Welcome to the **Sourland Mountain**!

Would you like to become an official protector of the Sourland Mountain, home to thousands of extraordinary species? Here is what you need to do in order to earn the Sourland Explorer badge…

**Steps:**
1. Complete the number of activities for your age group, choosing at least one activity from each section. Feel free to ask an adult for help with the activities.

| Ages 5-8: Complete at least 7 activities | Ages 9-12: Complete at least 10 activities |

**Activities:**
- Detective Rock
- Rock Storyteller
- Cartographer
- Timeline Trouble
- Navigate the Sourlands
- Spot the Animals
- Who am I?
- Dinner Time
- A Seed’s Journey
- Sourland Eye-Spy
- Nature Artist
- Sourland Explorer Notebook

2. Spend at least 60 minutes in the Sourland Mountain and complete at least 1 bonus activity. *see bonus activity at the end of the packet*

3. Show your activity book and bonus activity to the Sourland Conservency, or email them your activity book at sarahcleveland1@gmail.com, and they will give you your badge.
Activity 1:

Detective Rock

Directions:
Look at the rocks below and label each rock using the word bank. Then, circle the type of rock you found in the Sourlands.

Word Bank:

Rounded boulder

Fractured boulder- a broken boulder

Sedimentary rock- rock with lots of layers
Activity 2:

**Rock Storyteller**

Directions: As you explore the Sourlands, notice the many large boulders and rocks throughout the preserve. How do you think they got there?

Write your explanation about how the boulders got here below:

_____________________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________

While the Sourland Mountain is a volcanic creation, these rocks were brought by muddy, unstable soil which carried these boulders downhill from higher up the mountain. This movement mostly happened in the ice ages, when permafrost affected the Sourland soil.
Activity 3:

Cartographer

Directions: A cartographer is a person who makes maps. In this activity, you must connect the landmark to its place on the map by drawing a line between the matching shapes. For ages 9-12 completing this activity, you must also identify what road the landmark is on.

- **Stoutsburg Sourland African American Museum**: housed in the former AME Church which was constructed before 1850 on Zion road. Camp meetings were held here, attended by both blacks and whites.
  - Road: _______________________

- **Highfields**: Built in 1931 by Charles Lindbergh, site of the infamous Lindbergh kidnapping.
  - Road: _______________________

- **Hunt House**: Built in 1752. In 1778, George Washington hosted a council of Revolutionary leaders.
  - Road: _______________________

- **John Harbort’s House**: Built in 1768 was used as a store, a hat factory, tavern and post office.
  - Road: _______________________

  - Road: _______________________
Activity 4: 

**Timeline Trouble**

What stories does this mountain hide? Fill in the timeline below using the word bank to find out.

1778- George Washington hosted the largest gathering of revolutionary leaders at the ____________

1673- The _________ claimed the Sourlands.

1800- by this time, the ___________ Native Americans had left the Sourlands, which had been their home for thousands of years.

1820- many towns in and around the mountains began to develop. The mountains were used as a source for __________.

1821-1850- slavery began to be prohibited in New Jersey. People in the Sourlands also began to provide hiding places for the ___________ ____________.

1860's- farms (mainly peach farms) were created out of the open areas from forest depletion. People also began relying on _______ _______ for income.

1900- The _______ industry failed allowing the mountains to grow back on farmland

1920's- During the prohibition, many _________ fled to the Sourlands to hide.

1932- Charles Lindbergh Jr was _________.

1940's- construction of new roads allowed for people from the ______ to build vacation homes in the Sourlands

1980’s- towns developed from rural communities to __________ communities

Word bank:
- Moonshiners
- Rock Quarrying
- Suburban
- Lenni Lenape
- Underground Railroad
- Kidnapped
- Lumber
- City
- Hunt House
- Peach
- English
Activity 5:

**Navigate the Sourlands**

Directions: Sometimes turtles need help crossing the road safely. Can you help the turtle navigate its way across the road?
Activity 6:

Spot the Animals

BEAR
BOBCAT
BUTTERFLY
COYOTE
DEER
FOX
FROG
HAWK
OWL
RABBIT
RACCOON
SALAMANDER
SPARROW
SQUIRREL
TURTLE
WOODPECKER
Activity 7:  
Who am I?  
Directions: Match the description with the picture.

**Furry**

I am small and slippery. In the winter, I live underground. I am an amphibian. I come out in the rain to travel to vernal pools where I make my home.

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Barred Owl

I am big and fury. There are many of us all over the Sourlands. I am crepuscular which means I am awake at dawn and at dusk. I travel with my family made up of does, bucks, and fawns. I only eat plants, but I eat a lot of them.

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Spotted Salamander

I am nocturnal which means I only come out at night and sleep during the day. I eat mostly small mammals such as mice and squirrels. I have sharp eyes that can spot small critters in the night and large talons which help me catch them. Who am I?
Activity 8:

**Dinner Time**

Directions: Put each animal in the circle of the Venn Diagram which shows what that animal eats.

- **Herbivore**: someone that eats plants only
- **Omnivore**: someone that eats both plants and meat
- **Carnivore**: someone that eats meat only

**Word Bank:**
- Squirrel
- Frog
- Worm
- Mouse
- Owl
- Grasshopper
- Bird
- Hawk
- Bunny
- Fox
Activity 9:
A Seed’s Journey
Directions: Below is the life cycle of a plant. Label each part of the cycle and color in the images.

Word Bank:
Roots and stem    Seed    Flowers    Germination    Leaves
Activity 10: **Sourland Eye Spy**

Directions: Go on a hike and when you see one of the items below in the wild, cross it off on the board. Try to get five in a row.

<table>
<thead>
<tr>
<th>Frog</th>
<th>Moss</th>
<th>Stream</th>
<th>Deer</th>
<th>Pine Tree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uprooted Tree</td>
<td>Rabbit</td>
<td>Turtle</td>
<td>Woodpecker Hole</td>
<td>Butterfly</td>
</tr>
<tr>
<td>Cairn</td>
<td>Maple Tree</td>
<td>Boulder</td>
<td>Tulip Tree</td>
<td>Flower</td>
</tr>
<tr>
<td>Grape Vine</td>
<td>Poison Ivy</td>
<td>Nest</td>
<td>Skunk Cabbage</td>
<td>Bird</td>
</tr>
<tr>
<td>Hugging Trees</td>
<td>Ash Tree</td>
<td>Cleft Boulder</td>
<td>Squirrel</td>
<td>Stump</td>
</tr>
</tbody>
</table>
Activity 11:

**Nature Artist**

Directions: Draw a picture of what you have seen on your hike in the Sourlands.
Activity 12:

Sourland Explorer Notebook

Date: ___________  Time of Day: _______

Weather:
☐ Raining  ☐ Windy  ☐ Cold
☐ Sunny  ☐ Snowing  ☐ Warm
☐ Cloudy  ☐ Hot  ☐ Calm

Observations:
List 4 things you saw:
1. _______  2. _______  3. _______  4. _______

List 3 sounds you heard:
1. _______  2. _______  3. _______

List the animals, birds, or insects you saw:

_____________________________________________________

_____________________________________________________

_____________________________________________________

Draw anything interesting you saw that you haven't seen before:
*Bonus Activities

Build a bluebird box

Have a picnic on the boulders

Create “leaf art”

Take a picture and post it using #inthesourlands

Make Trail Mix

Build a fairy house

Pick up trash
How to Identify Trees:
Use their leaves or bark to figure out what kind of tree it is.

Ash Tree:  

Pine Tree:  

Maple Tree:  

Black Birch:  

Eastern Red Cedar Tree:  

Tulip Poplar Tree:
How to Identify Animal Tracks
Use the footprints that they have left in the ground to identify animals.
Don’t Touch These Plants

Poison Ivy:
“Three leaves, let it be!”
Poison Ivy has three leaves and can make a rash on your skin that itches so stay away from it!

“Hairy rope, don’t be a dope”
If you see a hairy rope on a tree don’t touch it! There is also a good chance that vines of Poison Ivy will also be coming out of it, so avoid that too!

Poison Oak:
Poison Oak causes a similar reaction to Poison Ivy.
Plant Care

**Habitat Destruction**
Land is destroyed when houses, roads and cities are built on it, so plants cannot grow. This destruction leads to the death of rare plant species that may only live in one area.

**Habitat Limitation**
Some plants require very specific conditions in order to grow. New Jersey hosts over 350 rare plant species because it provides these conditions these rare plants need in order to survive.

**Deer Browse**
Although deer may be cute, there are too many living in the Sourlands at once. Because they are herbivores, thousands of native plants are being eaten which leads to the death of many rare plants also.

**Invasive vs. Native Plants**
Invasive plants are plants that come from different areas and grow here where they don’t belong. They compete with native plants to survive and are able to take over an area where native plants belong. Native plants are also eaten more often than invasive plants which gives invasive plants an extra edge.

**How can you help the Sourlands?**
1. Garden with native plants
2. Support deer management
3. Stay on trails
4. Avoid picking or digging up wildflowers
5. Don’t leave wrappers behind
1. Simple and Sophisticated
   ○ Almonds, dried cherries, dark chocolate chips, sea salt, cinnamon.
2. Old School
   ○ Peanuts, raisins, M&Ms.
3. Tropical Mix
   ○ Cashews, Brazil nuts, dried mango, coconut flakes, banana chips.
4. Fall Flavors
   ○ Pecans, dried apples, maple granola, pumpkin seeds, nutmeg, cinnamon.
5. Savory Seeds
   ○ Almonds, pumpkin seeds, sunflower seeds, garlic powder, onion powder, cayenne pepper.
6. Nuts for Nuts
   ○ Almonds, walnuts, peanuts, cashews, pecans, raisins
7. Energy Mix
   ○ Walnuts, pumpkin seeds, sunflower seeds, cinnamon, nutmeg, sea salt, dried apricots, dried cranberries
8. Peanut Butter Pal
   ○ Banana chips, peanut butter chips, peanuts, almonds, dark chocolate chips
9. Monkey Munch
   ○ Banana chips, peanuts, sea salt, almonds, dark chocolate chips, raisins, coconut flakes
10. Cereal Lover
    ○ Bran flakes, shredded wheat cereal, puffed rice, granola, cashews, dried cherries, dried cranberries, dried blueberries.
11. Chow
    ○ Almonds, whole-grain Chex or wheat cereal, dark chocolate chips, peanut butter chips, cacao nibs, dried cranberries.
12. Pb&J
    ○ Peanuts, dried strawberries, peanut butter chips, shredded wheat cereal.