Who are cloud girls?

Why was there such a strong need for them (hint: page 2, first paragraph)?

In what ways were they better than men?

Look in the journal. What kind of food was eaten and why?

How did a lookout get water (hint: page 4)?

What was the lookout’s method of communication with people far away?

Look at all of the pictures of the lookouts. Which three objects do you see the lookouts using the most (more than once)? How does each one help the lookout?

1)

2)

3)

In addition to looking for fire, what daily chores did they have to do?

What did they do for fun?

Outside on the catwalk, one of the signs refers to gray ghosts. What are the gray ghosts?
Fire Tower

What is a fire tower used for?

Where are fire towers usually located?

What is the reason for windows and a catwalk (walkway) on all sides of the cabin?

On the catwalk, find an animal or signs of animals in the tops of the trees or out in the forest above the trees.

In the first towers lookouts on duty were perched up high on tall tree platforms. Look for a picture of this type of fire tower. What is the name of this tower?

Look for the tower on the map on the table. Which direction was it from the Tillamook Forest Center (red dot on map)?

Count the number of towers on the map that once existed in the Tillamook State Forest.
Wildlife Evidence

Wildlife need areas to hide, feed, find shelter, and raise their young. Some animals travel long distances and require a lot of space, while others live their entire lives in a small area. Can you find evidence of wildlife?

Record your discoveries....

Directions/Schedule

- As a group you MUST BE at your allotted appointments to gather data.
- You will have TWO appointments for gathering data (not back-to-back)
- You choose the rest of your schedule
- You are expected to have a minimum of two other sections of your packet completed for credit

<table>
<thead>
<tr>
<th>Slot</th>
<th>Time</th>
<th>Appointment/Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10:05-10:35</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10:40-11:10</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>11:15-11:45</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>11:50-12:20</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>12:25-12:55</td>
<td></td>
</tr>
</tbody>
</table>

Other activities to do:

- Fill out your group’s metadata form (your chaperone has this)
- Visit the exhibit (pages 8, 9, 10, 11)
- Go on a Nature Walk (pages 12, 13, 14)
- Visit the Fire Tower (pages 15-16)
- Eat Lunch (choose a place outside or inside the community room if not full).

**At 1pm your group needs to be back at the bus!!!**
Tillamook Forest Center Map

Nature Journaling

Words from the Woods

Choose a 3-7 letter word that captures your feelings about the forest. Then use each letter of the word to begin a line of your poem.

Example: Sun-made cloud shadows Placed on the earth Running across its surface In and out of the sun I sit Not long does the cloud’s twin stay Going, going on its way.
Nature Walk Map

Trails
1. Head outside on to the trails for more investigation.
2. You will find many clues along the way.
3. Look, listen and touch gently, but do not harm any live plant or animal.
4. Please remember not to pick any flowers or leaves.
5. Please remember not to throw any objects, and sticks and stones must stay on the ground.
6. PLEASE STAY ON THE TRAILS!

History of the Tillamook Forest Center

About TFC
The Tillamook Forest Center is a special place to develop a deeper connection with Oregon’s forests through experience and exploration. Located at the heart of the Tillamook State Forest, the region’s newest interpretive and educational center showcases the legacy of the historic Tillamook Burn and the public spirit behind a monumental reforestation effort that left a permanent imprint on Oregon history while also shaping sustainable forest management today. We’re the region’s largest forest-based learning center and outdoor classroom facility, located 50 miles west of Portland and 22 miles east of Tillamook on Oregon Highway 6.

Unique Opportunities in a Unique Setting
The Center is bookended by a climbable 40-foot tall replica of a forest fire lookout tower and a dramatic 250-foot-long pedestrian suspension bridge which leads from the building across the Wilson River to the Wilson River Trail and nearby Jones Creek Campground.

No other place in Oregon or the Northwest provides the forest-based learning opportunities found at the Tillamook Forest Center. We’re distinguished by our forest surroundings, our focus on forest history, on the power of wildfire, and on the art and science of sustainable forest management today.
Science Station Reflection (1)

At this station I was required to collect data about:

<table>
<thead>
<tr>
<th>Habitat Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macroinvertibrates</td>
</tr>
<tr>
<td>Soil Structure</td>
</tr>
<tr>
<td>Vegetation</td>
</tr>
<tr>
<td>Water Quality</td>
</tr>
</tbody>
</table>

My role or roles at this station:

- ____________________________________________
- ____________________________________________
- ____________________________________________

(examples: recorded data, took soil core, ran transect tape, estimated cover, added reagents to mixing bottle)

Considering the data that we gathered and other observations I have made today I would say that the ___________________________ (macroinvertebrate population, overall aquatic and riparian habitat, soil structure, vegetation diversity, water quality) is _________________ (poor/good) because ___________________________________________ and ___________________________________________ and ___________________________________________.

This information can be found inside the interpretive center.

Watershed

**FIND:** The *What's a Watershed?* panel

**Fill in the blank:**
A watershed acts like a ________, collecting water from surrounding slopes and forests and channeling it into streams and rivers.

List one way Tillamook State Forester managers protect waterways in each watershed area below:

1) Staring at the Top (upland area) ______________________________________

2) Keeping Streams “Green” ____________________________________________

3) A Thin Blue Line ___________________________________________________

What watershed are in you right now? _________________________________

**FIND:** The *Stream Game* (draw on the back of the stream model.)

**PLAY:** The stream game and match the animals/plants to the clues below

- **kingfisher**
  - I like to get my roots wet, and I keep fish cool with my leaves.

- **black bear**
  - I lay eggs under rocks in small streams but can also walk to the forest to find food under leaves and logs on the forest floor.

- **Pacific giant salamander**
  - We begin our lives in the gravel.

- **caddis fly**
  - I fly from my perch in search of fish to feed my young.

- **red alder**
  - My portable home of twigs and leaves can be seen in the stream on top of rocks. I’m important food for fish.

- **salmon eggs**
  - I roam the stream banks snacking on berries and looking for fish.
Drinking Water

GO TO: The wall map in the lobby
FIND: Barney Reservoir and Skookum Lake on the map

Locate...Barney Reservoir on the map.
Did you know...this reservoir provides drinking water for Forest Grove, Cornelius, Hillsboro and Beaverton?

Locate...Skookum Lake on the map.
Did you know...It provides drinking water for the town of Tillamook?

Both of these are fed by rain and snow that falls on the Tillamook State Forest.

Do you know where your drinking water comes from?

GO TO: FOREST OF TODAY & TOMORROW

Question: What is inside the box labeled Water of Life?

People need water to survive, and forests provide clean drinking water. What are the names of the other boxes with water related activities/items?

GO TO: The Forest Stream Model
FIND: The Stream Bubble

Take turns crawling inside to “see” like a fish.
What do you see?

Science Station Reflection (2)

At this station I was required to collect data about:

<table>
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</thead>
<tbody>
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</tr>
<tr>
<td>Vegetation</td>
</tr>
<tr>
<td>Water Quality</td>
</tr>
</tbody>
</table>

My role or roles at this station:

- ________________
- ________________
- ________________
- ________________

(examples: recorded data, took soil core, ran transect tape, estimated cover, added reagents to mixing bottle)

Considering the data that we gathered and other observations I have made today I would say that the ____________________________ (macroinvertebrate population, , overall aquatic and riparian habitat, soil structure, vegetation diversity, water quality) is ______________ (poor/good) because ________________ and ________________ and ________________ and ________________ and ________________.
This information can be found inside the interpretive center.

**Rain in the Tillamook Forest**

**GO TO:** The EARLY COAST RANGE FOREST in the exhibit hall

**FIND:** *The Early Forest Shaped by Elements* panel

**Fill in the blank:** The Tillamook’s mild, wet climate helped produce a __________ rain forest of breathtaking beauty.

A temperate rain forest is any forest in the mid-latitudes that receives more than 50-60 inches of rainfall per year.

**FIND:** *The Drops of Liquid Life* panel

**Compare** how the yearly rainfall in the Tillamook State Forest compares to rainfall elsewhere in the state by answering the questions below.

What is the average rainfall at the Tillamook Forest Center?

________________

How much rain falls in Portland in each year? __________

Which area would be considered a temperate rain forest?

________________

**Math challenge**

In 2006 and 2007 the Wilson River flooded. In 2006 the rain total was 160” and in 2007 the rain total was 133”.

How much more rain above the average amount did the forest receive in 2006 _____ and in 2007 _____?

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**Exhibit Hall Reminders**

- You should be with an adult at all times.
- This is a public area. Please remember *quiet* voices.
- Please walk wherever you go.
- Please remember that *FOOD & DRINKS* are NOT allowed in the exhibit hall.
- Please enjoy the exhibit materials at the location they are found and tidy the area when finished.
- The Lockout Tower has a maximum occupancy of 27. PLEASE do not drop anything from the tower.

*Have fun learning about the forest!*