

# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

## 2017 CONTEST SCORESHEETS

### Scoresheets included:

- **Trees**
  - ✓ [Junior](#) 15 pts.
  - ✓ [Intermediate](#) 20 pts.
  - ✓ [Senior](#) 30 pts.
  
- **Plants**
  - ✓ [Junior](#) 10 pts.
  - ✓ [Intermediate](#) 15 pts.
  - ✓ [Senior](#) 20 pts.
  
- **Forest Health**
  - ✓ [Junior](#) 15 pts.
  - ✓ [Intermediate](#) 20 pts.
  - ✓ [Senior](#) 30 pts.
  
- **Wildlife on the Forest Hike**
  - ✓ [Junior](#) 20 pts.
  - ✓ [Intermediate](#) 20 pts.
  
- **Forest Ecosystems (Upland Hardwoods and Mangrove Forests)**
  - ✓ [Junior](#) 20 pts.
  - ✓ [Intermediate](#) 30 pts.
  
- **Map & Compass**
  - ✓ [Junior](#) 20 pts.
  - ✓ [Intermediate](#) 20 pts.
  - ✓ [Senior](#) 22 pts.
  
- **Tree Measurement**
  - ✓ [Senior](#) 28 pts.
  
- **Forest Management (Senior Quiz)**
  - ✓ [Senior](#) 25 pts.

## 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 15 tree samples. For each tree sample (labeled A through O), find the correct species in the list below and then write the number of the species in the space next to the appropriate letter.

<b>Junior - Tree ID</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 15

#	Common Name	Scientific Name
1	American Holly	<i>Ilex opaca</i> var. <i>opaca</i>
2	American Sycamore	<i>Platanus occidentalis</i>
3	Bald Cypress	<i>Taxodium distichum</i>
4	Eastern Redcedar	<i>Juniperus virginiana</i>
5	Flowering Dogwood	<i>Cornus florida</i>
6	Laurel Oak	<i>Quercus laurifolia</i>
7	Live Oak	<i>Quercus virginiana</i>
8	Loblolly Pine	<i>Pinus taeda</i>
9	Longleaf Pine	<i>Pinus palustris</i>
10	Melaleuca	<i>Melaleuca quinquenervia</i>
11	Pecan	<i>Carya illinoensis</i>
12	Pignut Hickory	<i>Carya glabra</i>
13	Red Maple	<i>Acer rubrum</i>
14	Sassafras	<i>Sassafras albidum</i>
15	Southern Magnolia	<i>Magnolia grandiflora</i>
16	Sweetgum	<i>Liquidambar styraciflua</i>
17	Tuliptree	<i>Liriodendron tulipifera</i>
18	Turkey Oak	<i>Quercus laevis</i>
19	Water Oak	<i>Quercus nigra</i>
20	Waxmyrtle	<i>Myrica cerifera</i>

- |          |          |
|----------|----------|
| A. _____ | I. _____ |
| B. _____ | J. _____ |
| C. _____ | K. _____ |
| D. _____ | L. _____ |
| E. _____ | M. _____ |
| F. _____ | N. _____ |
| G. _____ | O. _____ |
| H. _____ |          |

## 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 20 tree samples. For each tree sample (labeled A through T), find the correct species in the list below and then write the number of the species in the space next to the appropriate letter.

### Intermediate - Tree ID

BADGE NUMBER: \_\_\_\_\_

TOTAL SCORE: \_\_\_\_\_ / 20

#	Common Name	Scientific Name
1	American Elm	<i>Ulmus americana</i>
2	American Holly	<i>Ilex opaca</i> var. <i>opaca</i>
3	American Sycamore	<i>Platanus occidentalis</i>
4	Bald Cypress	<i>Taxodium distichum</i>
5	Black Cherry	<i>Prunus serotina</i>
6	Black Walnut	<i>Juglans nigra</i>
7	Boxelder	<i>Acer negundo</i>
8	Chinese Tallow	<i>Triadica sebifera</i>
9	Common Persimmon	<i>Diospyros virginiana</i>
10	Eastern Redcedar	<i>Juniperus virginiana</i>
11	Flowering Dogwood	<i>Cornus florida</i>
12	Laurel Oak	<i>Quercus laurifolia</i>
13	Live Oak	<i>Quercus virginiana</i>
14	Loblolly Pine	<i>Pinus taeda</i>
15	Longleaf Pine	<i>Pinus palustris</i>
16	Melaleuca	<i>Melaleuca quinquenervia</i>
17	Pecan	<i>Carya illinoensis</i>
18	Pignut Hickory	<i>Carya glabra</i>
19	Red Maple	<i>Acer rubrum</i>
20	Sassafras	<i>Sassafras albidum</i>
21	Slash Pine	<i>Pinus elliottii</i>
22	Southern Magnolia	<i>Magnolia grandiflora</i>
23	Southern Red Oak	<i>Quercus falcata</i>
24	Sweetgum	<i>Liquidambar styraciflua</i>
25	Tuliptree	<i>Liriodendron tulipifera</i>
26	Turkey Oak	<i>Quercus laevis</i>
27	Water Oak	<i>Quercus nigra</i>
28	Waxmyrtle	<i>Myrica cerifera</i>

A. \_\_\_\_\_ K. \_\_\_\_\_

B. \_\_\_\_\_ L. \_\_\_\_\_

C. \_\_\_\_\_ M. \_\_\_\_\_

D. \_\_\_\_\_ N. \_\_\_\_\_

E. \_\_\_\_\_ O. \_\_\_\_\_

F. \_\_\_\_\_ P. \_\_\_\_\_

G. \_\_\_\_\_ Q. \_\_\_\_\_

H. \_\_\_\_\_ R. \_\_\_\_\_

I. \_\_\_\_\_ S. \_\_\_\_\_

J. \_\_\_\_\_ T. \_\_\_\_\_

# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** This station has 30 tree samples. For each sample (labeled A through DD), identify the plant material and then write the common name in the space next to the appropriate letter. Please print neatly and be sure your answer is legible. Common names must be the ones used on the Florida 4-H Forest Ecology website and must be complete. (E.g., "maple" is not a correct answer for "red maple.")

<b>Senior - Tree ID</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 30

A. \_\_\_\_\_

P. \_\_\_\_\_

B. \_\_\_\_\_

Q. \_\_\_\_\_

C. \_\_\_\_\_

R. \_\_\_\_\_

D. \_\_\_\_\_

S. \_\_\_\_\_

E. \_\_\_\_\_

T. \_\_\_\_\_

F. \_\_\_\_\_

U. \_\_\_\_\_

G. \_\_\_\_\_

V. \_\_\_\_\_

H. \_\_\_\_\_

W. \_\_\_\_\_

I. \_\_\_\_\_

X. \_\_\_\_\_

J. \_\_\_\_\_

Y. \_\_\_\_\_

K. \_\_\_\_\_

Z. \_\_\_\_\_

L. \_\_\_\_\_

AA. \_\_\_\_\_

M. \_\_\_\_\_

BB. \_\_\_\_\_

N. \_\_\_\_\_

CC. \_\_\_\_\_

O. \_\_\_\_\_

DD. \_\_\_\_\_

## 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 10 plant samples. For each plant sample (labeled A through J), find the correct species in the list below and then write the number of the species in the space next to the appropriate letter.

<b>Junior - Plant ID</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 10

#	Common Name	Scientific Name
1	Air-potato	<i>Dioscorea bulbifera</i>
2	Beautyberry	<i>Callicarpa</i> spp.
3	Blackberry	<i>Rubus</i> spp.
4	Cabbage palm	<i>Sabal palmetto</i>
5	Cogongrass	<i>Imperata cylindrica</i>
6	Coontie	<i>Zamia pumila</i>
7	Coralbean	<i>Erythrina herbacea</i>
8	Gallberry	<i>Ilex glabra</i>
9	Greenbrier	<i>Smilax</i> spp.
10	Kudzu	<i>Pueraria montana</i> var. <i>lobata</i>
11	Lizard's-tail	<i>Saururus cernuus</i>
12	Muscadine grape	<i>Vitis rotundifolia</i>
13	Poison ivy	<i>Toxicodendron radicans</i>
14	Poison-oak	<i>Toxicodendron pubescens</i>
15	Pricklypear	<i>Opuntia humifusa</i>
16	Resurrection fern	<i>Pleopeltis polypodioides</i> var. <i>michauxiana</i>
17	Saw palmetto	<i>Serenoa repens</i>
18	Spanish moss	<i>Tillandsia usneoides</i>
19	Tread softly	<i>Cnidioscolus stimulosus</i>
20	Water hyacinth	<i>Eichhornia crassipes</i>
21	Wiregrass	<i>Aristida stricta</i>

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_
- D. \_\_\_\_\_
- E. \_\_\_\_\_
- F. \_\_\_\_\_
- G. \_\_\_\_\_
- H. \_\_\_\_\_
- I. \_\_\_\_\_
- J. \_\_\_\_\_

## 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 15 plant samples. For each plant sample (labeled A through O), find the correct species in the list below and then write the number of the species in the space next to the appropriate letter.

### Intermediate - Plant ID

BADGE NUMBER: \_\_\_\_\_

TOTAL SCORE: \_\_\_\_\_ / 15

#	Common Name	Scientific Name
1	Air-potato	<i>Dioscorea bulbifera</i>
2	Beautyberry	<i>Callicarpa</i> spp.
3	Blackberry	<i>Rubus</i> spp.
4	Bracken fern	<i>Pteridium aquilinum</i>
5	Buttonbush	<i>Cephalanthus occidentalis</i>
6	Cabbage palm	<i>Sabal palmetto</i>
7	Cogongrass	<i>Imperata cylindrica</i>
8	Coontie	<i>Zamia pumila</i>
9	Coralbean	<i>Erythrina herbacea</i>
10	Fetterbush	<i>Lyonia lucida</i>
11	Florida rosemary	<i>Ceratiola ericoides</i>
12	Gallberry	<i>Ilex glabra</i>
13	Greenbrier	<i>Smilax</i> spp.
14	Ground blueberry	<i>Vaccinium myrsinites</i>
15	Japanese climbing fern	<i>Lygodium japonicum</i>
16	Japanese honeysuckle	<i>Lonicera japonica</i>
17	Kudzu	<i>Pueraria montana</i> var. <i>lobata</i>
18	Lizard's-tail	<i>Saururus cernuus</i>
19	Muscadine grape	<i>Vitis rotundifolia</i>
20	Poison ivy	<i>Toxicodendron radicans</i>
21	Poison-oak	<i>Toxicodendron pubescens</i>
22	Pricklypear	<i>Opuntia humifusa</i>
23	Resurrection fern	<i>Pleopeltis polypodioides</i> var. <i>michauxiana</i>
24	Saw palmetto	<i>Serenoa repens</i>
25	Spanish moss	<i>Tillandsia usneoides</i>
26	Tread softly	<i>Cnidioscolus stimulosus</i>
27	Virginia creeper	<i>Parthenocissus quinquefolia</i>
28	Water hyacinth	<i>Eichhornia crassipes</i>
29	Winged sumac	<i>Rhus copallinum</i>
30	Wiregrass	<i>Aristida stricta</i>
31	Yellow jessamine	<i>Gelsemium sempervirens</i>

A. \_\_\_\_\_ I. \_\_\_\_\_

B. \_\_\_\_\_ J. \_\_\_\_\_

C. \_\_\_\_\_ K. \_\_\_\_\_

D. \_\_\_\_\_ L. \_\_\_\_\_

E. \_\_\_\_\_ M. \_\_\_\_\_

F. \_\_\_\_\_ N. \_\_\_\_\_

G. \_\_\_\_\_ O. \_\_\_\_\_

H. \_\_\_\_\_

## 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 20 plant samples. For each plant sample (labeled A through T), find the correct species in the list below and then write the number of the species in the space next to the appropriate letter.

#	Common Name	Scientific Name
1	Air-potato	<i>Dioscorea bulbifera</i>
2	Beautyberry	<i>Callicarpa</i> spp.
3	Blackberry	<i>Rubus</i> spp.
4	Bracken fern	<i>Pteridium aquilinum</i>
5	Buttonbush	<i>Cephalanthus occidentalis</i>
6	Cabbage palm	<i>Sabal palmetto</i>
7	Cogongrass	<i>Imperata cylindrica</i>
8	Coontie	<i>Zamia pumila</i>
9	Coral ardisia	<i>Ardisia crenata</i>
10	Coralbean	<i>Erythrina herbacea</i>
11	Fetterbush	<i>Lyonia lucida</i>
12	Florida rosemary	<i>Ceratiola ericoides</i>
13	Gallberry	<i>Ilex glabra</i>
14	Greenbrier	<i>Smilax</i> spp.
15	Ground blueberry	<i>Vaccinium myrsinites</i>
16	Japanese climbing fern	<i>Lygodium japonicum</i>
17	Japanese honeysuckle	<i>Lonicera japonica</i>
18	Kudzu	<i>Pueraria montana</i> var. <i>lobata</i>
19	Lizard's-tail	<i>Saururus cernuus</i>
20	Muscadine grape	<i>Vitis rotundifolia</i>
21	Poison ivy	<i>Toxicodendron radicans</i>
22	Poison-oak	<i>Toxicodendron pubescens</i>
23	Pricklypear	<i>Opuntia humifusa</i>
24	Primrose-willow	<i>Ludwigia peruviana</i>
25	Resurrection fern	<i>Pleopeltis polypodioides</i> var. <i>michauxiana</i>
26	Saltbush	<i>Baccharis</i> spp.
27	Saw palmetto	<i>Serenoa repens</i>
28	Saw-grass	<i>Cladium jamaicense</i>
29	Spanish moss	<i>Tillandsia usneoides</i>
30	Switchcane	<i>Arundinaria gigantea</i>
31	Tread softly	<i>Cnidioscolus stimulosus</i>
32	Virginia creeper	<i>Parthenocissus quinquefolia</i>
33	Water hyacinth	<i>Eichhornia crassipes</i>
34	Wild azalea	<i>Rhododendron canescens</i>
35	Winged sumac	<i>Rhus copallinum</i>
36	Wiregrass	<i>Aristida stricta</i>
37	Yellow jessamine	<i>Gelsemium sempervirens</i>

<b>Senior - Plant ID</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 20

- |  |  |
|--|--|
| A. _____<br>B. _____<br>C. _____<br>D. _____<br>E. _____<br>F. _____<br>G. _____<br>H. _____<br>I. _____<br>J. _____ | K. _____<br>L. _____<br>M. _____<br>N. _____<br>O. _____<br>P. _____<br>Q. _____<br>R. _____<br>S. _____<br>T. _____ |
|--|--|

# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 15 insect, disease, and stress samples. For each sample (labeled A through O), find the correct identification in the list below and then write the number in the space next to the appropriate letter.

## Junior - Forest Health

BADGE NUMBER:

TOTAL SCORE: / 15

### Insects

1. Ambrosia beetle
2. Black turpentine beetle
3. Cicadas
4. Eastern tent caterpillar
5. Fall webworm
6. Southern pine beetle

### Diseases

7. Armillaria root rot
8. Cedar-apple rust
9. Fusiform rust
10. Hypoxylon canker
11. Needlecast
12. Pitch canker

### Stresses

13. Catface
14. Lightning
15. Mistletoe

A. \_\_\_\_\_ I. \_\_\_\_\_

B. \_\_\_\_\_ J. \_\_\_\_\_

C. \_\_\_\_\_ K. \_\_\_\_\_

D. \_\_\_\_\_ L. \_\_\_\_\_

E. \_\_\_\_\_ M. \_\_\_\_\_

F. \_\_\_\_\_ N. \_\_\_\_\_

G. \_\_\_\_\_ O. \_\_\_\_\_

H. \_\_\_\_\_



# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 20 insect, disease, and stress samples. For each sample (labeled A through T), find the correct identification in the list below and then write the number in the space next to the appropriate letter.

## Intermediate - Forest Health

BADGE NUMBER:

TOTAL SCORE: / 20

### Insects

- |                             |                      |
|-----------------------------|----------------------|
| 1. Ambrosia beetle          | 13. Cedar-apple rust |
| 2. Black turpentine beetle  | 14. Fireblight       |
| 3. Cicadas                  | 15. Fusiform rust    |
| 4. Eastern tent caterpillar | 16. Hypoxylon canker |
| 5. Fall webworm             | 17. Needlecast       |
| 6. Ips beetle               | 18. Oak leaf blister |
| 7. Pine sawflies            | 19. Pitch canker     |
| 8. Pine tip moth            |                      |
| 9. Pine webworm             |                      |
| 10. Southern pine beetle    |                      |

### Stresses

20. Catface  
21. Galls  
22. Lightning  
23. Mistletoe

### Diseases

11. Annosus root rot  
12. Armillaria root rot

- |          |          |
|----------|----------|
| A. _____ | K. _____ |
| B. _____ | L. _____ |
| C. _____ | M. _____ |
| D. _____ | N. _____ |
| E. _____ | O. _____ |
| F. _____ | P. _____ |
| G. _____ | Q. _____ |
| H. _____ | R. _____ |
| I. _____ | S. _____ |
| J. _____ | T. _____ |

# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will be identifying 30 insect, disease, and stress samples. For each sample (labeled A through DD), find the correct identification in the list below and then write the number in the space next to the appropriate letter.

<b>Senior - Forest Health</b>	
BADGE NUMBER: _____	
TOTAL SCORE: _____	/ 30

## **Insects**

1. Ambrosia beetle
2. Black turpentine beetle
3. Cicadas
4. Cottonwood leaf beetle
5. Cypress twig gall midge
6. Eastern tent caterpillar
7. Fall webworm
8. Ips beetle
9. Pine sawflies
10. Pine tip moth
11. Pine webworm
12. Scale insects
13. Southern pine beetle
14. Sycamore lacebug
15. Twig girdler

## **Diseases**

16. Annosus root rot
17. Armillaria root rot
18. Bacterial leaf scorch

19. Cedar-apple rust
20. Fireblight
21. Fusiform rust
22. Hispidus canker
23. Hypoxylon canker
24. Laurel wilt
25. Needlecast
26. Oak leaf blister
27. Pitch canker
28. Powdery mildew
29. Sycamore anthracnose
30. Tar spot

## **Stresses**

31. Catface
32. Galls
33. Lightning
34. Mistletoe
35. Witches'-broom

- |          |           |
|----------|-----------|
| A. _____ | P. _____  |
| B. _____ | Q. _____  |
| C. _____ | R. _____  |
| D. _____ | S. _____  |
| E. _____ | T. _____  |
| F. _____ | U. _____  |
| G. _____ | V. _____  |
| H. _____ | W. _____  |
| I. _____ | X. _____  |
| J. _____ | Y. _____  |
| K. _____ | Z. _____  |
| L. _____ | AA. _____ |
| M. _____ | BB. _____ |
| N. _____ | CC. _____ |
| O. _____ | DD. _____ |

# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Junior - Wildlife Hike</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 20

**Mammals**

1. Armadillo
2. Black bear
3. Bobcat
4. Cottontail rabbit
5. Florida panther
6. Gray squirrel
7. Opossum
8. Pocket gopher
9. Raccoon
10. Red fox
11. Sherman's fox squirrel
12. Striped skunk
13. White-tailed deer
14. Wild pig

**Reptiles**

15. American alligator
16. Black racer
17. Coral snake
18. Cottonmouth
19. Cuban brown anole
20. Eastern box turtle
21. Eastern diamondback rattlesnake
22. Eastern indigo snake
23. Fence lizard
24. Five-lined ground skink
25. Gopher tortoise

26. Green anole
27. Pygmy rattlesnake
28. Yellow rat snake

**Amphibians**

29. Green treefrog
30. Southern leopard frog
31. Southern toad

**Birds**

32. American crow
33. Barred owl
34. Blue jay
35. Carolina chickadee
36. Chuck-will's-widow
37. Eastern towhee
38. Florida scrub jay
39. Northern bobwhite
40. Northern mockingbird
41. Pileated woodpecker
42. Red-bellied woodpecker
43. Red-cockaded woodpecker
44. Red-shouldered hawk
45. Sharp-shinned hawk
46. Tufted titmouse
47. Turkey vulture
48. Wild turkey
49. Wood duck
50. Wood stork

- |          |          |
|----------|----------|
| A. _____ | K. _____ |
| B. _____ | L. _____ |
| C. _____ | M. _____ |
| D. _____ | N. _____ |
| E. _____ | O. _____ |
| F. _____ | P. _____ |
| G. _____ | Q. _____ |
| H. _____ | R. _____ |
| I. _____ | S. _____ |
| J. _____ | T. _____ |

2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Intermediate - Wildlife Hike</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 20

**Mammals**

- 51. Armadillo
- 52. Black bear
- 53. Bobcat
- 54. Cottontail rabbit
- 55. Florida panther
- 56. Gray squirrel
- 57. Opossum
- 58. Pocket gopher
- 59. Raccoon
- 60. Red fox
- 61. Sherman's fox squirrel
- 62. Striped skunk
- 63. White-tailed deer
- 64. Wild pig

**Reptiles**

- 65. American alligator
- 66. Black racer
- 67. Coral snake
- 68. Cottonmouth
- 69. Cuban brown anole
- 70. Eastern box turtle
- 71. Eastern diamondback rattlesnake
- 72. Eastern indigo snake
- 73. Fence lizard
- 74. Five-lined ground skink
- 75. Gopher tortoise

- 76. Green anole
- 77. Pygmy rattlesnake
- 78. Yellow rat snake

**Amphibians**

- 79. Green treefrog
- 80. Southern leopard frog
- 81. Southern toad

**Birds**

- 82. American crow
- 83. Barred owl
- 84. Blue jay
- 85. Carolina chickadee
- 86. Chuck-will's-widow
- 87. Eastern towhee
- 88. Florida scrub jay
- 89. Northern bobwhite
- 90. Northern mockingbird
- 91. Pileated woodpecker
- 92. Red-bellied woodpecker
- 93. Red-cockaded woodpecker
- 94. Red-shouldered hawk
- 95. Sharp-shinned hawk
- 96. Tufted titmouse
- 97. Turkey vulture
- 98. Wild turkey
- 99. Wood duck
- 100. \_\_\_\_\_ Wood stork

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_
- D. \_\_\_\_\_
- E. \_\_\_\_\_
- F. \_\_\_\_\_
- G. \_\_\_\_\_
- H. \_\_\_\_\_
- I. \_\_\_\_\_
- J. \_\_\_\_\_
- K. \_\_\_\_\_
- L. \_\_\_\_\_
- M. \_\_\_\_\_
- N. \_\_\_\_\_
- O. \_\_\_\_\_
- P. \_\_\_\_\_
- Q. \_\_\_\_\_
- R. \_\_\_\_\_
- S. \_\_\_\_\_
- T. \_\_\_\_\_

2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Junior - Forest Ecosystems</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 20

**Ecosystem Questions**

**Upland Hardwoods**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

**Mangrove Forests**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Intermediate - Forest Ecosystems</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 30

**Ecosystem Questions**

**Upland Hardwoods**

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_
- 12. \_\_\_\_\_
- 13. \_\_\_\_\_

**Mangrove Forests**

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_
- 12. \_\_\_\_\_
- 13. \_\_\_\_\_

**Plant ID**

**Upland Hardwoods**

- A. Bluff oak (*Quercus austrina*)
- B. Carolina laurelcherry (*Prunus caroliniana*)
- C. Sparkleberry (*Vaccinium arboreum*)
- D. Yaupon holly (*Ilex vomitoria*)

- 14. \_\_\_\_\_
- 15. \_\_\_\_\_

**Mangrove Forests**

- A. Black mangrove (*Avicennia germinans*)
- B. Buttonwood (*Conocarpus erectus*)
- C. Red mangrove (*Rhizophora mangle*)
- D. White mangrove (*Laguncularia racemosa*)

- 14. \_\_\_\_\_
- 15. \_\_\_\_\_

# 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Junior - Map &amp; Compass</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 20

## Map Symbols

Please provide the correct answer (A, B, C, or D) to each of the ten questions displayed on the table.

2 point for each correct answer.

1. \_\_\_\_\_

6. \_\_\_\_\_

2. \_\_\_\_\_

7. \_\_\_\_\_

3. \_\_\_\_\_

8. \_\_\_\_\_

4. \_\_\_\_\_

9. \_\_\_\_\_

5. \_\_\_\_\_

10. \_\_\_\_\_

2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Intermediate - Map &amp; Compass</b>	
BADGE NUMBER: _____	
TOTAL SCORE:	/ 20

**Do not write in the scoring box.**

**Map Symbols**

Please provide the correct answer (A, B, C, or D) to each of the ten questions displayed on the table.

1 point for each correct answer.

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

<b>SCORE</b>	
Symbols subtotal: _____	(0-10)
Degrees subtotal: _____	(0-5)
Distance subtotal: _____	(0-5)
TOTAL: _____ (out of 20)	

**Compass**

Please provide the correct bearing and distance in feet as listed below.

Full points (5) if answers are within 3 degrees or feet. One point off for each additional 3 degrees or feet in error.

1. To get from Point A to Point B you need to travel at a bearing of \_\_\_\_\_ degrees.
2. To get from Point C to Point D you need to travel \_\_\_\_\_ feet.



2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Senior - Map &amp; Compass</b>	
BADGE NUMBER: _____	
TOTAL SCORE:	/ 22

**Do not write in the scoring box.**

**Map Symbols**

Please provide the correct answer (A, B, C, or D) to each of the ten questions displayed on the table.

1 point for each correct answer.

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

SCORE		
Symbols subtotal: _____ (0-10)		
Line	Bearing (2)	Distance (2)
A-B	_____	_____
B-C	_____	_____
C-A	_____	_____
Compass subtotal: _____ (0-12)		
TOTAL: _____ (out of 22)		

**Compass**

Please provide the correct bearing and distance in feet between each pair of points.

12 points possible: 4 points per line: 2 points bearing, 2 points distance.  
 1/2 point taken off for each increment of 4 degrees or 3 feet in error.

<u>Line</u>	<u>Bearing</u>	<u>Distance</u>
A-B	_____	_____
B-C	_____	_____
C-A	_____	_____

## 2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

**Instructions:** You will measure 4 standing trees and fill out the table below. For each tree, identify the species and estimate the diameter, merchantable height, and volume. Diameters should be measured and recorded in even 2-inch diameter classes. Heights should be measured in 16-foot logs to the nearest full half-log. Merchantable height should be measured from stump height to either an 8-inch top diameter, a major fork, or a serious defect that affects more than half the tree's diameter at that point. Tree volumes can be found in the table at the bottom of this page.

<b>Senior - Tree Measurement</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 28

Tree #	Species (1 pt)	DBH (2 pts)	Height (2 pts)	Volume (2 pts)	Score
1					
2					
3					
4					

### Volume Table

HEIGHT (NUMBER OF 16-FOOT LOGS)									
DBH	1	1½	2	2½	3	3½	4	4½	5
10	36	48	59	66	73	-----	-----	-----	-----
12	56	74	92	106	120	128	137	-----	-----
14	78	105	132	153	174	187	200	-----	-----
16	106	143	180	210	241	263	285	-----	-----
18	136	184	233	274	314	344	374	-----	-----
20	171	234	296	348	401	440	480	511	542
22	211	290	368	434	500	552	603	647	691
24	251	346	441	523	605	664	723	782	840
26	299	414	528	626	725	801	877	949	1,021
28	347	482	616	733	850	938	1,027	1,114	1,201
30	403	560	718	854	991	1,094	1,198	1,306	1,415
32	462	644	826	988	1,149	1,274	1,400	1,518	1,637
34	521	728	934	1,119	1,304	1,447	1,590	1,727	1,864
36	589	826	1,063	1,274	1,485	1,650	1,814	1,974	2,135
38	656	921	1,186	1,428	1,670	1,854	2,038	2,224	2,410
40	731	1,030	1,329	1,598	1,868	2,081	2,294	2,494	2,693

2017 FLORIDA 4-H FOREST ECOLOGY CONTEST

<b>Senior - Forest Management</b>	
BADGE NUMBER:	
TOTAL SCORE:	/ 25

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_