Students take a 1.3 mile walking tour of Chippokes Plantation, inspect significant historic buildings and artifacts, and make inferences about plantation life from their observations while answering a series of questions.

**Background**

Historians use a variety of methods to learn about everyday life in previous time periods. By studying the types and designs of buildings and the construction materials used, they are able to infer many details about a farm's prosperity and social structure. Chippokes Plantation is typical of Virginia plantations. The number and variety of outbuildings as well as the presence of two "main houses" enable students to visualize plantation life and see how it changed through the years.

The River House, built in the early 1800s, is believed to be sitting in the same spot as an earlier house, built in 1642. The foundation has a definite seam in the brick, indicating that the house was later expanded. The dimensions of the older section of the current house match the dimensions specified in a 1642 lease. The house was to be 40 feet long by 20 feet wide with two chimneys, glass windows, and a cellar. Though historians have no proof that the house was actually built, the fact that the River House's original dimensions fit those specifications leads them to believe that the house did indeed exist. However, because the brick bond is typical of nineteenth century America, the current house is believed to be a reconstruction. One chimney has a different brick bond pattern from the rest of the foundation, suggesting that it has been repaired.

Outbuildings along College Run Trail were previously used as the kitchen, tenant and slave quarters, barns and farm buildings. Though most have been converted for private residences or other functions, visitors can still visualize their former uses. By comparing slave/tenant farm quarters to the owners' homes, one gets a feel for the difference in social roles and the attitudes towards slaves. The owners' spacious houses offered a view of the river, while slave/tenant farmers' quarters were cramped.

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**Grade Levels:** 4 - 11

**Objectives**

Students investigate changes over time by:
- observing clues;
- making inferences about the history of human use of the area.

**Materials**

Per team:
- Clues to the Past Student Worksheet
- clipboard
- pencils

**Credits**

Plantation layout sketch from River Times used with permission from the Mathematics and Science Center, Richmond, VA.

**Where**

Chippokes: College Run Trail is paved bike/hike trail, running 1.3 miles from visitor center to mansion; there are two inclines on trail where wheelchair and walking-handicapped students may need assistance. As an alternative, students may be transported by road from visitor center to River House after introduction at beginning of trail ("At the Park" Step 2).

**When**

At the Park: 1.5 to 2 hours, daylight hours.

**Time of Year:** Any time is suitable for the walk, visitor center and mansion open seasonally.
Clues to the Past

often with more than one family occupying them. Chippokes, like many Virginia plantations, relied on sharecroppers to farm the land after the Civil War. Sharecroppers typically received one-half of the crop for themselves if they used the owner’s draft teams, or three-fourths if they farmed with their own animals.

The mansion, built in 1854 by Albert Jones, is typical of plantation homes of the day. The stucco front, painted white to serve as a landmark for river travelers, is inscribed to resemble large stone blocks. Such blocks were considered more prestigious than red brick, but because a painted surface required additional upkeep, often only the front was finished this way. The formal gardens, replanted during the 1920s, contain ornamental species typical of the period: azaleas, boxwood, and crepe myrtle. Ornamental fruit trees and a wild flower garden are also present.

Unlike many plantations, Chippokes never relied solely on a tobacco crop, which may partly explain why it prospered long after many others failed. Chippokes is still a working farm with a variety of crops and cattle.

Procedure

Before the Trip:

1. Contact the park staff to arrange the date and time and to ensure facilities will be open. Make reservations to tour the mansion.

2. Discuss plantation life with the class. Encourage them to think about the many activities on a plantation as well as the workers needed to run it.

3. Discuss how historians learn about the past, by reading old documents, studying pictures, and examining artifacts for clues. Explain that the students will act as historians as they study the buildings at Chippokes to learn about plantation life.

4. Divide the class into teams of three to four students each. Provide each team with a copy of the accompanying Clues to the Past Student Worksheet. The students will work as teams to answer the questions about the historical buildings along the 1.3 mile College Run Trail.

At the Park:

1. Tour the visitor center before beginning the walk.

2. Lead the class to the beginning of College Run Trail. Stop there and point out that Virginia’s first successful settlers landed here before crossing the James River to settle on Jamestown Island. While on this side of the river they met and were befriended by Chief Chippokes. Stimulate discussion with some questions such as:

   - How do you think the settlers felt when they landed here?
   - What do you think this site looked like at that time?
   - What natural features may have made this place seem suitable for establishing a settlement?
   - Why do you think the settlers moved across the river to build their settlement?

3. Keep the group together until the first stop at the River House, about 0.5 mile down the trail. (As an option, students may be transported closer to River House by road.)

4. Allow student groups to proceed at their own pace from here but set a time (about 1 hour) for everyone to gather at the end of the trail. Assign adult leaders to assist the groups as needed. Encourage students to use their observational skills to answer the questions.

5. One adult should proceed to the mansion to meet the first group to finish. Conduct informal discussions about what it would be like to live and work on a plantation until everyone finishes.

6. When the entire group is reassembled, lead a discussion of the findings. Accept all inferences as long as students can support their opinions. (A suggested format for student reporting is: “We think _______ because _______.”) Some questions to guide further thought might be:

   - How is a plantation similar to a farm today? How is it different?
   - How is a plantation similar to a town today? How is it different?
   - What kind of activities do you think the owner’s children participated in each day? Slave children?

Resources


Extensions

1. Students write a sample journal entry for a day in the life of the owner’s child or a slave child living on the farm, including details about typical activities as well as their feelings about their lives.

2. Students make a model of a typical plantation showing outbuildings and crop lands.

Variations

Younger students:

Students answer only the starred (*) questions on the Clues to the Past Worksheet.

- Which jobs do you think you’d most like to do if you worked on the plantation? Least like to do?
- What would you have done for fun if you lived on the plantation?
- What could we do to learn more about this plantation?
7. Optional: Take the guided tour of the mansion.

Follow-up:

Ask students the following:

- If you wanted to make a peanut butter and jelly sandwich in the kitchen in 1800, what would you have to do?
  a. Raise wheat. Visit grist mill to grind flour for bread.
  b. Raise the peanuts. Shell, roast, and grind them with a hand grinder.
  c. Go to the orchard and pick fruit. Cook over fire for several hours. Pour into jar, seal with wax.
  d. Milk the cow, churn the butter.
  e. Bake the bread on the hearth (mixing, kneading, rising takes several hours).
  f. Haul water and heat it to clean up.
  g. Assemble your sandwich.
Clues to the Past Student Worksheet

Note: Younger students should answer questions marked with (*) and may answer others if they like. Older students should answer all questions.

RIVER HOUSE (Built in early 1800s)

1. Stand on the trail and look at the end of the house facing the trail.
   a) What evidence do you see that the house was expanded sometime after it was built?

   b) What events might have prompted the owner to expand the house?

2. Examine the chimney brick pattern. Brick layers call the long side of a brick the “stretcher” and the short end a “header.” A typical brick pattern in the 1800s was one row of headers followed by three rows of stretchers. The brick pattern changes mid-way up the left chimney.
   a) What does the pattern become? (draw)

   b) What might have happened to result in a change in the brick pattern?

3. Notice the stars on all four chimneys. They are fairly recent additions. A clue to their purpose is hidden inside the house. Stars on opposite chimneys are connected by a large bar that runs through the attic. What purpose might the stars and bars serve?

4. Walk up close to the house and look at a window.
   a) Describe the appearance of the glass.

   b) How do you think this type of glass was made?

5. Stand on the trail next to the River House and look down the road toward the river. Historians believe this road was used to roll hogsheads (large wooden barrels) of tobacco down to the river. Why were they taken to the river?

OUTBUILDINGS:

6. Look at the house across the trail from the River House. It was originally a kitchen. Why was the kitchen a separate building?

7. Behind the kitchen are two buildings that served as a smokehouse and a poultry house. Why were these needed on a farm?

8. Walk down the trail to the next house on the left. It was probably built in the 1830s-1850s as a slave house for two families. How is it different from the River House?

9. The inside had just two rooms, one on each side of the chimney. Why do you think the chimney was located in the middle?

10. The next building (now a public rest room) was probably built for newly freed slaves. In what year do you think this house was built and why?
11. Many freed slaves became sharecroppers. The house was probably in the middle of a small tract of land for the sharecropper family to farm. What do you think the term "sharecropper" means?

12. The next four buildings on the left were farm buildings: an apple mill, dairy barn, horse barn and corn crib. Plantations were like small towns with everything needed being right on the plantation. What other town-like features might this plantation have had?

MANSION: (Built in 1854)

13. A line of cedar trees often grows where a man-made fence once existed. Can you think of any reason to explain this? (Hint: Birds eat cedar berries.)

14. Compare the mansion to the River House. How are they different?

15. Do you think the farm was prosperous in the mid 1800s? Why?

16. Walk around the mansion and note the material each side is made of and the color. What do you see?

17. Why do you think the front is white? (Hint: It faces the river.)

18. The front of the house appears to be made of large stone blocks. In reality it's less expensive stucco plastered onto bricks.
   a) Why do you think the plantation owner made the front look like block?

   b) Why just the front?

19. Notice the raised, windowed structure on the rooftop. This is a cupola. What purpose do you think it served?

20. Some people (particularly in seafaring towns) call the cupola a "widow's walk." Why do you think it received this name?

21. Look at the display of kitchen equipment inside the kitchen (beside the mansion).
   a) Name 3 kitchen tools on display that are still used today.

   b) Name 3 tools that have been replaced by electric appliances.

22. Walk to the carriage house and examine the carriages on display.
   a) Which carriage looks the most comfortable?

   b) Which one do you think could travel the fastest? Why?
Clues to the Past - Suggested Answers to Worksheet Questions

1. a) There's a seam in the brick foundation. The brick on the right side looks older than on the left.
b) Farm was prosperous; family grew.

2. a) All stretchers.
b) The chimney may have been damaged and repaired at later date.

3. Hold the chimneys upright.

4. a) Wavy.
b) Hand blown.

5. To load onto ships for transport to England and other far away places. The river was the major method of transportation.

6. Cooking was done in open fireplaces which posed a major fire hazard. With the kitchen in a separate building, the main house was protected. Also the main house would not be overheated in the summer by the heat from the kitchen.

7. Poultry house provided fresh eggs. Meat was preserved by smoking in the smoke house. (There were no grocery stores or convenient refrigeration.)

8. Much smaller, less view of river.

9. Heats both sides of house - separates living quarters.

10. Late 1860s - after Civil War for freed slaves.

11. Farmer shares the crop with land owner.


13. After birds eat berries, seeds pass through digestive tract, and are dropped while birds perch on fence.

14. Mansion larger, brick.

15. Yes - new larger house.

16. Front is white, scribed to look like large blocks; other sides - red brick.

17. House was landmark for river travelers; other sides didn't need to be seen from a distance.

18. a) Stone block was a popular style and/or prestigious (could it have held the paint better than plain brick?)
b) Harder to maintain than plain brick.

19. Provided good view of river.

20. When the husband traveled by sea, there was a chance that he would never return, and that the wife, who would regularly climb up to the "widows walk" to look for her husband's ship, would become a widow.

21. a & b) Answers will vary.

22. a) Lucy Ludwell's (there are plaques to describe each carriage).
b) Breaking cart - lightweight, small.
Plantations and Plenty

As Virginia’s oldest working plantation, Chipokes has seen it all. Through pre-trip research, discussion, and on-site observations, students look into Virginia’s agrarian heritage and find clues to the Commonwealth’s present economy.

Background

Soon after the first English settlers established a foothold in Virginia in the early 1600s, a major institution that was to become the basis for the region’s economy began to evolve—the plantation. The Chesapeake Bay area was ideal for plantation development. Its many, broad, easily navigated rivers reached far inland providing easy access to thousands of acres of fertile ground and facilitating the transport of goods.

Fueling the quest for land was a burgeoning demand in Europe for tobacco, originally a Native American crop first brought to Europe by Columbus a century earlier. After breeders developed milder strains of the leaf, tobacco was brought back to America in 1612 by one of its earliest proponents, John Rolfe. Quickly, tobacco became the choice cash crop for the early planters.

The prospective planter’s first job was to clear the land of the immense trees dominating the landscape. The lumber from the trees was a primary building material. Clay for bricks, and oyster shells and sand for mortar were also important construction materials. Few essentials for starting a plantation were transported from overseas on the tiny crowded ships—a few hand tools, some livestock for breeding, seed for planting, and, perhaps most important, laborers.

The primary laborers fell into two groups. Indentured or bond servants were usually white and worked for a specified period of years as compensation for debts, or as restitution for crimes. Slaves, usually blacks, were owned by the planters, and in most cases had no means or hope of acquiring freedom for themselves or their children. Bonded servants and slaves worked side-by-side in the plantation fields and homes. Most of Virginia’s population increase between 1634 and 1674 was due to immigration of bonded servants who had willingly indentured themselves. Much of the development of the Bay region can be credited to those who toiled with little or no compensation.

The growth of plantations, however, was not entirely attributed to cheap labor. Plantations expanded because tobacco farming, which rapidly depletes the soil of nutrients, constantly required new fields of virgin, fertile soil. Today, easily available commercial fertilizers help to maintain a field’s productivity year after year. In colonial times, the custom was to clear new fields when old ones became exhausted. The abandonment of many tobacco farms and fields led to erosion, resulting in siltation of streams and rivers. The concept of natural resources conservation was seldom considered in the “land of plenty.”

Grade Levels: 4 - 11

Objectives

Students investigate the development of plantation economy and lifestyle by:
- researching plantation life;
- communicating information in a creative format;
- comparing past and present roles of the plantation in the economy.

Materials

At school:
- Chesapeake Bay area map
- appropriate resource materials

To take:
- pen, paper and clipboard (optional)

Where

Chipokes Plantation State Park or any Virginia plantation.

When

At the Park: 1 to 2 hours, during regular park hours.

Time of Year: any time of year is suitable, but special arrangements must be made with park staff to open the visitor center between Labor Day and Memorial Day.

Since each plantation occupied large areas of land, towns and cities were slow to be established. Each plantation was virtually self-sufficient and many resembled independent towns with resident blacksmiths, tanners, brick makers and other artisans.

Plantations influenced the region’s moral and political development. Since one requirement for entry into the House of Burgesses
Plantations and Plenty

was land ownership, many of Virginia's early leaders were plantation owners. This trend continued throughout the colonial days and until the end of the Civil War.

Procedure

Before the Trip:
1. Call the park to arrange a field trip date and time.
2. At least two weeks before the field trip, students should locate Jamestown and Chippokes Plantation State Park (directly across the James River from Jamestown) on a map of Virginia or the Chesapeake Bay region. Discuss what students would do if they received a land grant in 1610 for the area that became Chippokes Plantation.
- What do you think the land looked like at the time?
- What might you have brought with you from England that would help you settle the land?
- What might you find on the land that would be useful?
- What would you need to do in order to establish a home and farm? What would you do first? Second? Third?
- How do you think your plantation would affect the environment? How important would this be to you?
3. After students have considered needs in settling the land, explain that Chippokes was a thriving plantation and that they are going to explore some of the features that made it and other plantations successful.
4. Divide the class into five study groups and assign each group to one of the following topics. Provide materials and class time for independent research and planning.
- Tobacco: How is it grown? How is Virginia well-suited to this crop? Why was it Virginia’s cash crop?
- Plantation life: What were typical activities? Layout and design? Organization? People?
- Transportation: What types of vehicles were used in and around plantations? What was the relationship between a plantation’s location and transportation?
- Virginia economy: How did plantations shape the economy? What role did tobacco play? What role did plantation owners play in shaping Virginia’s development?
- Role of slaves/bond servants: Why was this type of labor introduced? How did this labor shape the development of plantations? How were slave and bond servants alike? Different?
5. Sponsor a “Colonial Day.” Each group develops a creative way of presenting their findings to the class. Ideas for presentations: simulated television news cast in which slaves and bond servants are interviewed, a game show in which contestants answer questions about tobacco, or a short skit about life on a plantation. Encourage students to create props and wear costumes for their presentations.

At the Park:
1. Students tour the visitor center exhibits, watch the ten-minute slide show on transportation along the James River, and look for information in the exhibits relevant to their research.
2. Lead the class on a walk along College Run Trail from the visitor center to the mansion (1.3 miles). Stop at several points and talk about the impact of plantations on Virginia's growth and economy. Solicit pertinent information from the research groups.
- Why was this a good spot for a plantation?
- What factors led to the development of a few very large plantations?
- Was slave labor necessary for plantations? What other options existed?
- In what ways did large plantation owners influence Virginia’s development?
- What role does farming play in Virginia's economy today?
- In what ways is today’s farmer similar to a plantation owner? In what ways is he different?
- What attitudes did plantation owners have about their contribution to Virginia’s economy? Do today’s farmers have the same attitudes? What is the general public’s attitude towards farmers?
- How did a plantation owner regard the James River? Do we view the river the same way today? (Colonists probably thought of the river much as we think of our interstate system.)
- Tobacco has always been a big business in Virginia. Do you think it

Resources

Jamestown-Yorktown Foundation. Historic Landmarks Along the Lower James River (brochure). P.O. Box 150, Richmond, VA 23201.
Yesteryear

"Upon the deck of the Sarah Constant that night Captain Newport unsealed the royal box. With the breaking of the seal-royal and the appointment of the royal council and the laws ordained by the charter and the rules of the London Company, Virginia was born. The Colony was born not at Jamestown May 13th, but at Cape Henry April 26, 1607—the birth not only of this colony but of the United States of America. Measured by any standard, April 26, 1607, is one of the critical days in human history." W.H.T. Squires

This activity provides directions for reenacting and communicating the fascinating history of this very special site.

Background

One spring day in 1607, a band of Chesapeake Indians witnessed the arrival of three large strange vessels just off a point of land on the southern side of the mouth of the Chesapeake Bay. As the strangers came ashore, the Indians slipped away unnoticed. That night, the Indians summoned the courage to attack. After a brief skirmish, the strangers fled to their ships and the Indians retreated into the nearby swamp.

The strangers were the first permanent English settlers taking their first steps on what is today, Virginia soil. Despite the attack, a group of the Englishmen explored some eight miles inland the next day. Though they didn’t encounter more Indians, they did find a fire where oysters were being roasted. One of the explorers who tasted the oysters wrote that they were “very large and delicate in taste.”

On the fourth day, the Englishmen erected a wooden cross and

Grade Levels: 4 - 9

Objectives

Students will investigate important historic events that occurred at Cape Henry by:

- using skills in group dynamics and theatrical presentations;
- formulating pertinent questions in order to write a “newspaper article;”
- stretching their imaginations.

Materials

- copies of the “Background” section (1 per student)
- clipboards, paper & pencils (at least one set per team)
- props and costumes for skits
- cameras (optional)
Yesteryear

named the place Cape Henry, in honor of the King’s son. They departed to explore the Bay, eventually establishing a settlement at Jamestown.

Ships continued to arrive at Cape Henry, often stopping to replenish their water supplies with swamp water that was slow to grow stale during long voyages. Few of the new arrivals found the site suitable for settlement, although some stayed in camps near the shore to fish. Eventually, several small plantations were built on nearby high ground. For the most part, though, Cape Henry remained wild and isolated.

It eventually became evident that ships approaching the Bay entrance needed a beacon to steer by, to prevent them from running aground. Thus a group of men stayed on Cape Henry to maintain a massive fire each night, using pine knots from the nearby forest.

Unfortunately, these isolated fire keepers were easy targets for pirates who would overtake them and rebuild the fire some distance down the shore. Ships fooled by the trick beacon would run aground and fall prey to the pirates. The most infamous pirate to prowl Cape Henry was Edward Teach, alias Blackbeard. Eventually Blackbeard was caught and his head was hung from the bow of a British ship. Blackbeard’s legendary treasure is said to still be buried among the dunes of Cape Henry.

As the flow of vessels sailing to and from the Bay increased, a permanent light at the entrance to the Chesapeake Bay became essential. Authorized and funded by the country’s First Congress, the first lighthouse of the United States was completed in 1791 and stood on top of one of the highest dunes at Cape Henry. A second lighthouse was built in 1881 to replace the first one. The original lighthouse is still standing and is open to the public from Memorial Day to Labor Day for a small fee.

The need for an army post to guard the southernmost entrance to the Chesapeake Bay was recognized in the early 1900s. By 1914, Fort Story was developed, and occupied by the army in 1917. Once established, it continued to grow and expand. Today, Fort Story occupies more than 1400 acres and is used for Coast Guard, Navy, and Marine Corps activities, and as a training site for amphibious (land-sea-air) operations.

Cape Henry was owned by the Commonwealth until after the Civil War when it was sold to lumbering companies for $1.00 an acre. Inadequate transportation and an enormous mosquito population, however, prevented the lumber companies from succeeding.

In 1902, a railroad, passing through the northern section of what is now Seashore State Park, was built from Norfolk to the growing resort of Virginia Beach. The railroad brought increasing numbers of vacationers and summer residents. One popular attraction was the immense dunes on which visitors frolicked. Some of the dunes remain within the park boundaries.

As the popularity of Cape Henry increased, local businessmen made plans to develop the area. Some citizens, recognizing the historic and natural values of the land, persuaded the Commonwealth to secure large portions of Cape Henry in the 1930s. During this time, men of the Civilian Conservation Corps, established by President Roosevelt, to offset the economic devastation of the Great Depression, came to the newly acquired land and cleared trails, built roads, cabins and a campground. In 1936 the site was opened to the public as Seashore State Park.

Procedure

Before the Trip:
1. Make and distribute a copy of the above “Background” section to each student and explain they are to use the information to stimulate their research efforts and imaginations for the following activity. Teachers of younger students may prefer to read the background to the students and discuss it in simpler terms, if necessary.
2. Divide the class into teams of about five students each. Each team will have two responsibilities: a) to develop and perform a 10 to 15 minute skit at the Seashore State Park amphitheater about a historic event from the list below; and b) to become reporters and write an article about a different historic event, based on another team’s skit, their follow-up press conference, and a walking tour of the park to the representative sites of these historic events. The choice of events are:
   • The first landing, from the settlers’ point of view
   • The first landing, from the Native Americans’ point of view
   • Pirate activities (piracy) around Cape Henry
   • Keeping the light: beacons on Cape Henry
   • Lumbering operation attempts

Where

Seashore State Park: one mile walk to representative sites, starting at amphitheater. Use map in park information section.

When

At the Park: Allow 30 minutes per team for skits and “press conferences” and 45 minutes for the walk, daylight hours.

Time of Year: Any time with mild weather.

Resources

Railroad construction and early tourist attractions near Cape Henry
Establishment and construction of Seashore State Park
3. Allow the teams several class periods to plan their skits (depending on resources available and the students' abilities).
4. During skit preparation, each team should consider:
   • Each team member's role
   • Presenting important facts
   • Props and costumes
   • Emotions and thoughts of the people actually involved in the events
   • Answering questions about their skit topic during the follow-up press conference
5. For their role as reporters, each team should consider:
   • Designating responsibility for conducting interviews, writing, editing and preparing graphic materials such as photographs or drawings
   • Preparing a list of questions for the press conference
   • Being alert for points to observe during the walking tour
   • “Who, what, where, when, why, and how?” as basic interview questions
6. Plan the trip itinerary so that all students know: a) when they will be setting up and performing their skits; b) when and who they will be interviewing; c) when they will be taking their walking tour of the park and which locations are the representative sites for their articles; and d) when and where they will take breaks and eat lunch.

At the Park:
1. Go to the amphitheater behind the park office. Allow the first team 15 minutes to get set for their performance.
2. Allow 10 to 15 minutes for the first performance.
3. After the skit, the characters hold about a 10 minute press conference for the reporters, while the second team prepares for their skit back stage.
4. Continue the process until all skits and press conferences are completed.
5. Lead the class on a tour of the representative sites of the historic events in the park. Give students time to take notes for their articles and if desired have the characters pose (in costume) for photographs in the appropriate settings. The sites can all be identified on the park map in this guide and can be reached during a one mile walk beginning at the amphitheater. The sites and their significance are as follows:
   • The beach and dunes directly behind the amphitheater represent the scene of the first landing of permanent English settlers, the area once favored by pirates and many years later, by vacationers.
   • The picnic area is surrounded by woods that were home to the Chesapeake Indians. This was also one of the areas originally developed by the Civilian Conservation Corps.
   • The old railroad bed is located between the cabin road and the paved section of the bike trail.
   • In the cypress swamps behind the visitor center, observe the brown tannic waters favored by seamen for their ships' drinking water; massive cypress trees that attracted lumber interests, and the rugged terrain that thwarted those interests; and part of the unique environment that inspired early conservationists to set this land aside as a park and natural area.
A side trip, by bus or car, to neighboring Fort Story would give students a view of the Cape Henry lighthouses.

Follow-up:
1. The teams complete their articles in class. Encourage them to write in an objective journalistic style and to use photographs or other illustrations prepared at the park. Cartoons and editorials would be interesting additions.
2. Combine the articles into a mini newspaper or magazine, make copies and distribute them to the students.

Variations
1. If students can make an initial planning visit, they may conduct their skits at the representative sites in the park instead of the amphitheater.
2. If field trip time is very limited, students can tour the park, then perform the skits and conduct the press conferences as a follow-up classroom activity.
3. One or more teams prepares a television news show instead of an article, using a camcorder.

Younger students:
Use, find, or draw pictures to go along with the background that zero in on the pirate theme. Incorporate the history with a treasure hunt of clues with each answer making part of a puzzle.

Gifted/Advanced:
Make brochures of the park and its history. Include the pictures taken.
Students study park historical information pertaining to a historical event or character(s), prepare skits and present them at the site of the event along Leesylvania's historical interpretive trail.

**Background**

The history of Leesylvania is long, by American standards, dating back to the early days of colonization. For thousands of years the wooded ravines and Potomac shoreline attracted Native Americans who harvested the abundant fish, waterfowl and fur-bearing mammals. These and other resources later enticed European explorers and settlers. England encouraged the settlement, and the King granted 50 acres of land to each person transported "into the Kingdom of Virginia." In 1658, Gervais Dobson purchased 2,000 acres, consolidating many of these parcels including the tract which is presently Leesylvania. Henry Corbin bought it next and passed it on to his daughter, Laetitia. In 1674, Laetitia married Richard Lee II, and so began the involvement of a famous Virginia family with this parcel of land on the Potomac.

No one lived on the land until 1753, when Henry Lee II brought his bride, Lucy Grymes, here to live. They named the land Leesylvania, which means "Lee's Woods." The eight children born to Henry and Lucy were to play critical roles in Virginia's future, especially Henry Lee III. Known as "Light-Horse Harry," this "son of Leesylvania" was a hero of the Revolutionary War, leading the soldiers who thus saved George Washington's troops at Valley Forge.

The land at Leesylvania changed hands again in 1825, when it was sold to the Fairfax family. In 1861, the Civil War came to Leesylvania, ironically, through the orders of Robert E. Lee. Light Horse Harry's son, Lee saw the importance of blocking the Potomac River passage into Washington, D.C., to hinder the movements of Union troops and merchant trade in and out of the Capitol. To this end, artillery sites were placed on high bluffs overlooking the river, including Freestone Point at Leesylvania.

A rail line from Washington to Fredericksburg, which bisects the property, was completed in 1872. Tenants cut the timber from the entire estate. Further lumbering operations occurred through the early 1900s.
Activity on this tract of land slowed when a private hunting and fishing preserve was established. The Fairfax house was redesigned as a hunting lodge, and wealthy guests stayed there or in private railroad cars. The Fairfax house burned in 1910, leaving only the chimney and stone foundation. After this, the property was unused until the 1950s.

In the 1950s, a corporation with plans to create a major resort bought the property. Among the things completed were a swimming pool and a pier into the Potomac at which was moored a “boat-el.” The “boat-el” was a floating gambling casino and angry neighbors eventually forced its closure and the subsequent bankruptcy of the resort corporation.

The American-Hawaiian Steamship Company then bought the property. The company’s owner, noted philanthropist Daniel K. Ludwig, was convinced of the value of preserving Leesylvania and sold the property at half its appraised value to the Commonwealth of Virginia. Final papers were signed in 1978, and Leesylvania State Park was born.

Procedure

Before the Trip:
1. Each student reads a copy of the above background information or the History of Leesylvania brochure, available from the park.
2. Contact the park to discuss field trip plans and to request loan-copies (one per four students) of the park publication, A Potomac Legacy: Lee’s Woods Historical Interpretive Trail, and if needed, the History of Leesylvania.
3. Divide the class into teams of 4-5 students each.
4. Assign each team a different passage from A Potomac Legacy to read. Each team then prepares a brief skit related to the historical event or character(s) described in the passage. Each team could also do more detailed research, make costumes and props and rehearse their skits prior to the field trip.
5. Instruct the teams to be sure their skits answer the following questions:

- Who are the characters?
- What is their place in Virginia history?
- What is the time period?
- What are the political conditions in Virginia at the time?
- How is the land at Leesylvania being used at the time?
- What does the particular site look like at the time?

6. Each team studies the map at the front of the brochure to become familiar with the location of their site. (Note: The length of the entire trail, including all loops, is 2 miles. The furthest stop is about 3/4 mile from the parking lot.)

At the Park:
1. Gather the class at the amphitheater as a central location.
2. Each team and an adult leader go to the point on Lee’s Woods Trail that corresponds to the passage for which they will be performing their skit. There they get familiar with the site, rehearse the skit and regroup at the amphitheater within one hour.
3. Proceed with the class to each stop in numerical order along the trail and have each team perform its skit. As an alternative, skits could be performed in the amphitheater.
4. The students watching rank their classmates’ skits on a copy of the accompanying Skit Summary Sheet.
5. When all skits are completed, take a show of hands to determine the team that received the most top scores. The topscoring team could receive as a reward a photograph of themselves posed in some skit action.

Follow-up:
Each student writes a diary entry for one day in the life of a character in their one of the skits.

Where
Leesylvania: Lee’s Woods Trail originating near Freestone Point picnic area.

When
At the Park: Allow 1 hour for on-site preparation, plus about 20 minutes per team for skits, evaluations, and travel between sites; regular park hours.

Time of Year: Any time the weather is pleasant.

Resources
Prince William Historical Commission. 1 County Complex Court, Prince William, VA 22192.
References are also listed in A History of Leesylvania brochure available from the park.

Extensions
1. Students draw a time line mural depicting the history of Leesylvania, also noting interesting historical events other than at this site.

2. Students locate and interview someone who remembers the attempt in the 1950s to develop the site as a resort. Find out what political situation supported this type of venture. (The Potomac River belongs to Maryland, where gambling and liquor by the drink were both legal.) Why did this create a controversy? What brought the plan to a halt in the end?

Variations
Gifted/Advanced:
1. Students research and write about the historical roles of the various Leesylvania owners.

2. Students research the role of the property during the Civil War to draw a map that shows the artillery emplacements along the Potomac and the area they defended. Why were they located in these spots?
### Skit Summary Sheet

<table>
<thead>
<tr>
<th>Stop or Trail Post Number:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the skit did you learn:</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Who the main characters were?</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Their place in Virginia history?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3 The time period?</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Political conditions in Virginia at that time?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 How land at Leesylvania was being used?</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 What site looked like?</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TOTAL SCORE</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Rank the thoroughness and effectiveness of the performances in answering each question on a scale of 1 to 4, where:

1 = misinformation was provided
2 = none of the information was provided
3 = some of the information was provided
4 = plenty of information was provided
Ever think about building a grist mill? George Washington did and had to take a lot into consideration. In this activity, George approaches the class for help in developing a comprehensive plan for a new grist mill.

**Background**

In 1761, George Washington inherited the title to Mount Vernon with the death of his half-brother's widow. Included in the property was a water mill, or grist mill, which had become decrepit and did not grind corn at a productive rate. At the time, markets were shifting and agricultural crops in northern Virginia were changing. Tobacco crops produced little profit for Mount Vernon. However, Washington, like other farmers of colonial Virginia, found a ready market for wheat.

As the Industrial Revolution developed, the demand for flour increased and merchants in Alexandria and Fredericksburg offered a local market. A mill was convenient for neighboring farmers who could get their wheat and corn ground by paying the miller a "one-eighth toll," or one barrel out of every eight barrels ground.

In 1770, Washington, an enterprising man, began construction of a new mill across the creek (Dogue Run, which is influenced by tides) from the original mill. Power for the mill operation came from water in the main stem of Dogue Run and...

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**Grade Levels: 5 - 11**

**Objectives**

Students will investigate factors involved in the construction of an 18th century grist mill by:
- developing group dynamics skills;
- researching literature;
- drawing sketches;
- reading maps;
- writing mill development plans.

**Materials**

- copies of background information and The Scenario (1 each per student)
- references for research
- topographic map of rural area adjacent to major Chesapeake Bay tributary
- Chesapeake Bay map copied from front of this guide
- map of northern half of Atlantic Ocean, showing major North American and European ports
- large pieces of plain paper for drawing maps and plans
- rulers, compasses, protractors

**Credits**

Down By the Old Mill Stream

from a tributary, Piney Branch Run. At the time, there was a pond uphill from the mill. Water flowing from the pond to the mill could be regulated at the pond.

The new mill operated two pairs of grinding stones. One pair ground wheat into fine flour for export, what Washington called "merchant trade." The other pair ground either wheat or corn for the "country trade." In the 1790s, Washington improved the mill by adding water-operated hoisting machinery, which took the grain from the level of the creek to the top floor.

Washington operated the mill during most of his adult life, including his eight years as the first President of the United States. In 1799, however, he rented it to a nephew, Lawrence Lewis. Later that year, Washington died, leaving the mill to Lewis in his will.

From Lewis' insurance policy on the mill, we know that the property had a nearby distillery for making liquor products from grain. In addition, the complex included a cooper's shop for making barrels to store flour, a stable with stalls for 30 cattle, and pig pens.

Since the water supply of Dogue Run was not constant, the mill seems to have been able to operate at full capacity only about six months out of the year. Flour was loaded onto Potomac River ships from a wharf on the creek's waterfront. Today Dogue Run has become so silted that the stream is no longer navigable.

Eventually, the mill passed to Lewis' son, who sold it in 1846. The mill had needed repairs since 1804. Since the mill had been inoperable for many years, the building was allowed to fall, and the stones were later used for other buildings. The present mill is a reconstruction of Washington's mill.

Procedure

Before the Trip:
1. Contact Mason Neck State Park to arrange a tour of the grist mill. (There is a nominal, per-person charge for tours.) Explain to the ranger that the group will be doing this activity and will come with numerous questions.
2. Make copies of the background information and The Scenario for each student.
3. Divide the class into six teams and assign each team the responsibility of preparing one of the six important parts of Washington's new mill plan.
4. Since the parts are all interrelated, be sure the teams collaborate in their planning.
5. Allow class time for students to do literature research, make preliminary plans and sketches, and prepare a list of questions to ask the interpreter after the grist mill tour.

At the Park:
1. Explain to the class that they should view the tour from the perspective of the mill being an example of an 18th century mill after which they can model their plans for George Washington.
2. Take the tour of the mill.
3. After the tour, the students, as a group, ask the interpreter questions to obtain the information they need to complete their plans.
4. Allow the students up to 30 minutes to inspect the mill and grounds on their own, take notes and make sketches that will be useful in their planning.

Follow-up:
1. Allow up to one more week for the students to complete their plans, drawings and maps, and prepare a written explanation of their plans and recommendations.
2. Students present their plans to the teacher (posing as George Washington), the rest of the class, and other invited guests (principal, parents, etc.).

Where

George Washington's Grist Mill Historical State Park is managed by Mason Neck State Park.

When

At the Park: Preparation - 1 week; mill tour, Q & A session with interpreter and independent investigation of mill - 2 hours; follow-up and presentations - 1 week; hours of mill are 9:00 am to 4:00 pm.

Time of Year: Any time is suitable, but advance arrangements must be made to have mill opened and an interpreter available (mill is routinely only open between late spring and early fall).

Resources

The Scenario

It is 1761 and George Washington has just inherited a large tract of land adjacent to a Chesapeake Bay tributary. Washington contemplates constructing a grist mill on the property but needs to carefully consider several factors before making such a large investment. He approaches your class for advice, knowing the class has the expertise to help him with his plans and decisions. While Washington is away on an important military mission, the class prepares the plans, addressing the following points:

1. There must be a reliable supply of grain. The farmers in the area grow mostly tobacco.
   - How can Washington convince farmers to switch to growing grain?
   - What kind of deal can he offer to ensure that both he and the farmers make a fair profit?
   - How can he ensure there will be a dependable supply of grain for many years? From how far must the grain be transported and by what means?

2. Washington intends to sell the surplus flour to far away markets in other American colonies and Europe.
   - How will the ships get close to the mill?
   - How will the flour be loaded onto the ships?
   - How will the flour be stored to keep it dry and free of pests during the long journey to other ports?
   - When, during the year, will be the peak milling times? Will this coincide with times when the ships are busy transporting other seasonal cargo? Will there be problems with the weather? If so, how will these problems be solved?
   - What route might the ships take from the mill to the other ports? Draw this route on maps of the Chesapeake Bay and the northern half of the Atlantic.

3. Washington needs to choose the best possible site for the mill on his tract of land.
   - On a topographic map, locate the best place for the mill. Pretend

   Washington owns all of the area encompassed by the map, and that any modern facilities shown on the map are either non-existent or in 18th century condition.
   - Where will the water that powers the mill come from?
   - Is the water supply at an elevation well above the mill site, so that the water can flow over the mill wheel?
   - Is there already a lake nearby? Must a dam be built?
   - How long must the raceway (the structure that channels the water from the water source to the mill) be?
   - Is the mill site accessible to farmers who will bring their wheat by wagon?
   - Is it accessible to merchants who would prefer to transport the flour away by ship?
   - Are there raw materials nearby for the mill construction (i.e., trees for lumber, stone for foundations, clay for bricks)?

4. Washington needs a design for the new mill and asked for a set of plans or a model.
   - What should be the approximate dimensions of the building and the water wheel?
   - What materials should be used for the outside walls, the floors and the water wheel, and where will the materials come from?
   - Where will the grain be brought in and flour brought out?
   - How will the power be transferred from the water wheel to the mill stones, conveyor systems and other equipment?

5. Washington requested two site plans or maps—one that shows the proposed site as viewed from above (top view) and one from the side. On both drawings show:
   - the position of the mill relative to the water source that powers the mill;
   - the raceway;
   - the wharves;
   - the waterway for ships.
   - On the top view show the roads and other related facilities.
   - On the side view show the changes in elevation from the water source to the mill and docks.

6. Washington also requested ideas for other businesses and facilities that should be near the mill.
   - What other tradesmen should be encouraged to set up shops near the mill to ensure all necessary supplies and services are available for the milling operation?
   - What other businesses should be established to meet the needs of the farmers bringing their grain to the mill and seamen who have come to take it away?

Any topographic map of a rural area adjacent to a major Bay tributary will do. Especially recommended is the Fort Belvoir Quadrangle which contains the grist mill and Mason Neck State Park. For map ordering information, see "Treasured Maps."
Researching the Bay

When scientists do research, they hypothesize, experiment, classify, quantify and perform many other scientific procedures. First, however, they do a literature search to find out what is already known. This activity teaches students some of the skills needed for researching Chesapeake Bay information. Included are suggestions for students to make the research process less taxing, resource lists for students and teachers, and ideas for teachers to increase student success.

Finding Information. Prior to starting the research assignment, the teacher should investigate available sources of information. Discuss with students the various sources of information and encourage all students to utilize at least four or five different sources in preparing their reports. Develop an in-class library of Chesapeake Bay resources. Publications and information sheets can be obtained by writing or calling state and local agencies and conservation groups. Do not assume that all of your students have the necessary letter writing skills or conversational skills to do this without some assistance and instruction. (A Chesapeake Bay resource list and a list of possible sources of information are included.)

Keep Organized. For most students, learning how to do the research is more important than completing the research "product." A project time log helps students manage their time. (A suggested project log format is included.)

Share the Results. Students will take greater pride in their work if they are given the opportunity to share what they have learned. Have a "Chesapeake Bay Seminar" when students can teach the class (not just read their papers aloud) what they have learned about the Bay.

Grade Levels: 4 - 12

Objectives

Students will investigate sources of accurate, current information about the Chesapeake Bay and will develop skills useful for topic selection and library research by:
- brainstorming topic concept;
- organizing conceptual component;
- using library resources;
- communicating needs via telephone and letter.

Materials
- copies of Finding the Answers, Time Log, and Research Card (1 per student)

Credits
Chesapeake Bay Programs and Directions, 1989. Council on the Environment. Richmond, VA.

Where
Class, home, library, community, park resource collections (all parks).

When
2-4 class periods.
Researching the Bay

Procedure

Following are four in-class activities that can help make the "ordeal" of researching a paper a little less painful. Included are materials to help students organize their research efforts. Student worksheets Finding the Answers, Time Log, and Research Card provide suggested formats for students to plan research.

Any of these forms may be modified as desired.

1. Brainstorming about the components of a concept helps students grasp how a topic is structured and may be divided. To brainstorm a Chesapeake Bay topic list:

- Write the words "Chesapeake Bay" on the chalkboard. Ask students to list things that they know to be part of the Bay. Put at least 25 of these on the board.
- Some sample contributions might be: fishing, pollution, crabs, acid rain, salt water, sand, tour boats, U.S. Navy, low tide, celgrass, phytoplankton, pound nets, MARPOL, deadrise, sharks, salt wedge, and tourists.
- Now make collections of small groups of the terms that have something in common and assign a descriptive label to each, e.g., fishing, sharks, crabs, pound nets (label: living resources); salt water, acid rain, pollution (label: water quality); U.S. Navy, deadrise, tour boats (label: vessels).
- Map the class concept of the Bay on the board.

Vessels Water Quality
1. Navy 1. salt water
2. deadrise 2. acid rain
3. tour boats 3. pollution

Chesapeake Bay

Living Resources
1. fishing
2. sharks
3. crabs
4. pound nets
5. celgrass

used as research topics, and the terms listed under each suggest some specific things to investigate.

- If the topic areas are still too broad (and those in the example given probably are), narrow down the topic by selecting just one of the Bay-related terms and repeat the concept mapping exercise based on that term only. If, for example, "fishing" was selected, the resulting concept map might look something like this:

<table>
<thead>
<tr>
<th>Gear</th>
<th>Laws</th>
</tr>
</thead>
<tbody>
<tr>
<td>gill nets</td>
<td>Marine</td>
</tr>
<tr>
<td>fishing rod</td>
<td>Resources</td>
</tr>
<tr>
<td>crab pots</td>
<td>Commission</td>
</tr>
<tr>
<td>tackle shops</td>
<td>2. limited access</td>
</tr>
<tr>
<td></td>
<td>3. moratorium</td>
</tr>
</tbody>
</table>

- The topics "Chesapeake Bay fishing laws," "Chesapeake Bay sport fishing," or "Chesapeake Bay fishing gear" are narrow enough to be easy to research.

2. Information scavenger hunt. Announce to the class that they are going on a scavenger hunt... for information. If necessary, make arrangements with the librarian for a short preparatory "using the library" lesson. Take the class to the library and tell them they are to look for interesting facts about the Chesapeake Bay. They will receive one point for each fact discovered and five points for each different resource they use (i.e., magazine, newspaper, books, encyclopedia, atlas, map). The students record each fact and note the source. Allow thirty minutes for the hunt, then assemble the class to share the facts they have found and provide two small prizes: one to the person with the most points; and the other to the person who finds the most interesting fact (determine by class vote). The list of facts can provoke good

Information Sources

A variety of curricular materials, workshop opportunities, audio-visual materials, and other resources concerning the Chesapeake Bay are available, often free or at low cost. Chesapeake Bay Toll-Free Information Hotline (800) 662-CRIS.

Chesapeake Bay Resources Directory.
Free: Council on the Environment (COE), 202 N. Ninth St., Richmond, VA 23219.

Chesapeake Bay Teaching Materials Lending Library Catalog. Contains over 80 available-to-borrow-by-mail items (printed materials, films, video tapes, computer programs, curriculum guides, charts, maps and posters which deal with the Chesapeake Bay).

Some publications are available in quantity classroom sets. See Grant Marine Advisory Services, Virginia Institute of Marine Science (VIMS), Gloucester Point, VA 23062. (804) 642-7171.

The Bay Team. Visits Virginia schools with in-class lessons (K-12), and teacher in-service programs about the Chesapeake Bay at no charge. Contact VIMS listed above; (804) 642-7172.

Coastal Growth, A Delicate Balance (27 minute secondary level video). Explores various current management issues related to the Chesapeake Bay. Cost: $5.00 for postage and handling from I Video Productions, Harbour Center, Suite 705, 2 Eaton St., Hampton, VA 23669. (804) 723-4363.

The Chesapeake Bay: It Starts With You! Kit features activities to teach students about important Chesapeake Bay issues. Council on the Environment, 202 N. Ninth St., Richmond, VA 23219.

Landsat Photograph of the Chesapeake Bay. A 25 x 38 inch poster shows incredibly detailed features of the Bay and surrounding area ($19.95 paper, $29.95 laminated). Chesapeake Bay Foundation, 162 Prince George St., Annapolis, MD 21401.

State Parks Reference Collections. Each of the seven parks in the Chesapeake Bay drainage basin maintains a small collection of Bay-related references which may be used on site. Additional information is available through visitor centers, interpretive materials, and programs.
Researching the Bay

Bay Information

Office of the Secretary of
Natural Resources
5th Floor, Ninth St. Office Bldg.
Richmond, VA 23219
(804) 786-0044

Chesapeake Bay Local Assistance Dept.
701 Eighth St. Office Bldg.
Richmond, VA 23219
(804) 225-3440

Council on the Environment
202 N. Ninth St., Suite 900
Richmond, VA 23219
(804) 786-4500

VA Dept. of Agriculture
and Consumer Services
Washington Building, Capitol Square
1100 Bank St.
Richmond, VA 23219
(804) 786-2373

VA Dept. of Air Pollution Control
801 Ninth St. Office Bldg.,
Richmond, VA 23219
(804) 786-2378

VA Dept. of Conservation and
Recreation
203 Governor St., Suite 302
Richmond, VA 23219
(804) 786-2121

VA Dept. of Forestry
Alderman and McCormick Roads
Natural Resources Bldg.
Box 3758
Charlottesville, VA 22903
(804) 977-6555

VA Dept. of Game and Inland Fisheries
4010 West Broad Street
P.O. Box 11094
Richmond, VA 23230-1109
(804) 367-1000

VA Dept. of Health
James Madison Building
109 Governor St.
Richmond, VA 23219
(804) 786-3561

VA Dept. of Historic Resources
221 Governor St.
Richmond, VA 23219
(804) 786-3143

VA Marine Resources Commission
2600 Washington Ave.
P.O. Box 756
Newport News, VA 23607
(804) 247-2200

Variations

Younger students:
Research assignments for elementary children pose some special problems. Many students have no helpful resources at home, and their families are unable to provide assistance with community resources. The elementary teacher must ensure that all students have access to research materials appropriate to their abilities. As young children typically have few independent study skills, it is also important that the teacher divide the research project lesson plan into small “bite-sized pieces,” each with specific directions and each focusing on a research skill (e.g. using the index in a reference book or using the author card catalog).
Finding the Answers

Student Name

My research topic is

Below, I have checked resources for my topic.

<table>
<thead>
<tr>
<th>Plan to Use</th>
<th>Actually Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>Books</td>
</tr>
<tr>
<td></td>
<td>Mom, Dad, Family &amp; Friends</td>
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<tr>
<td></td>
<td>Television</td>
</tr>
<tr>
<td></td>
<td>Radio</td>
</tr>
<tr>
<td></td>
<td>Family Photos</td>
</tr>
<tr>
<td></td>
<td>Magazines</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Classroom</td>
<td>Teacher</td>
</tr>
<tr>
<td></td>
<td>Reference Books</td>
</tr>
<tr>
<td></td>
<td>Textbooks</td>
</tr>
<tr>
<td></td>
<td>Maps</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Library</td>
<td>Books</td>
</tr>
<tr>
<td></td>
<td>Films &amp; Filmstrips</td>
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<td></td>
<td>Video Tapes</td>
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<td>Records</td>
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<tr>
<td></td>
<td>Slides</td>
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<tr>
<td></td>
<td>Reference Books</td>
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<td>Reference Indexes</td>
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<td></td>
<td>Periodicals</td>
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<td></td>
<td>Atlas</td>
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<td>Card Catalog</td>
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<td></td>
<td>Other</td>
</tr>
<tr>
<td>Community</td>
<td>Interviews</td>
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<tr>
<td></td>
<td>State Parks</td>
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<tr>
<td></td>
<td>Newspaper</td>
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<tr>
<td></td>
<td>Local, State or Federal Agency</td>
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<tr>
<td></td>
<td>Local College</td>
</tr>
<tr>
<td></td>
<td>Visit Museum, Aquarium, Zoo</td>
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<tr>
<td></td>
<td>Local Business or Industry</td>
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<tr>
<td></td>
<td>Information Hotline</td>
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<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>
Chesapeake Bay Research Project

Time Log

Name: ___________________________________________  Grade: ____________

Research Topic: _______________________________________

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Task</th>
<th>Teacher Check-off</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select topic and have it approved by teacher</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Determine possible sources of information (at least five)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct research and maintain record on research cards (see below)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outline of research report due</td>
<td></td>
</tr>
<tr>
<td></td>
<td>First draft of report due</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final draft of report due</td>
<td></td>
</tr>
</tbody>
</table>

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Research Card

Name: ___________________________________________

Topic: ___________________________________________

Source: _________________________________________

Date: __________________________________________

Important information:

1. 

2. 

3. 

4. 