

SOUTHEASTERN MAPS
AND
AERIAL PHOTOGRAPHIC SYSTEMS

SE MAPS

Teaching Manual

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[SE MAPS is based on concepts developed by Dr. Peggy W. Cain at the South Carolina Department of Education]

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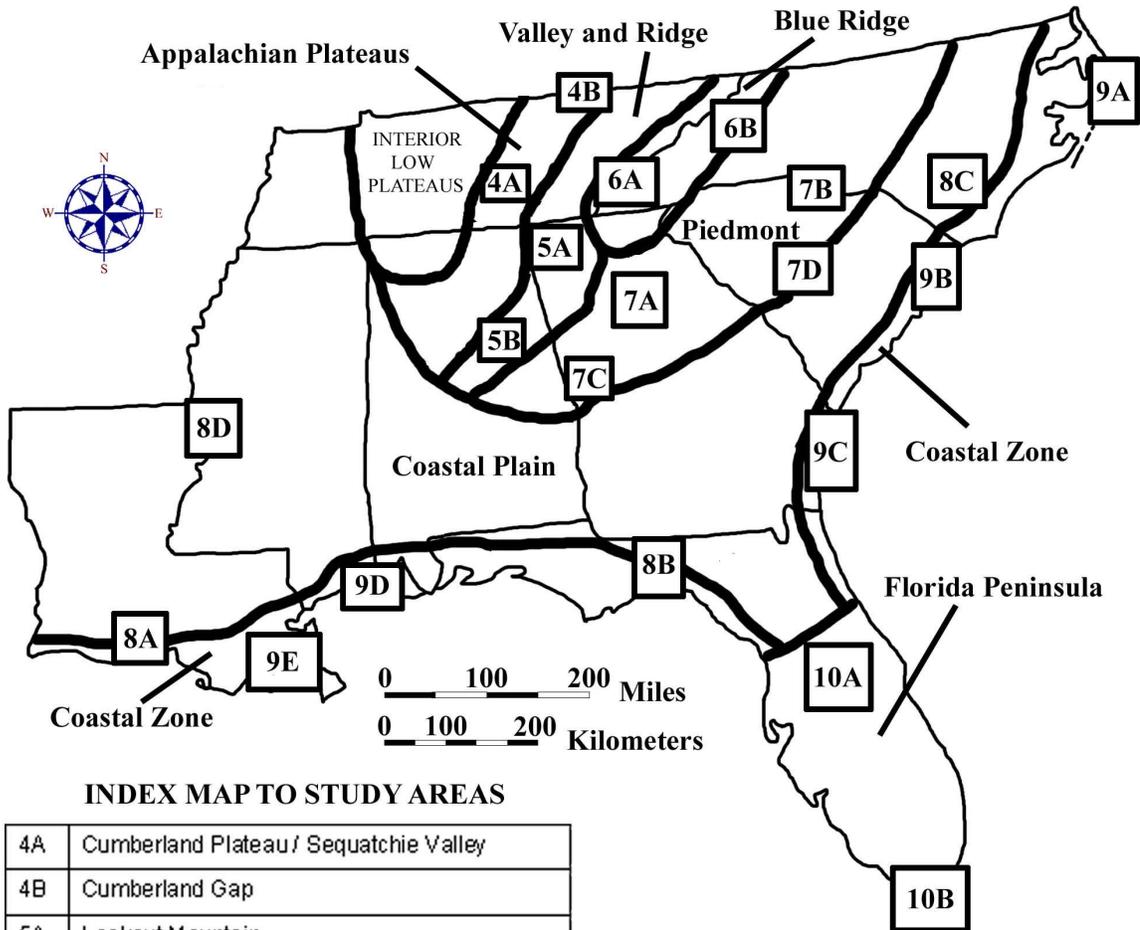
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SOUTHEASTERN MAPS AND AERIAL PHOTOGRAPHIC SYSTEMS
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PREFACE

Very few middle school students have had the opportunity to view their local landscape from a high altitude aircraft, and virtually none have had an opportunity to see first hand what their state looks like from an orbiting satellite platform. As the name suggests, SouthEastern Maps and Aerial Photographic Systems provides these students with a fresh look at their state and region by using sets of infrared aerial photographs, satellite imagery, side-looking airborne radar (SLAR) and other specialized remotely sensed images matched with topographic and special purpose maps including three-dimensional anaglyph maps and a variety of regional base maps. Hands-on activities keyed to these cartographic products have been chosen to assist students in making connections between the Southeast's geological framework, natural resources, land use, and environmental concerns.

SE MAPS presents a true interdisciplinary curriculum, in which students learn to make connections among the traditional middle school core disciplines. The Southeast's complex geologic and geographic setting offers students both a scientific and historical context for the study of local legends, stories, and anecdotes, and other events recounted in primary source diaries. By using reading, writing, and other communication skills, language arts students learn to appreciate regional customs and cultural diversity. Aerial photographs, satellite images, and other remotely sensed data enhance science students' understanding of the geologic events that produced the modern landscape and help explain patterns of distribution of various natural resources. Mathematics students' skills are enhanced by applying problem-solving techniques involving probability, estimation, geometry, graphing, and measuring. Such activities mirror the real-life critical thinking skills needed to interpret the Southeastern landscape and manage its natural resources. Social studies students relate a variety of Southeastern historical events to the influence of particular landscape features associated with each landform region. These types of classroom activities are tied to national and state curriculum standards and help students make connections between disciplines rather than simply memorizing isolated facts. Other broad themes, covering topics like transportation, land-use changes through time, and environmental protection, are woven throughout the SE MAPS Teaching Manual.

As a collaborative effort, SE MAPS has drawn on the diverse talents of scientists, educators, historians, and others throughout the eight participating Southeastern states to bring to the forefront the most important topics and natural features of the region. It is much more meaningful for a South Carolina student to study the sandhills near that state's capital city, Columbia, than the sandhills of Nebraska or the African Sahara Desert. Likewise, a student in Tennessee is more likely to be interested in local caves their family might have visited than caves in New Mexico or China. By allowing students to see familiar landscapes from a different perspective, the authors of SE MAPS hope to raise not only the literacy level of middle school students in all disciplines, but also their ability to comprehend and contribute meaningfully to the continuing dialog on how best to both utilize and preserve the abundant natural heritage that we all share.

The authors of SE MAPS owe a great debt of gratitude to Dr. Peggy Cain, retired from the South Carolina Department of Education, whose vision created the first incarnation of this project, SC MAPS (South Carolina Maps and Aerial Photographic Systems). The success of SC MAPS in South Carolina provided a model that has been closely followed by SE MAPS. In turn, SE MAPS has been an effective model for the development of several state versions of the curriculum that will further enhance the learning experience for students in those states.

John R. Wagner, Editor

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