STAFF DEVELOPMENT CONPOMENT INFORMATION

COMPONENT TITLE: Florida Master Naturalist Program: Upland Habitats of Florida

IDENTIFIER NUMBER: 2015007

MAXIMUM POINTS: 35

GENERAL OBJECTIVE:
Participants will demonstrate increased content knowledge in biology, and environmental science instruction. This will include knowledge of Florida's upland habitats, of the plants and animals that depend upon those systems, and the role of humankind in shaping our past, of determining our future, and as stewards of the land. The participants will demonstrate competency in the use of provided materials in instructional applications in the classroom including but not limited to field experiences and reading in the subject area with all students grades K-12.

SPECIFIC OBJECTIVES:

Within the duration of this component participants will:
1. Demonstrate an understanding of uplands ecology including:
    a. Ecosystems and ecological scale
    b. Florida's geologic history
    c. Soils and topography
    d. Biodiversity of upland habitats
    e. Climate and hydrology of Florida
    f. Natural fires and prescribed burnings
    g. Population and community ecology
    h. Habitat loss, fragmentation and road effects
    i. Invasive exotic species
    j. Trophic structure and nutrient cycling
    k. Economic value of upland communities
    l. Threats to upland communities
    m. Conservation, management and restoration within upland communities
2. Demonstrate an understanding of upland habitats including:
    a. Pinelands including high pine, scrubby flat woods, pine flat woods, sand pine scrub and pine rocklands
    b. Hardwoods including southern hardwood forests, temperate broad-leaved evergreen, forests, tropical hardwood hammocks
    c. Scrub, dry prairies, and rangelands
3. Demonstrate an understanding of upland plants including:
    a. Plant identification techniques including root, stem and leaf types
    b. Representative herbaceous plant species and their role in the ecology of upland systems
    c. Representative woody plant species and their role in the ecology of upland systems

d. Fire adaptations in upland plants
e. Conservation and interpretation of upland plants

4. Demonstrate an understanding of invertebrate species found in upland systems including:
    a. Flatworms, nematodes, annelids, mollusks, and arthropods
    b. Adaptations and ecological function of representative species
    c. Conservation and interpretation of upland invertebrates
5. Demonstrate an understanding of vertebrate species found in upland systems including:
    a. Reptiles and amphibians
    b. Diversity and ecology of birds including owls, raptors, scavengers, and generalists.
    c. Diversity and ecology of mammals including insectivores, herbivores, omnivores, and carnivores
    d. Conservation and interpretation of representatives vertebrate species
6. Develop an understanding of interpretation within upland systems including:
    a. Concepts and components of interpretation
    b. Communicating with your audience
    c. Developing a theme and structure for interpretive programs
    d. Spoken presentations, guided tours, and spontaneous information
    e. Working with children
7. Develop an understanding of ethical issues in upland systems including:
    a. Philosophy and general components of environmental ethics
    b. Tips for protecting resources through planning
    c. Specific issues related to upland habitats of Florida
    d. Individual lifestyles and management of natural resources

DELIVERY PROCEDURES:

Participants will:

1. Attend in-service presentations on the Upland Systems of Florida
2. Observe demonstration lessons taught by in-service provider which highlights strategies presented in the workshops
3. Complete a final project as required by the Florida Master Naturalist Program
4. Develop and implement plans for a classroom lesson applying strategies presented in the in-service presentations. This can be part of the final project.
5. Participate in the follow-up activities

EVALUATION PROCEDURES:

Participants will:

1. Demonstrate a minimum of 80% of the component objectives as measured by pre- and post-tests or other valid measures
2. Demonstrate increased competence as indicated by valid measures of performance as required in Florida Statute 231.508 (1) on eighty (80) percent of the specific objectives of a component that is used for certification
3. Develop a lesson and create relevant materials to demonstrate an understanding of Florida's Upland Systems

4. Teach a lesson incorporating the upland habitats of Florida. Submit a copy of the lesson plan to document the incorporation of the strategies
5. Submit written documentation of required hours for the component and complete a component evaluation

FOLLOW-UP PROCEDURES:

1. Collect data affirming that activities/implementation have impacted instruction and increased student achievement
2. Provide written/oral reflections
3. Analyze student performance data
4. Share ideas, research, lesson plans and/or best practices
5. Provide and share feedback regarding implementation of activities

COMPONENT EVALUATION:

All participating teachers will assess the degree to which the seminar lectures, activities and classroom modules addressed the specific objectives and will make recommendations for revisions through the component evaluation.