new vocabulary is used to describe each park.
- Ask them to share their findings with their classmates and see how they compare.



Lesson 2:

Play Top Trumps!

- Tell the children that they are going to use the National Parks cards to play TOP Trumps.
- Demonstrate how to play the game to the class by asking for three volunteers to come to the front.
- To start the game, shuffle and deal all the cards face down. Each player holds their cards so that they can see the **top** card only. The player to the dealer's left starts by reading out a category from the **top** card (e.g. Highest Point, 8,500 ft).
- The other players then read out the same category from their cards. The one with the best or highest value wins, and that player collects all the top cards, including their own, and moves them to the bottom of their pile. It is then their turn again to choose a category from the next card.
- If two or more cards share the top value and this will frequently occur with this set of cards, then all the cards are placed in the middle and the same player chooses again from the next card.
- Using a different category, the game is repeated until all the cards are used.
- The person with all the cards at the end is the winner!
- Divide the class into groups of 3-6 to play. Each group needs one pack to play.
- Note: To shorten the game, play with the **discard rule** where any losing card is simply removed from the game. The last person left with cards in their hand, wins. OR The person with the most cards at the end of the class wins.

Lesson 3:

Using the informational text on each TOP Trumps **National Parks** cards, have the students work in groups to find the answers to the questions listed on the attached worksheet. This will give them additional information as they gain an understanding of the characteristics that make each park unique.

Lesson 4:

Guided Research - Three focus points for early learners of the Common Core State Standards:

Going deeper and making connections to learning - Building vocabulary that is rich and varied - *Exposing children to research and creative thinking*

Establish a desired understanding. (This is where you explain what they will learn about and understand the “essential question.” They base their research on this question. With the younger learners it is best to develop a clear outline to help them maintain focus and look for important facts.)

This lesson introduces the essential question (options for teacher to select). Assign each student to one of the national parks being studied.



- What is the role that the national park plays in the greater community, in terms of helping the ecosystem, encouraging tourism, etc?
- What makes this national park unique?
- Why should someone visit this park?

The students should use this essential question to frame their research into their park. Provide students with organizers as both a rubric to guide them and to set expectations for the project.

Suggested information to include:

- Top Trumps information
- Location
- Ecosystem
- Wildlife
- What is it famous for?
- Why should someone visit?
- Why was it opened?
- Other miscellaneous facts

Lesson 5:

Have students use their research to create a final project using written, visual, or oral presentations.

- Create a poster/visual presentation to display your research and images. Have the class do a walkaround tour to present.
- Create a brochure advertising your park.
- Have students create a virtual “tour” of the park - this could be physical images or using PowerPoint that highlight the information and major features of the park.
- As a class, come up with several new categories that could go on a TOP Trumps card and have students create their own new cards for their park.

Lesson 6:

Additional projects:

- Have students create a proposal for a new national park. Have them select a natural park/monument/historical area they have visited. If this is too limiting, allow them to create their own space using the ecosystem and geographical vocabulary learned in Lesson 1.
- Select a national park or protected area NOT in the TOP Trumps pack. There should be over 60 nationally recognized areas. (ex: Arches, Biscayne, etc). Have them create Top Trumps cards for these new parks to add to your existing deck or name a new class deck.



National Parks Worksheet

Name: _____

Directions: Use your Top Trumps National Parks Pack to complete the worksheet. Note: You may need to use outside sources to solve some of the *Bonus* questions.

1. This national park is made up of a giant volcano that forms the eastern side of an island.

2. _____ shares its northern border with Watkins Lake in Canada.

3. How long are the Rocky Mountains? *Bonus*: What states do they run through?

4. What is the largest active volcano in the world? _____

5. In _____, you can find fossil beds of prehistoric mammals and marine life that dates back _____ years. *Bonus*: What are the lines running horizontally across the rocks? _____

6. What is shown in the image of the Mesa Verde National park card?

7. Despite its scary name, this park is home to a great diversity of life.

8. What is the name of the national park that runs along the border of Texas and Mexico, using the Rio Grande River as its natural separator? _____

9. How tall are the largest Sand Dunes in America and where are they located?

Bonus: How many Statues of Liberty tall is that? _____

10. How big is the largest tree on Earth and where is it located? *Bonus*: How old is this tree? _____



11. What type of ecosystem is Everglades National Park? _____

12. Which national park contains the world's most extensive Permian fossil reef?

_____ *Bonus:* What is a Permian fossil reef?

13. What types of ecosystems exist in Olympic National Park? _____

Bonus: Describe each ecosystem: _____

14. In _____, you can hike up _____ Mountain, one of the highest points along the North Atlantic seaboard. *Bonus:* Why does this mean you can be the first person in the whole country to see the sun rise? _____

15. _____ is the tallest waterfall in North America with a height of _____.

16. _____ is the deepest and purest lake in the USA and was formed when _____.

17. _____ national park is unique in that it is at the meeting of two deserts, the _____ and the _____.

18. Which park contains one of the longest cave systems in the world? _____

Bonus: What is the word for when rock is gradually worn away over time due to natural elements? _____

19. The rock spires in Bryce Canyon national park are known as _____.

Bonus: Who were the Paiutes? _____

20. Which park contains sites of the arrival of Columbus in 1493? Where is this park located? _____



21. _____ is the world's first national park and paved the way for conservation "for the benefit and enjoyment of the people." *Bonus:* Which president was a known conservationist? _____

22. _____ was carved over a million years by the Virgin River, which has exposed the bright colours underneath. *Bonus:* What is a tributary and the Virgin River is a tributary of which larger river? _____

23. How were the huge rock formations in the Grand Canyon formed?

Bonus: How do they know how long this process has taken? _____

24. Which national park is home to the General Grant Tree? _____

Bonus: Which US president is this tree named after? _____

25. What is the origin of the name of the Great Smoky Mountains? _____

Bonus: What is this effect caused by? What is this vapor? _____

26. Why is Cuyahoga Valley a non-traditional national park? _____

27. How were the Teton mountains of Grand Teton National Park formed? _____

Bonus: What is a fault line and what is an earthquake? _____

28. Which park contains some of the oldest trees on Earth and how old is the oldest tree ever recorded? _____

29. Where is Hot Springs located and at what temperature are the pools?



30. Over four million years ago, sulfuric acid started dissolving the limestone at the _____ to create over 119 caves.



Answers:

1. Haleakala
2. Glacier
3. 3000 miles, *Bonus*: Montana, Idaho, Wyoming, Colorado, Utah, and New Mexico
4. Mount Rainier
5. Badlands, 30 million, *Bonus*: The lines are layers of rocks, each from a different period.
6. Openings in the cliff, containing ancient villages and houses of the Pueblo people.
7. Death Valley
8. Big Bend
9. 750 ft tall, located at Great Sand Dunes National Park in Colorado, *Bonus*: Statue of Liberty is 305ft tall from the bottom of the base to torch, so roughly 2.5 statues tall.
10. The General Sherman Tree is 275 ft tall and 25 ft wide, Sequoia National Park in California, *Bonus*: It is about 2,000 years old.
11. Subtropical wetland
12. Guadalupe Mountains, *Bonus*: The reef is essentially a large ridge made up of plant and animal skeletons that have accumulated over time. The Permian period is a geologic time that occurred from 251 to 299 million years ago.
13. Mountain glaciers, temperate rainforests, rugged coastline, *Bonus*: Mountain glaciers have lots of life in the form of microbes and temperatures are at or above ice melting point. Temperate rainforests are damp places with lots of life as they get a lot of rain (precipitation) but have cooler temperatures. Rugged coastline is where land meets the sea and rugged refers to the structure of the rocks. There are many types of plants and animals that must survive the salty waves and changing environment.
14. Arcadia, Cadillac, *Bonus*: Due to the direction of the Earth's rotation and the fact that you are very high up.
15. Yosemite Falls, 2,425 feet
16. Crater lake, Mount Mazama volcano erupted and collapsed in on itself.
17. Joshua Tree, Mojave, Colorado
18. Wind Cave, *Bonus*: Erosion
19. Hoodoos, *Bonus*: Native American tribe in Utah
20. Virgin Islands, located in St. John, one of the US Virgin Islands in the Atlantic Ocean
21. Yellowstone, Theodore Roosevelt
22. Zion Canyon, *Bonus*: A tributary is a smaller river that flows into a larger one. The Virgin River is a tributary of the Colorado River.
23. The Colorado River has eroded (worn down) the rocks to create these huge formations. This process has taken over six million years. *Bonus*: Geologists can examine the rock layers and fossils to determine how old they are.
24. Kings Canyon, *Bonus*: General Ulysses S. Grant
25. The name comes from the natural fog that mysteriously covers the mountains. *Bonus*: Caused by the tight tangle of trees breathing out vapor that hangs in the air. This vapor is what is known as VOCs or "Volatile Organic Compounds" that the trees and plants breathe out as they undergo photosynthesis. Plants give off VOCs as well as oxygen.
26. It is easily accessible from the surrounding urban areas of Ohio as in the middle of a city
27. Created when two chunks of Earth's crust shifted along a fault line: one slanting down, the other lifting, *Bonus*: A fault line is essentially a crack in the Earth's crust, usually at the boundary of tectonic plates. An earthquake is the shaking of the Earth's surface caused by the movement of tectonic plates against each other.
28. Great Basin, 5,000 years old
29. In Arkansas, 143 degrees Fahrenheit
30. Carlsbad Caverns