

FISH AND WILDLIFE MANAGEMENT CAREER DEVELOPMENT EVENT

Revised 9/22

The Fish and Wildlife CDE will consist of three parts:

Individual Identification- 50 specimens @ 8 points each	400 points
Individual Exam- 50 questions @ 5 points each	250 points
Individual current issue activity- up to 25 questions	50 points

Total possible team score- 3 Individual scores (700 points possible) 700 X 3 = 2100 points

Total points for each contestant will be 700 points. Each contestant will work individually and will be scored individually. The top three individual scores of the four person team will be added to get the total team score. Contestants will get 38 minutes (45 seconds per sample) to complete each section of the CDE (ID, exam, and current issue activity)

I. Identification

The CDE will consist of identification of ten specimens in each of the five groups — (1) Insects, (2) Birds, (3) Mammals, (4) Fish, and (5) Reptile & Amphibians. All specimens will be selected from the following list of Minnesota (insects, birds, mammals, fish and reptile & amphibians. Eight points will be given for each correct answer on identification, a possible maximum of 400 points for this section.

Fish and Wildlife Identification List

Insects (54 Species)

Alderfly	Emerald Ash Borer	Polyphemus Moth
Aphids	Firefly	Predacious Diving Beetle
Assassin Bug	Giant Ichneumon	Red Admiral
Backswimmer	Giant Water Bug	Robber Fly
Black and Yellow Mud Dauber	Grasshopper	Rove Beetle
Blow Fly	Ground beetle	Soldier Beetle
Boxelder Bug	Gypsy Moth	Sphinx Moth
Bumble Bee	Honey Bee	Springtail
Caddisfly	House Fly	Stink Bug
Carpenter Ant	June Beetle	Stonefly
Cecropia Moth	Katydid	Syrphid fly
Cicada	Lacewing	Two-Lined Chestnut Borer
Crane Fly	Lady Beetle	Viceroy
Damselfly	Long-Horned Beetle	Water Strider
Deer Fly	Mayfly	Weevil
Dobsonfly	Midge	Whirligig Beetle
Dragonfly	Monarch	Woods Cockroach
Elm Sawfly	Mosquito	Yellowjacket

Birds (56 Species)

Non-Game Birds

American Kestrel
Bald Eagle
Barred Owl
Black Capped Chickadee
Blue Jay
Broad-Winged Hawk
Common Loon
Common Snipe
Cooper's Hawk
Crow
Double Crested Cormorant

Eastern Bluebird
Grackle
Great Blue Heron
Great Egret
Great Horned Owl
House Sparrow
Mourning Dove
Northern Harrier
Northern Saw-Whet Owl
Northern Cardinal
Osprey

Purple Martin
Red-Tailed Hawk
Red-Winged Blackbird
Robin
Sandhill Crane
Screech Owl
Sharp-Shinned Hawk
Starling
Trumpeter Swan
Turkey Vulture

Game Birds

American Coot
American Widgeon
Blue-Winged Teal
Canada Goose
Canvasback
Gadwall
Green-Wing Teal
Greater Prairie Chicken

Lesser Scaup
Mallard
Northern Pintail
Northern Shoveler
Redhead
Ring-Necked Duck
Ring-Necked Pheasant
Ruddy Duck

Ruffed Grouse
Sharp-Tailed Grouse
Spruce Grouse
Snow Goose
Woodcock
Wood Duck
Wild Turkey

Mammals (48 Species)

Badger
Beaver
Black Bear
Bobcat
Cougar
Coyote
Deer Mouse
Eastern Mole
Eastern Chipmunk
Eastern Cottontail
Elk
Ermine
Fisher
Flying Squirrel
Fox Squirrel
Franklin's Ground Squirrel

Gray Fox
Gray Squirrel
Gray Wolf
House Mouse
Jackrabbit
Jumping Mouse
Little Brown Myotis
Long-Eared Bat
Meadow Vole
Mink
Moose
Muskrat
Northern Grasshopper Mouse
Norway Rat
Pine Marten
Pocket Gopher

Porcupine
Raccoon
Red Fox
Red Squirrel
Red-Backed Vole
River Otter
Shrew
Snowshoe Hare
Spotted Skunk
Star-Nose Mole
Striped Skunk
13-Lined Ground Squirrel
Virginia Opossum
White Footed Mouse
Whitetail Deer
Woodchuck

Fish (39 Species)

Bigmouth Buffalo
Black Crappie
Bluegill Sunfish
Bowfin
Brook Trout
Brown Trout
Bullhead
Burbot
Channel Catfish
Chinook Salmon
Cisco
Coho Salmon
Common Carp

Creek Chub Minnow
Darter
Fathead Minnow
Flathead Catfish
Freshwater Drum
Green Sunfish
Lake Sturgeon
Lake Trout
Largemouth Bass
Long-Nose Gar
Muskellunge
Northern Pike
Paddlefish

Pumpkinseed Sunfish
Rainbow Trout
Rock Bass
Sauger
Sea Lamprey
Shiner Minnow
Smallmouth Bass
Smelt
Walleye
White Crappie
White Sucker
Whitefish
Yellow Perch

Reptile & Amphibians (25 Species)

American Toad	Gray Tree Frog	Prairie Skink
Blue Spotted Salamander	Great Plains Toad	Six-Lined Racerunner
Boreal Chorus Frog	Green Frog	Snapping Turtle
Bull Snake	Milk Snake	Spiny Soft-Shell Turtle
Canadian Toad	Mink Frog	Spring Peeper
Common Garter Snake	Mudpuppy	Tiger Salamander
Eastern Hognose Snake	Northern Leopard Frog	Timber Rattlesnake
Eastern Red-Backed Salamander	Northern Map Turtle	Western Fox Snake
	Painted Turtle	

Identification will consist of 10 samples in each of the five areas.

1. Specimens must not be handled by contestants unless protected in tubes or boxes. If very small insects are used, they may be mounted under a binocular microscope. All specimens will be represented by study specimens or photographs. The ducks can be either male or female.
2. Scientific names will not be used in the identification and written portion of the CDE, but the correct common name as used in the above lists must be given.

II. Exam

There will be a written test consisting of 10 questions on each of the five ID groups. The written questions will be scored five points for each correct answer – 250 points possible for the written exam.

1. The written part will be objective questions on such items as: nesting, feeding, habitat, game laws, identifying features, etc. (for bird, mammal, fish section) and biology (e.g. where they live, what they eat), life cycle, identifying features, and ecological importance, including impact on humans (insect section). Hunting Safety/Regulations, Fishing/Ice Fishing/Sparring Safety & Regulations Trapper Safety & Regulations, History & Legislation of Wildlife Management.

Please see suggested references. The questions must pertain to above listings only.

III. Current Issue Individual Activity

The current issue activity will look at real world applications and what is happening currently in the Fish and Wildlife Industry. The current issue activity will be up to 25 questions worth 50 points.

1. Each individual will work on the current issue activity individually. The team activity will have specific reference material posted for that year.

2022	Wildlife Diseases	2026	Invasive species
2023	Technology Used in Wildlife Mgt.	2027	Limnology/ Water quality
2024	Wildlife Nuisances & Depredation	2028	Population Dynamics & Management
2025	Biological Indicators in Habitat Monitoring	2029	Environmental Analysis/ Species of special concern

IV. Tiebreakers

If individuals or teams have a final tie score, the tie will be broken in this order.

1. Identification score
2. Exam score
3. Current Issue score

IV. Additional Information

1. Computer scan sheets will be used for this CDE. Form number 105482 will be used. Refer to the CDE rules link for a sample.
2. Official Dress or appropriate FFA attire is required. Refer to Rule 1-A-5 in General CDE/LDE Rules and Procedures
3. The following are the recommended references for the CDE but similar titled references will provide the needed information.

V. References:

Insect References Primary

Insects of the North Woods Jeff Hahn Adventure Publications 820 Cleveland Street South Cambridge, MN 55008

Supplementary

National Wildlife Federation Field Guide to Insects and Spiders & Related Species of North America (National Wildlife Federation Field Guide). 2007. Arthur V. Evans. 496 pp.

Bird References Primary

Birds of Minnesota and Wisconsin, Robert Janssen, Daryl Tessen, Gregory Kennedy, 2003, Lone Pine Publishing

Supplementary

Peterson Field Guide Series. Number 1.

Ducks at a Distance: A Waterfowl Identification Guide, 1978, U.S. Department of the Interior.

Supt. of Documents; Washington, D.C.

Free download at <http://www.gutenberg.org/files/18884/18884-h/18884-h.htm>

Mammal References Primary

Mammals of Minnesota, Evan B. Hazard, 1982, University of Minnesota Press.

Supplementary

Mammals of Minnesota Web Page <http://www.dnr.state.mn.us/mammals/index.html> Minnesota DNR

Mammals of Minnesota-Field Guide Stan Tekeila Adventure Publications 820 Cleveland Street South Cambridge, MN55008

Fish References Primary

Fish of Minnesota Field Guide, Dave Bosanko, 2007, Adventure Publications

Supplementary

Minnesota DNR Webpage "Fish of Minnesota" <http://www.dnr.state.mn.us/fish/index.html>

Herpetology References Primary

Minnesota DNR Webpage "Reptiles & Amphibians" http://dnr.state.mn.us/reptiles_amphibians/index.html

Supplementary

Tekeila, S. 2003. Reptiles and Amphibians of Minnesota Field Guide and CD. Adventure Publications, Cambridge. 140 pp. CD: 81 Tracks