Discovering Archaeology in Alabama

Intrigue of the Past

Project Archaeology

State of Alabama
Alabama Historical Commission

U.S. Department of the Interior
Bureau of Land Management
Intrigue of the Past
Discovering Archaeology in
ALABAMA
RIVERS OF ALABAMA

[Map of Alabama showing various rivers including the Tennessee River, Sipsey Fork, Mulberry Fork, Locust Fork, Coosa River, Mobile River, Tensaw River, and others.

Locations marked include Upper Tombigbee River, Lower Tombigbee River, Mobile River, Tensaw River, Perdido, Black Warrior River, Canadian River, Mobile River, Coosa River, Chattahoochee River, etc.]
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State of Alabama
Alabama Historical Commission
and
U.S. Department of the Interior
Bureau of Land Management
Heritage Education Program
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Intrigue of the Past: Discovering Archaeology in Alabama is part of the Bureau of Land Management’s (BLM’s) Project Archaeology program for teachers. In 1991, BLM embarked on its Heritage Education Program to educate young Americans about their nation’s rich cultural heritage and the need to preserve and protect it. Project Archaeology is the cornerstone of this program.

The ultimate goal of Project Archaeology is to educate students to take responsible actions toward our archaeological heritage. The fragile record of our past is increasingly threatened throughout the world. Archaeologists, public land managers, and concerned citizens see education as a primary means of reversing this trend.

The need to understand the past, to know about our ancestors or about others who have lived on this land before us, is universal. The study of archaeology leads to a greater understanding of the past, a better understanding of the present, and better prepares us for the future. Archaeological studies give us information about past environments, human interaction with those environments, and environmental change. This information helps us in planning and managing for future environments.

Studying the past gives us a sense of place and connectedness in a fast-changing world. There is a comfort in connecting with people and places gone by. At-risk students often lack this sense of place, especially if their family is very mobile or they are cutoff from their extended family. A study of past peoples and places can help them connect to the idea of a past, even if it is not the specific past of their people.

The BLM manages approximately one eighth of the United States or 270 million acres of public lands, primarily in eleven western states. Smaller parcels are scattered throughout much of the rest of the country, including Alabama. There are an estimated five million cultural sites on those lands. Since the Bureau cannot afford to hire enough archaeologists and rangers to protect its lands, we must depend on you—the Public, and especially teachers and future generations they teach—to help us preserve and protect the Nation’s past.

Sites on public and private lands all across the nation are being vandalized at an alarming rate. Many others disappear daily due to rapid development. Archaeologists cannot monitor every site 24 hours a day, 365 days a year. However, a committed public can help control the looting and insist that developers mitigate the sites they encounter.

BLM’s Project Archaeology program is designed to introduce archaeology into classrooms. Classroom-tested lessons in archaeology are presented in Intrigue of the Past: A Teacher’s Activity Guide for Fourth through Seventh Grades. Student materials and Alabama specific information are contained in Intrigue of the Past: Discovering Archaeology in Alabama.

Intrigue of the Past: Discovering Archaeology in Alabama is a product of many individuals. I want to thank our partner the Alabama Historical Commission, and especially Dr. Thomas O. Maher, Linda Derry, and Julie Lyons for their perseverance in completing this task! Dr. Maher’s support, both moral and financial, was crucial to bringing the book to completion. We are very grateful for their help.
The Alabama Historical Commission provided the final funding for printing this volume. The BLM Jackson Field Office, Jackson, Mississippi provided initial funding for editing and graphics work.

Dr. Boyce Driskell and Susan White Driskell wrote this wonderful book. Darla Graves of the Alabama Indian Affairs Commission and Linda Derry of the Alabama Historical Commission added the final chapter. Karen Jackson Laubenstein reorganized and edited the test and brought the characters to life. This is truly an outstanding accomplishment.

Roy Paul, of The Roy Paul Press, copy edited and designed the book based on previous BLM Discovering Archaeology publications. Catherine C. Meyer did outstanding work in obtaining the graphic art and photographs. At the Alabama State Printing Office, Stan Holt acted as the printing and publications advisor; Tina Salyer and Beau Ward did the pre-press work with Mr. Paul. We are grateful for their long distance efforts.

The Anasazi Heritage Center Staff is ever patient with our projects and deadlines. Wayne Rice and Cynthia Ramsay, BLM Imagination Team, assisted with many tasks. I would like to thank everyone who has given us encouragement and information. Intrigue of the Past: Discovering Archaeology in Alabama is truly a product of the efforts of many people.

We sincerely appreciate all the hours of hard work everyone put into this publication.

Margaret A. Heath
Bureau of Land Management
Heritage Education Manager
Preface

Teachers find archaeology to be an excellent teaching tool that enables them to impart skills in an engaging and interesting way that makes learning stick. Archaeology lesson plans are holistic and multidisciplinary, so the skills taught range from math to science to language to social studies and more. Archaeology can be a framework to help students learn how to think critically, to cooperate with others, to learn about other cultures, and to approach problems and solve them.

Alabama's archaeologists support and encourage this growing interest in Alabama's cultural heritage and the discipline of archaeology. However, we respectfully remind Alabama educators that archaeological sites are nonrenewable and irreplaceable. Therefore we encourage teachers to use archaeology lesson plans to teach good citizenship by developing in our children informed, thoughtful, and responsible behavior toward all cultural resources.

Archaeological sites are fragile resources. Archaeologists develop proper excavation skills over years of supervised collegiate study. We request that classroom teachers never plan to excavate a real archaeological site unless under the supervision of a professional archaeologist. Even simulated "sandbox digs" can sometimes send the wrong message to students. Excavation in a real situation is much more complicated than simplified simulations. Teaching simplified excavation techniques may encourage students to try their newfound "skills" in the real world, thereby damaging irreplaceable resources. Our plea to educators is to use archaeology in the classroom, but to teach it responsibly by including preservation and conservation ethics in lesson plans.

If you want to learn more about a responsible approach to archaeology in your classroom, or need to know how to develop hands-on archaeology lesson plans without destructive excavation, please contact the Alabama Historical Commission—Cahawba Division (334-875-2529) about Project Archaeology teacher workshops. This educational program offers prepared lesson plans for 4th through 7th grades, the expertise of nearby professional archaeologists, lessons on preservation, and a consideration of Native American Indian perspectives.

Intrigue of the Past: Discovering Archaeology in Alabama represents the hard work and dedication of many people and organizations. The authors of the book are Dr. Boyce Driskell, who is a research archaeologist at The University of Alabama; his wife, Susan White Driskell, a seventh grade teacher with the Tuscaloosa County School system; Linda Derry, an archaeologist at Old Cahawba; Darla Graves, Director of the Alabama Indian Affairs Commission; and Karen Laubenstein, editor and children's writer from
Alaska. Dr. Driskell penned the archaeological content. Susan White Driskell was responsible for classroom characters and settings. Darla Graves and Linda Derry collaborated to write about modern Native Americans in the final chapter. Karen Laubenstein reorganized and edited the text, and developed the dialog for the fictional characters in our story.

In addition, I would like to thank Linda Derry, Old Cahawba, for bringing Project Archaeology to Alabama and coordinating this effort. Darla Graves, Director of the Alabama Indian Affairs Commission, has been involved with Project Archaeology from the beginning of the program. We appreciate her support, information, and permission for use of copyrighted materials in the final chapter.

Julie Lyons, Education Coordinator at Old Cahawba, compiled the Resource Guide and made herself available to help on all the last minute projects. Additionally Julie assists Linda Derry in coordinating Alabama Project Archaeology. The book would not have been completed without the efforts of Catherine Meyer, University of Alabama Museums, who performed miracles in obtaining permissions for the illustrations.

Various archaeological organizations in Alabama have been great supporters and encouragers in bringing archaeology to the public. Project Archaeology is endorsed by the Alabama Association of Professional Archaeologists, the Alabama Archaeological Society Education Committee, the Council on Alabama Archaeology, and the Alabama Historical Commission.

Finally, I thank the Bureau of Land Management's Imagination Team, especially Megg Heath, who has been the light in the darkness for archaeological education, especially here in Alabama and of course, Roy Paul for learning more about Alabama archaeology than he ever thought he wanted to know.

Thomas O. Maher, Ph.D.
Alabama State Archaeologist
Introduction to Educators

*Project Archaeology* is designed to teach students about America’s rich cultural past and what actions they can take to preserve and protect it. Designed for teachers to reproduce for their own classrooms, the materials can be used to supplement an existing curriculum or as a stand-alone curricular unit.

Archaeology lessons are found in *Intrigue of the Past: A Teacher’s Activity Guide for Fourth through Seventh Grades*. This set of twenty-eight lessons is divided into three sections: “Fundamental Concepts”; “The Process of Archaeology”; and “Issues in Archaeology.” The lessons are cross-referenced and keyed into Bloom’s Taxonomy and Alabama State standards.

*Intrigue of the Past: Discovering Archaeology in Alabama* is the second component of *Project Archaeology*. This volume is designed to provide student materials that are difficult to find in generic textbooks. The specific topic of focus is that of Alabama’s rich prehistory. Plans are underway to create additional sections that will address Alabama’s diverse historic past as well as the rich archaeological information that has been gathered.

The material contained in *Intrigue of the Past: Discovering Archaeology in Alabama* is intended to be a companion book to the teacher’s guide. We strongly recommend that you use the lessons to complement your teaching Alabama prehistory.

Neither volume includes lessons on mock digs. While these can be valuable learning experiences, we encourage teachers to use them with extreme care. Mock digs may inadvertently teach that digging is OK anytime, anywhere. However, when used carefully in conjunction with *Intrigue of the Past* lessons and under the guidance of a professional archaeologist, mock digs, laboratory lessons, and reports teach children experientially a great deal about the scientific process.

Remember that conducting a dig at a real site on public lands is illegal unless it is done with a federal or state permit. In many cases, digs on private land in Alabama may violate state laws. If you do locate site, we urge you to contact the State Archaeologist, (334) 242-3184, who can tell you what your next step may be. Details for contacting professionals are provided in the Resources section of this book. Every site contains valuable information that will be lost forever if it is not properly retrieved and reported. Also, prehistoric sites are sacred to many Native Americans and care must be taken not to violate sacred places.

You may have received these materials by attending a *Project Archaeology* workshop. If this is not the case, you have only one piece of the complete program. Workshops allow you to experience the activities firsthand, to ask questions and exchange ideas with teachers and archaeologists. Workshops provide current information about archaeology in your area. State, county, and municipal preservation laws and ordinances may affect projects you are planning with your students. Workshops can inform you of this possibility and suggest means to facilitate your project.

To find out about workshops in your area, contact the Alabama Historical Commission, Office of the State Archaeologist, 468 South Perry Street, Montgomery, Alabama 36130-0900, (342) 242-3184 or on-line at www.perserveala.org. You may also contact the Imagination Team, Bureau of Land Management, Anasazi Heritage Center, P.O. Box 758, Dolores, Colorado 81323, (970) 882-4811, or e-mail: ProjArch@co.blm.gov.
How to Use This Book

Discovering Archaeology in Alabama is designed to be reproduced for classroom use by students. Please reproduce the desired quantities of the chapters and lessons that you wish to use. If you want to use these materials for some other purpose, please contact the Alabama Historical Commission and the BLM Heritage Education Program first. Always list our publication, title, and author of the piece you use and give our addresses.

Grade level: Discovering Archaeology in Alabama is written at a challenging fourth grade reading level. It is appropriate for 4th grade students and above.

Boldface words from the text are contained in the word list at the end of each chapter and in the Student Glossary. Words are printed in boldface and defined the first time they are used.

ALL CAPS in the text indicate the word or idea is treated in a side bar on or near that page.

Lesson Plans: The chapters are designed to link to the lessons in Intrigue of the Past: A Teacher's Activity Guide for Fourth Through Seventh Grades. Forthcoming materials will include specific lessons for Intrigue of the Past: Discovering Archaeology in Alabama.

References: The Appendix lists the references used in producing Discovering Archaeology in Alabama.

Resources for Teachers: The Appendix is very valuable for educators who are trying to enrich their offerings to students. It is a compendium of museums, archaeological sites, government agencies, and other resources that teachers may find useful in conducting archaeology lessons.

Evaluation: We are interested in hearing from you. Please complete the evaluation and return it to us. Your opinion counts! We will refer to evaluations when we revise the book.
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- Alabama Indian Affairs Commission, 10-4, 10-5, 10-6, 10-7, 10-9, 10-10, 10-12
- BLM, 2-4, 4-2, 4-3
- Brose, David, Yesterdays River: The Archaeology of 10,000 years Along the Tennessee-Tombigbee Waterway, US Army COE, Mobile District, 1991, 2-2, 2-8, 3-1, 3-10, 5-1, 5-4, 5-8, 6-1, 7-6, 7-10, 8-4, 9-8
- Cambron, James W. and David C. Hulse, Handbook of Alabama Archaeology, Part I Point Types, Alabama Archaeological Society 1964, 4-1, 5-10
- Dover Publications, copyright-free drawings, 3-4, 3-7, 3-9, 3-11, 3-13, 6-2, 6-3, 6-4, 7-2, 7-4, 8-2, 8-9, 9-10
- Drooker, Penelope Ballard, Mississippian Village Textiles at Wickliffe, University of Alabama Press, 1992, 6-9
- Goldman-Finn & Driskell, “Preliminary Archaeological Papers on Dust Cave, Northwest Alabama,” Journal of Alabama Archaeology, Vol. 40, 2-7, 2-8, 3-1, 3-8, 3-14, 3-16
- Henson, Bart and John Martz, Alabama's Aboriginal Rock Art, AHC, 5-6
- Kane, S. and R. Keaton, Beneath These Waters: Archaeological and Historical Studies of 11,000 Years Along the Savannah River, US Army COE Savannah District, 1993, 3-12, 5-2, 5-4
- Krebs, W. Phillip, 10,000 Years of Alabama Prehistory, University of Alabama Museums. 1996, 3-13, 7-5, 7-8, 8-5, 9-3, 9-5
- Lewis, Thomas M.N. and Madeline Kneberg, Tribes That Slumber: Indians of the Tennessee Region, University of Tennessee Press, 1958, 2-3, 3-7, 3-8, 4-2, 5-3, 5-5, 5-11, 6-6, 6-7, 7-3, 8-4, 9-8, 9-9
- Lyons, Julie, AHC, 5-9, 6-5, 10-3 (photo),
- Old Cahawba Park/AHC, Class-2, 1-3, 1-5, 2-1, 3-6, 3-10, 7-5, 7-10, 8-2, 9-4, 9-5, 9-7, 9-9, 10-1
- University of Alabama Museums, facing Class-2, 2-7, 3-1, 3-7, 4-2, 6-1, 8-4, 9-8
- University of Alabama Press, Courtesy of Richard Mashall, “Oval Woodland House,” 6-9, 7-1
- Walthall, John A., Prehistoric Indians of the Southeast; Archaeology of Alabama and the Middle South, University of Alabama Press, 1987, 4-8, 6-8, 7-7, 8-3, 9-7
Intrigue of the Past
Discovering Archaeology in ALABAMA
The Cast of Characters

Tyler: Tyler uses crutches and sometimes a wheelchair because his legs were injured when he was little. He was traveling by bus to visit his parents at their archaeological dig site in Brazil when the bus wrecked. The story is told by Tyler.

Miss Annie: Miss Annie is the teacher. She likes kids and most of all likes to make learning fun for them. Her name is Ms. Brown, but for many years, everyone in the town has called her Miss Annie.

Chips: Chips is the class computer whiz. His first report to the class was on computer chips so they called him 'Chips' instead of his real name, Caspar.

Javonda: Javonda is the unofficial class leader. She seems to know exactly what questions to ask. Javonda is also an athlete.

Josh: Josh is another athlete. Josh always wears University of Alabama shirts and baseball caps, since his older brother started going to college there. He hopes to be a detective or a policeman someday.

T.J.: T.J. is Josh’s identical twin. His face always grows red with embarrassment when he has to talk in class. T.J. is short for ‘Thomas John’. He does not say as much as Josh, though, and likes to stay in the background most of the time.

Lekendrick: Lekendrick likes maps. He usually wants to know where places are located. Lekendrick is the class clown.

Felicia: Felicia lives on a farm and knows all about plants and animals. She sometimes has trouble paying attention, because she often is thinking about other things.

Cast-1
Discovering Archaeology in Alabama

Professor Horatio P. Flintsides: Professor Flintsides is usually rumpled looking. He often wears a blue lab coat. He is bald on the top of his head, with thick white hair around the sides of his large ears and heavy eyebrows. A pencil usually perches behind his ear. Around his neck dangles a key on a long ribbon.

Kee: Kee is the smallest girl in the class. Despite being tiny, she is very good at karate and gymnastics. Kee loves animals and hopes to become a veterinarian.

Sally: Sally has curly brown hair and bright green eyes and is proud to be an American Indian. Many of her classmates don’t know it because she is a quiet girl.
THE ADVENTURE BEGINS
Clarence Bloomfield Moore was from a wealthy Philadelphia family. He was so interested in archaeology that in 1891, he bought a sternwheeler boat. He called it the "Gopher," and made it his expedition headquarters. It gave him a floating office, laboratory, and home. He soon began excavations of mound and burial sites found along southern waterways like the Alabama and the Black Warrior rivers. Moore conducted the first systematic excavation of the mounds at Moundville.
Hi! My name is Tyler. I want to tell you about something that you may or may not believe. That's okay, because we weren't sure what to make of it, either. One day, our teacher, Miss Annie, started our class off much differently than usual...

"Class, have you ever heard of a time machine?" Miss Annie asked the class, with a twinkle in her eye.

"Time machines, Miss Annie?" Chips declared, making a face. "There's no such thing! Time machines are just make believe!"

Miss Annie only smiled mysteriously and walked to the marker board.

"Scientists called ARCHAEOLOGISTS really are time travelers," Miss Annie told the class. "We can travel through time by studying ARCHAEOLOGY. Archaeology is the scientific study of the remains of past CULTURES and people's LIFE WAYS."

"Miss Annie! My parents are archaeologists," Tyler spoke up proudly.

"But if time travel is impossible, how can it be done, Miss Annie?" Javonda asked. The class quieted down.

Josh raised his hand. "Miss Annie, don't archaeologists create stories of the past by solving puzzles and mysteries? Like detectives, they search for clues to learn about the people and places in the past, right?"

Miss Annie nodded, and looked pleased.

"That's right!" T.J. said. "We once had some archaeologists dig at a small mound in back of our house. They
worked there for several weeks. The archaeologists found some things from hundreds of years ago. They took these things to the university’s museum. One of them told me they were clues to the past.”

“But where do archaeologists find these clues?” Lekendrick wondered.

“Many of their clues are from ARTIFACTS,” Miss Annie told the class. “Does anyone know what an artifact is?”

“I know about artifacts, Miss Annie!” Tyler called out. “They can be tools and weapons, household items, pieces of structures or buildings, clothing . . . almost anything humans made or used.”

“Good, Tyler,” Miss Annie said. “The places where artifacts are found are . . .”

“Archaeological sites!” Javonda and Tyler both answered. Miss Annie smiled, pleased someone knew about sites.

“Miss Annie, where did all those people go? I mean, the ones who left those things . . . artifacts?” Felicia wanted to know, flipping her braids behind her back.

“We’re talking about many thousands of years ago,” Miss Annie explained. “Over time, people moved somewhere else or they died. Just like today, people moved to different places.”

“So artifacts are clues?” Javonda asked.

“Yes,” Miss Annie nodded, “each clue the archaeologists uncover becomes another piece of the story. It solves a little bit more of the mysteries of the past. That’s how we learn about the past. We call the time since people kept written records as HISTORY. We refer to the time before people kept written records as PREHISTORY. Often the things people once made and used are all we have left of prehistoric peoples.”

“Tap, Tap, TAP-TAP!” Just then, an unusual knock sounded at the classroom door. Tyler knew that knock. He had heard it often at home, but what would his neighbor be doing here?

“Oh! It’s time for our visitor!” Miss Annie announced the second big surprise of the day.
“Let me introduce you to a scientist, Professor Horatio P. Flintsides,” she said grandly.

Amazing! It was Tyler’s neighbor, Professor Flintsides.

“My, my, my what have we here?” Professor Flintsides asked them. His bushy eyebrows moved when he talked. His thick glasses made his eyes look huge. He waved a bit shyly at the class and stared at a point on the back wall. The professor had not noticed Tyler yet.

“Good morning, Class! So good of you to be here!” the professor said in a booming voice. The class could not help laughing. The professor acted as if they had just appeared before him rather than him before the class!

Everyone stared at his clothing. Underneath his wrinkled lab coat, there was an assortment of things: tools, a can of bug spray, a measuring tape, papers, pencils, and bits of many other items. All of his pockets were lumpy.

“Professor Flintsides is here to teach us about archaeology and studying the past,” Miss Annie announced enthusiastically. “He’ll be our tour guide for our travels through time!”

“I suppose he’s going to use a time machine?” Chips joked, winking at his friends.

Professor Flintsides nodded, his eyes sparkling.

“The fact is, Professor Flintsides has invented a simulated time machine . . .” Miss Annie paused. She saw that the class looked confused. “You will see soon. Simulated means that something gives the appearance of, or looks like something that it’s not. That’s ‘simulated’ or a ‘simulation’.”

“When can we start? Can we go on the time travels now?” Javonda asked. The class started talking at once.

Miss Annie again rapped on a desk to quiet us.

“Archaeology,” the professor repeated, “helps us learn about our past human history. We can learn about people over thousands and even millions of years. Archaeology uses scientific methods to help discover past people and learn about their lives from long ago.”
“Hey! That means I can study about my parents when they were kids!” Lekendrick pointed out, grinning.

“Very funny,” Miss Annie said.

“Yes, it’s very possible,” the professor agreed. “The more you learn about archaeology... the easier you can travel back through time.”

“As if it’s going to happen!” Chips said incredulously. “Time travel? Now I’ve heard everything!”

“Not long ago,” Professor Flintsides began, “I was experimenting with making the past come alive when I made a fabulous discovery! Please, I must ask that we keep my invention a secret to keep it from getting into the wrong hands,” Professor Flintsides winked.

Lekendrick raised his hand again. “Professor Flintsides, where is your time machine?”

“Let’s go outside and see it,” Professor Flintsides suggested. “By the way, I call my invention the ‘Flintsides Traveler’.”

They hurried outside and stood along the riverbanks behind the school. They gaped in complete astonishment. For there, floating on the river, was a freshly painted steamboat. The boat had “Flintsides Traveler” painted in gold letters on its bow.

Professor Flintsides walked up the long wooden gangplank. Everyone began talking, unable to believe the time machine was a boat! Excitement hung in the air. They knew their adventures were just about to begin.

Professor Flintsides Fabulous Time Machine

“Hop aboard, everyone!” Professor Flintsides beckoned to the class from the open door. “Let me get my pilot’s cap and soon we’ll be on our way!”

He chuckled, pulling a black hat onto his head. Then the professor yanked on a rope. Bells clanged from the front of the steamboat.
“Be careful!” Miss Annie cautioned. “Go slowly so you don’t trip someone else!”

Tyler went first with his crutches, entering the doorway with ‘Main Deck-Boiler Room’ painted over it.

“Tyler!” Professor Flintsides looked happy to see Tyler. Tyler was glad he was finally noticed. “How are your parents?”

“Great, Professor!” Tyler responded.

“Look! In the back! There’s the paddle wheel!” Felicia exclaimed excitedly, just behind the others. They looked where she pointed. Sure enough! There was the big, round paddlewheel in the back of the steamboat. It looked like it was made of wood.

They headed past the professor. Soon everyone was on the boat.”

“Professor, this is a really neat boat,” Josh commented.

The professor nodded. “I modeled it after a sternwheeler used by an important archaeologist, Clarence Bloomfield Moore. C. B. Moore used his Gopher of Philadelphia for his archaeology research about 100 years ago! Boats like this one are called sternwheelers because the paddle wheel is the in stern or back of the boat.”

“Come along, students,” the Professor said. “Let’s go up to the ‘Grand Salon.’” Professor Flintsides said leading them into a big room.

Tyler sat in the first row of the rows of tables, right next to the black iron smokestack. A narrow metal staircase curved around the smokestack leading up to the pilothouse. On both sides of Tyler, facing the front,
the rows of tables and chairs. It was just like in their classroom, except the tables and chairs were bolted to the floor. The chairs had seat belts.

The room was very bright! Sunlight streamed in from big windows on three sides and a huge skylight.

“This is neat!” Sally exclaimed.

From the windows, they could see the woods and their school. Far below was the river.

“Honk honk!” A horn sounded loudly. They jumped, then noticed Professor Flintsides holding a rope. “Have a seat, kids. Time's a-wasting.”

Everyone hurried into his or her seat.

“Captain Flintsides, where's your invention?” Javonda asked curiously, making the professor smile when she called him 'Captain'.

“Young ladies and gentlemen, your attention, please!” the professor gestured, his eyes twinkling. Before they could ask more questions, he pulled on a cord that lifted a draped cloth. They gasped! The whole front wall was full of computer equipment and was topped by a very large computer monitor.

“Wow!” the class exclaimed. It was the biggest computer screen they had ever seen!

“Would you look at that? It's like those big-screen TVs at the mall!” Chips whistled admiringly.

Professor Flintsides looked pleased. “This, Class, is where I've installed my fabulous invention! This computer is the brain for the Flintsides Traveler. The computer controls the boat and will take us back through time. You can see the buttons necessary to operate the Traveler.” In front of his big chair was a large shelf holding the computer keyboard. A big, round, green button was located on one side of it.

Professor Flintsides sat down in the driver's seat in front of the computer.

“Are you ready, young ladies, gentlemen, and Miss Annie?” the professor called out.

“Ready!” They answered, eager to go.

“Good, then I’ll start the Traveler up,” he said, “and away we'll go!”

Chapter 1-6
They waited for what was going to happen next. It was not what they expected. Instead of whooshing them away and back through time, Professor Flintsides began to pat his lab coat and search frantically through all of his pockets. The more he looked, the more frantic he became. He began muttering, “Key, key… What did I do with that key?”

“Professor, the key is hanging around your neck!” Miss Annie said gently.

“So it is!” The professor laughed self-consciously. He held the key up in triumph. He inserted the key into the computer console and then pushed the large, green, round button. There was a low whirring noise. The professor nodded happily. “Excellent! There’s the steam, that means we have POWER!”

The entire boat began to shake and vibrate.

“Superb! The paddlewheel is spinning!” he said gleefully, rubbing his hands together in delight.

The large computer screen flickered, then lit up.

“Splendid, splendid!” Professor Flintsides exclaimed. “Ah! Everything’s working just like clockwork.

Little green and red lights blinked all over the computer console. The professor pulled on a rope, sounding the horn. He yelled over the noise, “Ready for a spin through time?”

“What’s that?” Chips asked, pointing at the numbers showing up on the screen.

“This… er… screen,” the professor answered, “will show important trip information. You will see the location and date on here when we are back in the past. “Okay!” he hollered over the noise. “Let’s find out where we are going first!”

The professor typed and “12,000 years ago” appeared on the screen.
Word List

archaeological sites—see site.

archaeologists—A person who practices archaeology.

archaeology—The scientific study of past human culture as it is shown by the tools, pottery, and other relics of past societies.

artifact—Any object used by people.

culture—The customs, beliefs, and ways of life of a group of people.

history—The time after written records or after the Europeans first came and wrote about the people and events in America. History follows the time that we call “prehistory.” History can also be a tale, story, or written description of events. These written descriptions usually explain why the events happened.

life way—A way of living that is typical of the culture.

prehistory—The time before there were written records or before the Europeans first came and wrote about the people and events in America is called prehistory. Prehistory can also mean the study of prehistoric people or existing in times before written history.

simulated—A pretended act.

site—A location or place. Site is a word used by archaeologists for places that prehistoric and historic people lived in or used. Sites are places where humans left things behind.

steamboat—A boat that is driven by a steam engine.

sternwheeler—A steamboat with the paddle wheel in the rear or stern.
"Alabama's human story," Professor Flintsides typed on the computer screen. "This story stretches back to about 12,000 years ago... during the last Ice Age. That's when archaeologists think the first Paleo-Indians came here to what's now the State of Alabama."

"Twelve thousand years ago? That's a long time!" Sally pointed out.

"Yes, it is," Miss Annie agreed. "During the last Ice Age, people moved into North America for the first time. Remember, yesterday we learned that Alabama's story goes back millions of years? For most of those millions of years, there were no people in Alabama."

T.J. raised his hand. "Miss Annie, I know all about the first people here. After Christopher Columbus discovered America... Conquistadors came up from Mexico or sailed on SHIPS from Spain and..."

"Whoa," Sally quietly interrupted. "The first people were already here in Alabama long before Columbus! They came thousands of years before Christopher Columbus even set sail from Spain 500 years ago."

"Thank you, Sally, that's correct," Miss Annie agreed, again claiming our attention. "Sometimes in Social Studies, we start learning about American history from the time of Columbus's voyage, because that's when we have the first written records about America. As Sally pointed out, that was only about 500 years ago. When we study archaeology, we learn it was probably about 11,500 years or more, before the time of Columbus, that small bands of Paleo-Indians first entered this land of Alabama."
“What were the Paleo-Indians like, Miss Annie?” Sally asked curiously.

“I think I’ll let Professor Flintsides answer that question,” Miss Annie said nodding to the professor.

“The Paleo-Indians lived off the land and its animals,” Professor Flintsides informed them. “These HUNTERS AND GATHERERS were the first of many Alabamians who hunted or fished for meat and collected or gathered wild plants, nuts, and berries. We call these people Paleo-Indians.”


“We’ve learned that most hunters and gatherers were much better adapted and skilled than people used to think they were,” the Professor said. “We no longer think the image of wild and coarse cave people is accurate. People learned to use what was available to survive and lead their lives. For most of prehistory, people had no houses. They probably used tents made of animal skins or quickly built huts made from tree limbs, grass, or leaves. Sometimes they camped in caves or in rock shelters under rock overhangs.”

“Why didn’t they build houses?” Kee wondered.

“Because they moved often from place-to-place in search of food,” Miss Annie explained. “The Paleo-Indians probably followed herds of big animals we call MEGAFANA.”

“I know about Ice Age animals,” Chips contributed. “The megafauna were extinct in North America by 8,000 B.C. or 10,000 years ago.”

“The megafauna included mastodons, giant ground sloths, horses, giant armadillos, giant bison, giant beaver, and even a few saber-toothed cats,” Professor Flintsides said, typing the list on the keyboard. “Chips, the mastodon became extinct around 10,300 years ago or 8,300 B.C.”

“All those animals lived here in Alabama?” Several students exclaimed.

“Yes, right here in Alabama,” Miss Annie confirmed. “They roamed the forests and grasslands. To the north of
Alabama were great ice sheets. There were several periods when these great sheets of ice covered much of the Earth. Coastlines were changed."

"Professor, before the Paleo-Indians came to Alabama, where did they come from?" Lekendrick asked.

"We don't know much about the Paleo-Indians," Professor Flintsides admitted. "They were here so long ago. Archaeology gives us clues to these people. When archaeologists discover Paleo-Indian artifacts, those things help provide answers to who these people were, where they came from, and how they lived. We still don't know for sure how long ago the first humans set foot in the Americas. We don't know exactly what route they took to get here, though we've got some good ideas."
“Then you don’t really know!” Lekendrick said, disappointed. “You can only guess?”

“That’s one of the hottest debates in American archaeology right now, Lekendrick. Most archaeologists used to think that the ancestors of the Paleo-Indians in Alabama crossed into America from Northeast Asia,” the professor said. He showed them on the world map that he brought up on the screen. “Recently, several scientists have other ideas of where the people came from, when they arrived, and whether or not they came by land or by sea using boats to follow the coastlines. This is one of the most debated discussions in American archaeology! Archaeologists and scientists are still searching for answers. They continue to find new and better ways of figuring out how old things are, of discovering artifacts, and recording the information.”

“So no one is yet completely sure about when the first people came to North and South America and where they came from?” Javonda asked.

“That’s right,” Miss Annie nodded. “Archaeologists are still uncovering bits and pieces to this puzzle.”

“A mystery waiting for us to solve some day!” Josh smiled.

“Professor, how could the Paleo-Indians cross the ocean to get here from Asia?” Lekendrick wondered, looking at the map.

“Did the Paleo-Indians have boats?” Chips asked. “That’s ocean between Alaska and Asia.”

“Archaeologists have long thought that the Paleo-Indians walked here,” Professor Flintsides announced, surprising us. “Though they may also have come by boat, we don’t know because today the ancient coastlines are under water. Wooden boats most likely would have disintegrated over time.”

“How could they walk here?” Josh wondered. “If it was the Ice Age, the water might have been too cold and dangerous for boats. There’s water between Alaska and Asia.”

“Today there is,” Miss Annie agreed. “But when the polar ice caps spread during the Ice Ages, water that
would have flowed into rivers and seas was frozen in the ice sheets. Sea levels fell worldwide. Coastlines changed, and some places separated today by water were then joined by land. There was dry land several miles wide between Alaska and Asia. People probably didn’t realize there was a **LAND BRIDGE** connecting Asia with America, because at that time it wasn’t coastline."

Professor Flintsides showed them on the map. “Today, that same area between the continents of Asia and North America is now under the **BERING SEA,**” she said. “We refer to that land as the Bering Land Bridge because it once connected the two continents. Another land bridge once connected Britain to Europe, but today that land is underneath the English Channel.”

“That’s neat!” Javonda exclaimed. “Why did these land bridges get covered by ocean again?”

“Hey, I know about this!” Chips announced, pushing his glasses up. “The Earth’s climate slowly warmed, causing the ice sheets to melt. The polar ice caps became smaller. Water flowed again in the rivers and into the seas. This made the sea levels rise. The rising water covered the Bering Land Bridge and created the Bering Sea. It also covered the British Land Bridge and created the English Channel.”

“The last Ice Age was called the **Pleistocene**! It’s right there on the geologic time chart,” Javonda pointed out as a new screen popped up. She said it like *ply-stowie-scene.*

“Good!” Miss Annie nodded, her eyes twinkling.

“Then the Paleo-Indians really could have just **walked** all the way from Asia!” Chips called out. “They probably didn’t even think it was that big a deal. They just followed the herds of animals and didn’t know they were walking over what later became a sea!”

“The Paleo-Indians probably moved in small groups across the Bering Land Bridge,” Professor Flintsides said. “Slowly, over thousands of years, they spread throughout North and South America. It didn’t happen all at once. Some may have journeyed down the Pacific coast in boats or walked along the coastlines. There are a
few archaeologists who think they used boats to come from Europe because of the similarity between some of the artifacts. I'm holding my judgment on that thought, however. I think we'll need to do a lot more scientific work before I can go along with that idea. I know that people used boats as many as 35,000 years ago to reach Australia."

"Then it is possible that they also had boats to cross from Asia to the Americas!" Chips said excitedly.

"However," Miss Annie cautioned, "we really can't know because the ice age coastlines are now far below sea level and skin boats or even kayaks wouldn't have survived all this time under water."

"We may find out soon though," Professor Flintsides said. "There are studies going on right now by underwater archaeologists."

"Professor, why did those Paleo-Indians come all the way here to Alabama? It sounds like hard traveling," T.J. said.

"You said they hunted megafauna," Josh said thoughtfully. "Maybe they didn't know they were moving here, they were just following the animals all over Asia and then America. They didn't know they were on a different continent. They just followed the food!"

"Professor, how did they hunt the big megafauna?" Josh wondered, changing the subject.

"Josh, for a long time archaeologists weren't sure that Paleo-Indians hunted the mastodon in Alabama," Professor Flintsides answered. "Then a mastodon was found near Nashville, Tennessee, in 1997, with cut marks on the bones. Other clues were found in Florida. We think this shows that Paleo-Indians killed and butchered these large animals and other megafauna in Alabama and the Southeast, after all."

"Miss Annie, I keep wondering what Alabama looked like when the Paleo-Indians came here?" Lekendrick asked curiously.

"Imagine a total wilderness," Miss Annie urged, gesturing toward the windows, "with only the plants,
animals, and the natural landscape. It was cooler and rained more than today. Because there was more rainwater from storms, the rivers and streams were probably bigger and water washed away some areas. Most of the state was forested with large trees. There wasn’t much underbrush like today’s forests. People and animals moved about very easily. Why do you think these ancient forests were different from today’s forests?”

“I bet all that rain made them different,” Javonda guessed.

“The climate sounds very different,” Felicia added.

“I think you’re both right!” Miss Annie smiled. “There was probably natural prairie or open grasslands, besides the forests.”

“Prehistoric people did all of their daily chores by hand,” added Professor Flintsides. They also made all of the tools they used in their daily activities. In fact, they made almost everything they possessed! A big part of their daily activities included making new tools, clothes, ornaments, and other items necessary for life.”

“I think it sounds like a harder life,” Felicia said. “I’m not sure I could do it!”

“Don’t the things they made, what they used to make them, and how they made them tell us about their culture, Miss Annie?” Tyler pointed out.

“Yes, Tyler. Archaeologists study their artifacts,” Miss Annie said. “Artifacts include all tools, ornaments, clothing, housing, weapons, and the waste material left over from the manufacture of their tools. Artifacts also include the raw materials and natural products like animal hides or rocks people collected and used. As we explore the daily life of prehistoric Alabamians, let’s take careful note of their activities and the artifacts associated with those activities. We can use the ‘Comparing Cultures’ worksheets I handed out yesterday.”

“I still don’t know what the people were like,” Josh said.

“The Paleo-Indians were people like us,” Miss Annie smiled. “As we discussed, the first Paleo-Indians in Alabama lived in small groups. These family groups probably
included parents, their children, and a few other kin such as aunts, uncles, cousins, and grandparents. There were probably no more than about 20 people in one group.”

“What was their day like? What did they do, besides hunting and gathering food?” Javonda asked.

“These people were on the move most of the time,” Professor Flintsides said. “They probably arose when the sun came up and went to sleep at dark. Their lives were lived outdoors most of the time. Because their dwellings were very small, most of their daily activities occurred outside. They could make torches from sticks or cane, since they had no electricity or batteries for lights. After dark, their only light was the campfire. Without gas or electric stoves, the campfire was also their only way to cook food.”

“It sounds like camping, to me,” Sally smiled.

“What did they cook in?” T.J. wondered, reminding the rest that it was nearing lunchtime. “They didn’t have tinfoil or metal dishes, right?”

“For most of prehistory, the first Alabamians and other Paleo-Indians did not even have cooking pots,” Miss Annie said.

“It must have been hard to cook their food! They must have roasted everything over the campfire, on sticks or something!” Kee guessed.

“Maybe we can find out on our first expedition in the Flintsides Traveler,” Miss Annie suggested. “The long period in which Alabamians lived as hunters and gatherers is divided into the Paleo-Indian and Archaic stages. We’ll learn more about the Archaic people later. Oh, my! It’s time for lunch! We’d better hurry or we’ll be late!”
Word List

**Bering Sea**—a part of the North Pacific Ocean north of the Aleutian Islands. The Bering Straight is between Siberia and Alaska and connects the Arctic Sea with the Pacific Ocean.

**Conquistador**—A Spanish word meaning *one who conquers*. The Spanish who explored and plundered the New World were called *conquistadores*.

**hunters and gatherers**—People who depend on wild animals and plants for food to survive.

**land bridge**—land that connected Siberia and Alaska during the Ice Age. When the Ice Age ended, the continental ice sheets and glaciers melted. The sea level rose and covered the Bering Land Bridge. Archaeologists believe that early humans entered North America by crossing this land bridge.

**megafauna**—Large animals of the Pleistocene.

**Paleo-Indians**—The name given to the oldest known cultural group in North America.

**Pleistocene**—The Ice Age(s) and period in the world's history from about one million years ago until about 10,000 years ago. During the Pleistocene much of the earth was covered with ice.
"Class," Miss Annie announced. "Professor Flintsides says the Flintsides Traveler is ready to go. I think he has a few words for us before we depart," Miss Annie told the class. They tried not to laugh, for Professor Flintsides began by again searching for his key. This time there was no ribbon around his neck.

"Professor? I think that's a ribbon hanging out of your coat pocket," Kee suggested helpfully. Professor Flintsides reached into his front pockets and pulled a ribbon out of the left one. To the class's relief, out came the key!

"Thank you, Kee," he said, and swung around to face the students. "Welcome, Class, it's good to have you back on the Flintsides Traveler!"

Professor Flintsides turned the key, and the computer monitor lit up. When he typed on his computer keyboard, the word "subsistence" flashed green on the huge screen. The students quickly wrote it down.

The professor turned to look at them. "Does anyone know what the term 'subsistence' means?"

"Yes!" Tyler raised his hand. "I think 'subsistence' means the ways people make their livings."

Sally answered too. "Subsistence means how people get the food and shelter they need to survive."

"Good, Sally and Tyler! Today we'll learn what archaeologists study to understand the subsistence of any group of people," the professor said. "How do we do that? Well, first we need to learn what foods and products were available for those people. What was in their environment? Once we know that, we try to
Gathering Information on Prehistory

Many Scientists are Involved. When you add “paleo-” to some of these scientists, it means they study the prehistoric or ancient information.

ANTHROPOLOGISTS—study humans and their behavior.

Archaeology is a branch of Anthropology.

ARCHAEOLOGISTS—study past humans and their artifacts.

BIOLLOGISTS—study living things, how they live and grow, and where they are found. Paleobiologists study ancient living things.

BOTANISTS—study plants and vegetation. Paleobotanists study ancient plants and vegetation.

CARTOGRAPHERS—draw and study maps.

CLIMATOLOGISTS—study the climates. Paleoclimatologists study climates of past ages.

ECOLOGISTS—study the relations of plants and animals with their environments. Paleoecologists study ancient environments and their relationships to ancient plants and animals.

GEOGRAPHISTS—study the surface of the earth and the plant, animal, and human life on it. Paleogeographists study the geography of ancient times and how land changes over time.

GEOLOGISTS—study the earth, soil, and rocks. Geology is a science that deals with the structure and physical changes of the earth to find out what changes have taken place over the years. Paleogeologists study the ancient changes of the earth found in rocks.

PALEONTOLOGISTS—study fossils and ancient animal life.

PALYNOLOGISTS—study ancient pollen to understand human or animal activity of climate changes.

PATHOLOGISTS—study diseases. Paleopathologists study diseases of ancient times.

PHYSICISTS—study forces, matter, and the laws governing them. Physics includes the study of motion, light, heat, sound, and electricity. Physicists have developed many dating methods and technology used in archaeology.

ZOOLOGISTS—study animal life. Zooarchaeologists study ancient and fossil animals.

There are even more scientists who help archaeologists understand more about the past. Jot down new ones you find in your archaeology journal.
discover the ways they found, used, processed, and discarded those foods and products.”

“When we learn about a group’s subsistence, that helps teach us about their life ways,” Chips pointed out.

“Right. Do you think subsistence was the same for prehistoric people as our subsistence is today?” the professor asked.

They nodded, but a little uncertainly.

“No, it was not!” The professor smiled at our frowns. “Alabama’s early prehistoric people made a living much different from ours,” Professor Flintsides continued. “They had no stores or supermarkets.”

“They were hunters and gatherers, right?” Javonda asked. Professor Flintsides nodded.

“They were people who lived by hunting and collecting wild game and plants,” Sally added loudly.

“Why couldn’t they just grow their food?” Chips wondered.

“That’s a good question, Chips!” The professor looked pleased. “It was thousands of years before people began to grow some of their food.

“Today, we’re going back in time and will look at some subsistence practices of Alabama’s Paleo-Indians,” Professor Flintsides announced. “I’ll set the Traveller to journey back to 11,000 years ago.” The professor typed on his keyboard. “Tennessee River, northern Alabama, 11,000 years ago” showed up on the large computer screen.

“By the way, Class,” Professor Flintsides said. “We are being anthropologists,” Professor Flintsides said.

“Class, does anyone remember what an anthropologist studies?” Miss Annie prodded.

“I do,” Javonda said. “Anthropologists study human behavior and how people live within the environment, their culture, and society.”

“Yes, Javonda, that’s right!” the professor agreed. “Be sure to pay close attention to the details of the
activities that you see. Try to take notes and make drawings. A very important part of archaeology and anthropology is keeping careful records—writing down all the details. Even the tiniest observation or artifact might give a clue about how people lived!

"Seat belts fastened?" the professor asked. "Engage!" Professor Flintsides cried, hitting the green button and abruptly sitting down in the captain's seat.

The Mosasaur Up Close 
and Personal

Professor Flintsides wiggled a long index finger at the students. "I'm setting the destination for 68 centuries ago. We'll aim for GREENE COUNTY, ALABAMA." He began to type in commands.

"Sixty-eight centuries—that's 6,800 years ago!" Kee pointed out.

"Professor, I thought we were going back 11,000 years ago," Josh called out.

"What were you saying, Josh?" Professor Flintsides had to shout over the sternwheeler's rumbles and shakes. They grabbed hold of their tables.

Outside the windows of the Traveler, everything looked . . . the same. No, wait! The air was becoming hazy. They could barely see the school. Then, the school faded away completely in what looked like fog! Little flashes of electrical current cut through the atmosphere. The whirring became even louder!

After what seemed a very long time, the roaring began to decrease. The Flintsides Traveler seemed to settle down. The computer monitor turned off and went blank! It was suddenly completely quiet. In the stillness, the fog cleared. Curious, the class stared out of the windows, not sure what they would see. The entire class gasped, for all they saw was . . .

Water! There was no dry land to be seen in any direction!

"Professor," Javonda demanded, "what does this mean?!"
“We’re in a lake! Or an ocean!” Lekendrick exclaimed. “There were no lakes this big in Green County or even Alabama, were there?!” Sally asked. “I mean, 6,800 years ago?”

“Dear me, me, me! This doesn’t look right!” Professor Flintsides exclaimed.

A huge splash broke the calm surface of the water. All heads turned in that direction. Water droplets were running down the windows, as if it were raining. Yet the sun was out!

“Look at that! There it is!” someone yelled. Was it possible? They stared as a giant sea monster came nearly out of the water. It dove below the surface again with a powerful splash!

Everyone began talking at once. “What was that?” “That thing must be 50 feet long!” “Did you see the size of those teeth?” “It had flippers instead of paws!” “Its legs looked like paddles!!” “What a really powerful and long tail!!!”

“Hush, Class, please don’t worry,” the professor hurried to assure them. “It’s just a MOSASAUR.”

“Okay, right!” Javonda said, anxiously. “It’s just a mosa-, a mosa-? Professor, how far back did we go?”

“Ahem, I seem to have added several extra zeros to our destination time.” said the professor sheepishly. “We went back 68 million years instead of 6,800 years. Let’s try this again.”

“Er, ah, I thought we were going back 11,000 years sir.” T.J. said trying not to embarrass the professor.

“So did I and that’s just where we’ll go!” he shouted as he engaged the machine. “But I do want to point out that archaeologists don’t study prehistoric dinosaurs and their relatives. That’s a job we leave to the paleontologists.”

The Paleo-Indian Camp

Whoosh! They were off again! The air around the Traveler changed from hazy to very foggy, just like it had before! They could see nothing outside except those little electrical flashes like tiny lightning. Finally the Traveler settled down and the noise stopped.
“Say, I’ll bet those windows can turn into screens,” Javonda said thoughtfully. “It looks like we’re going places but we’re really not. I like this simulation!”

Miss Annie smiled knowingly at her and winked.

The class looked outside. They had landed in the midst of an ancient forest! The trees were huge and the forest was very open. There was hardly any underbrush. It seemed dark, because the tall trees blocked out most of the sunshine. Gradually, their eyes adjusted to the dim light.

“Hey! Look over there!” Javonda pointed through the trees.

A small group of people were slowly walking through the forest.

“These are some of the first people in Alabama!” Kee said, in awe. “Are they Paleo-Indians?”

“Yes,” said Professor Flintsides. “Be very quiet now and watch closely.”

Six people moved slowly in a line side-by-side through the forest, three women and three children. One woman was out in front of the others. She looked about 30 years old. Behind her, an older woman and a very young woman walked with the children. Everyone carried basket-like bags.

“That woman looks like their leader,” Javonda observed quietly.

“Yes, she appears to be,” Professor Flintsides agreed. From time-to-time, the lead woman turned and spoke to the others in the group. They could hear her voice, but could not understand what she was saying.

Suddenly, the leader stopped and stooped down. She carefully examined the ground. The others moved around her, watching expectantly. The younger woman handed the leader a pointed stick. The stick looked about five feet long (one and a half meters). The woman poked and dug with the stick into the forest floor.

“What’s she doing? Oh! It’s a potato!” Sally exclaimed, when the leader pulled a large root out of the ground. “I didn’t know potatoes grew wild in the forest!”
“Sally, it’s like a potato, but we call it a tuber,” the professor said. “Usually those roots are very tasty.”

The leader handed the tuber to the older woman. Everyone examined it with some murmurs, and then the older woman stowed it away in a carrying bag. The group spread out into the line again and continued their search. Soon they’d filled some of their pouches or carrying baskets with the tubers.

When they came to a walnut tree, they stopped and gathered the nuts. They filled one of their baskets to the brim with nuts and then continued walking.

“Plant foods form most of their diet,” Professor Flintsides told them quietly. “However, their hunters are always on the lookout for game animals and meat. We find mostly hunting tools in archaeological sites. Many tools were not needed for gathering, as you’ve seen.”

“They’ve stopped!” Chips exclaimed softly.

The group had stopped. The class heard shouts!

**How To Hunt For Mastodon**

The women and children turned to face a clearing in the woods. The class could see everything, including a muddy water hole at the edge of the trees.

Several men appeared from out of the forest! They moved into the far side of the clearing, shouting and waving their arms over their heads.

“What are they doing!” Kee asked, as puzzled as the rest of the students.
Discovering Archaeology in Alabama

“I can’t believe it! It’s a giant animal!” Chips yelled excitedly. He pointed. There was the giant beast. It was moving slowly out of the forest and into the edge of the clearing.

“Awesome, it’s huge!” someone cried. The 10-foot high beast swayed its long trunk in front of the men.

“Rrroar!” The beast trumpeted thunderously. The beast lifted his enormous head and did it again, raising his huge curved tusks and staring suspiciously with his small, beady eyes right at the men!

“That creature’s not like any elephant I’ve ever seen!” Felicia declared.

At the edge of the clearing, the men began to circle the giant animal and herd it backwards. Because it kept watching the men, it didn’t see the low, swampy pool of water right behind it near the far edge of the clearing.

“It’s going to get stuck!” Josh exclaimed.

“Professor, what is it?!” Javonda asked impatiently.

“A mastodon,” the professor finally said. “MASTODONS lived in Alabama during the last great Ice Age. This probably was a regular watering hole for these animals.”

The men continued to quickly jab at the huge animal with their long, thin spears. Each pointed spear had a tip of large chipped stone called a PROJECTILE POINT.

“Rrroar!” The mastodon trumpeted again, sounding angrier as it began to sink in the mire of the watering hole. Although the men’s weapons did little damage to the animal, their actions continued to force the mastodon backwards into the water. The beast continued to face its attackers.

“I think it knows it’s stuck now,” Josh said.

Sure enough! The mastodon began struggling frantically to free itself from the mud. However, the more it struggled, the deeper it sank into the pool!

“It’s becoming more and more trapped,” Chips pointed out. “He’s not going to get away.”

Chips was right, for the men moved in with their spears for the ‘kill!"
“Cool!” Lekendrick exclaimed admiringly, while the class watched the men skillfully thrust their long spears at the mastodon.

“They killed it!” Felicia sounded amazed, as the huge mastodon finally fell over and stopped struggling. The beast was laying half in and half out of the watering hole.

“Now the women and children will help!” Sally said, as the women and children quickly crowded around the edge of the pool, gesturing and speaking excitedly at the men and the mastodon carcass.

One man waded the short distance to the giant animal and pulled himself up onto the large carcass. He reached into a leather pouch at his belt and removed a large, flaked stone tool. Using the sharp, chopper-like knife, he began to hack away at the animal’s thick hide. He soon pierced the hide with it.

Working carefully, the man removed a large flap of skin and exposed the meat below it. The other men joined him, carrying baskets. They began to cut away long strips of steaming meat, dropping it into the baskets. When a man’s basket became full, he carried it to the women and children working on the shore.

The women and children worked to collect wood while the men cut up the mastodon carcass.

“Is he starting a fire?” Lekendrick asked, pointing at a boy about the same age of the students that was kneeling before a pile of wood. He took a long skinny fire stick, a small flat piece of wood with holes in it, some tinder of dry CATTAIL seeds in a nest of grass, and a piece of leather from his pouch. He lay the leather on the ground and arranged the wood on top of it. He put the end of the stick into a tiny hole in the wood and rotated the fire stick rapidly between his palms, keeping its end in the wooden hole. The students could see smoke begin to rise from the wood. A tiny ember fell onto the leather. Then he dumped the tiny glowing ember into the cattail nest and blew on it until a small flame leapt forth.
"The tinder’s burning! He did it! That boy started a fire, without matches!” Chips marveled, as the boy blew the smoldering tender into flames. By adding wood, the fire soon burned briskly.

Meanwhile, the women and children were laying strips of mastodon meat on the grass. They used large, sharp flakes of stone to cut the meat into thin strips. The flakes were left over pieces of stone created when a person made a stone projectile point.

“What’s she doing?” Javonda pointed.

One woman had moved back into the edge of the woods near the class. She held a flint knife and began cutting a pile of small, green saplings or young shoots of trees, and stringy vines. She carried these back to the fire.

“She’s making something!” Javonda said, as the woman tied her saplings with the vines into a crude frame. She placed this frame squarely over the boy’s fire with his help. Then she added more wood to the fire.

“I wonder what that frame’s for?” Chips asked.

The frame stood on short legs about two and one-half feet (.76 meter) above the ground. The rest of the women and children brought their thin strips of meat to the fire. They placed their meat strips across the frame.

“They’re smoking the meat!” Felicia said, the first to figure it out.

“Yes, it will take many hours to cut up the entire animal,” Miss Annie said.

“Possibly even several days,” Professor Flintsides added. “It will also take several hours to dry each of the meat strips into jerky. Before they can remove and store it, the meat has to be dried.”

“Jerky can be kept for a long time if it remains dry,” Miss Annie nodded. “We still make and eat jerky today. Do any of you make jerky from beef or venison at home?”

“We do on our farm!” Felicia piped. “I really like it! It’s spicy and chewy!”

“What will happen now?” Javonda asked, for everyone looked settled into a routine of sorts—cutting and drying the meat or collecting wood for the fire.
"As the day wears on, the men will cut away much of the mastodon's meat that remains above the water and it will be smoked," the professor told the class. "Some pieces of meat will be set aside and cooked for the evening meal. The meat below the water would spoil so they won't use it."

"It just occurred to me that these people don't have refrigerators or freezers to store the meat," T.J. said. "No wonder they have to smoke it! That's way too much meat to eat at once!"

"Do these people live near here?" Kee asked.

"They don't live in one place," the professor explained. "This small band of Paleo-Indians will probably camp at this spot for several days after the success of their hunt. As T.J. just suggested, only by smoking and drying it can they make the meat last and not spoil. They will eat all of the fresh mastodon meat that they can every day for a while! Mastodon meat was a rare treat, since it was very difficult to kill these large animals. Luckily there was that water hole nearby that helped trap the animal, or it would have been very difficult to kill it."

"What else did they eat?" Felicia wondered.

"They usually had to settle for a supper of RABBIT or snake with baked tubers," the professor replied.

"Snake!" Kee repeated, wrinkling her nose before she remembered not to judge the Paleo-Indians by her own standards.

Thin strips of meat were drying over the smoldering fire, with piles of meat nearby awaiting their turn on the drying rack. The three women were busily unloading piles of walnuts, tubers, and small things made of hide from their carrying baskets and laying them near the fire.

"What are those little hide things?" Sally wanted to know.

Professor Flintsides chuckled. "Those small things are hide packets and probably contain spices, such as salt and ground up bark from several trees. The women will use them to season the food. They carry those spice and medicinal herb packets everywhere they go. When they find the right plants, they refill their supplies."
"Hey! Look at the tents!" T.J. spoke up. The boy who'd started the fire earlier was with two girls, about six and seven years old. They were setting up small tents made of several deer hides sewn together.

"Those tents aren't bad!" Tyler whistled admiringly. The class studied the tents, which formed a rectangle of about five feet by eight feet (1.5 meters × 1.8 meters). Three tents were spread out on the ground near one another.

Using small sticks for tent stakes, the children staked one long side of each of the hides into the ground. Next, they propped the center up with longer sticks they'd gathered for tent poles. This formed a very good shelter. Lastly, they unfolded sleeping furs and spread them inside the tents. The furs looked like they would be warm in the cool night air of fall.

"The bands of people didn't always pitch tents," Professor Flintsides said. "Usually they simply slept in those hides out in the open, around the fire. Tonight, if you look, you can see clouds and rain threatening. As the weather turns colder, in a few weeks, the band will probably move to a small cave nearby. Caves are dry and warm and make a good place to spend the winter."

"It looks like the women are now cooking supper," Miss Annie said, drawing our attention back to the people outside.

"Because they were often traveling, the women usually only cooked one large evening meal a day," the professor said. "They ate the jerky and other dry foods, like the nuts and berries, during the day and while they walked."

"Why is she digging that hole?" Kee wanted to know. The supper preparations were in full swing. A woman was digging a small, bowl-shaped hole near the fire.

"Let's watch and see," Miss Annie suggested. They noticed the woman was using her digging stick again. They were learning that the digging stick had many uses, from most digging tasks to a walking stick.

The woman lined her small hole with a piece of deerskin. This formed a basin, or bowl, in the ground.
She took a strip of the fresh mastodon meat and cut it into small chunks with a stone knife. She placed the chunks into the skin basin. Behind her, a young woman returned to the clearing carrying her basket like it was very heavy.

The young woman removed about 24 cobblestones from her carrying basket and laid them near the fire. The cobblestones were smooth and round, like stones found in streams. Next, the woman pulled a larger, flat stone out of her basket and laid this down near the fire. She picked up a round cobble.

"Bang! Bang!" They heard the stones crunch when the woman forcefully hit the large flat stone with her cobble. She continued hitting it until she had created a small pitted area in its center.

"I think that takes a lot of strength and experience to know where to strike," Miss Annie said. They agreed, since most of them had not tried to shape a stone before!

The woman laid the flat stone down. Next, she took a walnut from her basket and struck it with the smaller cobblestone.

"That cobblestone is called a hammerstone," Tyler said, recognizing it from several at the museum.

Naturally, the hammerstone smashed the walnut into pieces.

"A nutcracker!" Lekendrick joked.

"True, but I wouldn't want to carry stones around all the time to crack nuts," Javonda retorted. "Two dozen rocks are HEAVY!"

"You're right, Javonda," agreed the professor. "They left those stones at campsites. Thousands of years later we archaeologists find them and use them as clues about past cultures."

The woman dumped both the walnut shell fragments and its minced nutmeat into the basin with the meat chunks. She cracked more nuts and added the fragments to the basin.

The oldest woman came over with a BASKET OF TUBERS she had cut into small chunks. She added these to the basin full of meat and walnuts. She took the little
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spice packets and sprinkled the spices over the basin. Lastly, she poured water into the basin from some type of container.

"Aha! They're making soup!" Javonda exclaimed.

"Cold soup!" Felicia said. "But why are the women putting those cobblestones into the fire?"

Both women were placing cobblestones directly into the fire. The older woman picked up two sticks and returned to the fire. When the rocks had been in the fire for several minutes, the older woman used the two sticks as **tongs**. She took the hot stones from the fire and carefully placed them into the basin.

"Sss..." The hot rocks hissed and a puff of steam rose out of the basin. The woman waited about five minutes, then removed each rock from the basin with the tongs and returned it to the fire. The other woman passed her with more hot rocks from the fire for the basin. They repeated the process several times.

"Hey! It's boiling!" Josh announced, as surprised as the rest of the class.

"I didn't know hot rocks could boil water!" Felicia exclaimed.

"Bet that's great stew of mastodon, walnut, and tubers!" Lekendrick said.

"What will they do tomorrow?" Chips asked, pointing at the people working outside.

"Tomorrow, everyone will help to finish butchering the mastodon and drying the meat strips," the professor told the class. "They will wrap the jerky in dry grass to pack and take it to their winter cave. They will crack the rest of their walnuts and may collect more because they are so close to the walnut trees. They will keep the nuts for flavoring food and for snacks. They won't eat all of the nuts at one time. They may even make nut butter!"

"It's good!" the professor added. "The women will boil the nut fragments, skim off the oily residue that rises to the top of the boiling water, and that makes the nut butter! The oily residue forms a nut butter when it's cooled. The nut butter will be carefully packed up and saved for later snacks."
“The Paleo-Indian’s candy bar!” Lekendrick joked.
“It was indeed!” the professor agreed. “Nut butter was sometimes added to stews for flavor. Nut butter preserved well, particularly during the cool weather of fall and winter. Sometimes the women mixed nut butter with ground-up jerky and wild seeds to produce a very nutritious trail food.”

It was now dark and the students could only see the people by the light of the fire. They were eating. Professor Flintside’s voice took on the dreamy tone of a storyteller.

“As you probably noticed, each of the men, women, and children are dressed in a similar way,” the professor was saying. “They’re wearing knee-length tunics made from tanned deer hide. The women sew their garments along the arms and sides with deer sinew. They decorate the necklines with stitching, or embroidery. They made their belts from braided plant fibers. Everyone carries a pouch at their belt.”

“What’s sinew?” Sally asked.

“Sinew is found at the ends of muscles. Like muscles it has long fibers. It’s very strong and made good thread and string.”

“How did they sew? Did they have needles?” Sally asked.

“They used BONE PINS with beautifully carved designs on them to decorate both their clothes and their hair,” the professor told them. “Women used the pin as a needle, or AWL, when making a new carrying basket. Some bone pins had holes in the end to thread with the thin strands of deer sinew. These awls were used when they made clothing.”

“Those bone pins must be very sharp!” Felicia guessed.

“They definitely are!” Professor Flintsides agreed. “They used those same pins as a tool when they needed a hard, sharp point.”

“Professor, they’re all barefoot!” Chips noticed.

“Yes, everyone is barefoot,” the professor grinned. “When they travel, especially over rough terrain, they might wear a pair of strong woven sandals made from tree bark fibers.”
The people had finished their evening meal. Everyone had crawled under the sleeping furs for the night. The camp was silent except for the crackle of the fire and the snores. A light rain began to fall, but everyone was dry and cozy in their small tents and sleeping furs, just like the students were in the Flintsides Traveler!

“Oh, my! Look at the time!” the professor exclaimed, gazing at his watch. “Everyone buckle in. Let me start the Flintsides Traveler and we'll be on our way!” Professor Flintsides typed in the information and started the machine to take them home.

Word List

anthropologists—scientists who study humans and their behavior.

awl—A pointed tool for making small holes.

bone pins—pins made of bone.

cobblestones—A round stone. Such stones used to be used to pave streets.

flaked stone tool—A stone tool made by flaking a piece of stone.
flakes (stone flakes)—A small thin, flat piece of stone.

jerky—meat that has been cut into strips and cured by drying in the sun.

life way—A way of living that is typical of the culture.

mastodon—A prehistoric elephant-like mammal that lived during the Ice Age. They became extinct at the end of the last Ice Age and Pleistocene period. They were different from their distant cousins, the mammoths and the modern elephants. Mastodons had teeth designed for eating different, rougher types of vegetation than its cousins.

mosasaurs—the largest meat-eating sea lizards that lived 80–90 million years ago.

paleontologists—scientists who study fossils and ancient animal life.

projectile point—An object having a sharp or tapered end that is placed at the end of a projectile, such as a spear or an arrow.

sinew—A strong cord of tissue in the body that joins a muscle to a bone; a tendon.

subsistence—The act of maintaining one's life. The Paleo-Indians's subsistence was by hunting and gathering.

tinder—a highly flammable material used to catch a spark and make fire.

tongs—A tool for holding or lifting things. Tongs are made with two movable arms that are joined at one end.

tuber—A thickened stem of a plant, usually underground, such as a potato, that bears buds from which new plants grow.