

OHIO CAREER DEVELOPMENT EVENTS
AQUARIUM MANAGEMENT

Effective August 1, 2006

Purpose

To provide students with the opportunity to demonstrate aquarium knowledge and skills.

Date

State: Determined by the Agriculture Education Service

Location

State: Determined by the Agriculture Education Service

CDE Rules

1. Each school may enter an unlimited number of dues paid FFA members as participants, the top 4 scores will be considered the "team" and the top 3 scores will be the team score of record.

Each contestant will have two hours to complete the total event, consisting of a written test, an identification test, and a skills practicum.

Written Test (75 points) (online prior to the event)

1. The written test will be 75 multiple choice, matching, and/or true/false questions worth one point each.

2. The test will cover all aspects of aquarium management listed below, however, information for test questions will be limited to those books, chapters, and/or pages listed in the reference section. Included will be the weighted amounts of each subject area.

Identification (50 points)

1. Fifty slides, live specimens, or pictures will be presented to contestants who will identify them on a multiple choice type test. Each breed or item to be identified will be worth one point each. Emphasis will be placed on obtaining live specimens.

2. Slides, live specimens, or pictures to be identified will be broken down as follows:

Freshwater/brackish water fish 25

Marine fish/invertebrates 7

Aquarium equipment 7

Aquarium plants 5

Fish diseases 3

Fish foods 3

50 possible points

3. Freshwater/brackish water fish (25 points)

Angelfish
Arowana
Black Angel
Black Lace Angel
Black Molly
Black Moor
Black Neon Tetra
Black Shark
Black Tetra
Bleeding Heart Tetra
Blind Cave Fish
Bloodfin
Blue (three spot) Gourami
Blue Ram
Blushing Angel
Bronze Corydoras
Bubble-Eye Goldfish
Butterflyfish
Cardinal Tetra
Cherry Barb
Chinese Algae Eater
Clown Knife
Clown Loach
Common (comet) (feeder) Goldfish
Common (feeder) Guppy
Convict
Discus
Dwarf Gourami
Elephant-Nose
Fancytail Guppy
Firemouth
Ghost Knife Fish
Giant Danio
Giant Gourami
Glass Catfish.
Glowlight Tetra
Gold Angel
Green Swordtail
Head and Tail light Tetra
Iridescent Shark
Jack Dempsey
Jewel Fish
Kissing Gourami
Koi
Kuhli (Coolie) Loach
Leopard Corydoras
Longfinned Danio
Lyretailed Molly
Marble Angel
Marble Hatchet Fish
Marble Molly
Moonlight Gourami

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Aquarium Management Rules

Neon Tetra
Opaline Gourami
Oranda Goldfish
Oscar
Paradise Fish
Pearl Danio
Pearl Gourami
Pencilfish - 3 Banded
Plecostomus
Puffer
Rainbow Shark
Red (Harlequin) Rasbora
Red Bellied Piranha
Red-Eyed Tetra
Red-Tailed Shark
Rosy Barb
Sailfin Molly
Scissortail Rasbora
Serpae Tetra
Severum
Siamese Fighting Fish (Betta)
Silver Dollar
Silver Hatchet Fish
Silver Molly
Tiger Barb
Tinfoil Barb
Tri-Colored (bala) Shark
Tuxedo Platy
Upside-Down catfish
Velvet Swordtail
Viel Angel
Wagtail Platy
Whiptail
White Cloud Mountain Fish
Zebra Danio

Other aquatic animals to be included in this section:

Mystery Snail
Apple Snail
Ghost Shrimp
Pond Snail
Red Ramshorn Snail

4. Marine fish and invertebrates (must know juvenile and adult forms)

Anemone
Banded Coral Shrimp
Batstar
Beau Gregory
Blue Devil (Blue Damsel)
Butterfly Fish (general shape)
Cleaner Wrasse
Clown Anemone Fish
Clown Triggerfish
Common Starfish

Emperor Angel
French Angel
Hermit Crab
Horseshoe Crab
Lionfish
Maroon Clown
Moorish Idol
Neon Goby
Parrot Fish (general shape)
Pencil Urchin
Percula (Common)
Pipefish
Poor Man's Moorish Idol
Powder Blue Sturgeon
Puffer Fish
Queen Angel
Royal Gramma
Sea Fan
Seahorse
Spiny Lobster
Three Spot (Domino Damsel)
Tomato Clown
White-tail (Three-striped) Damsel
Yellow Tang (Yellow Sturgeon)

5. Aquarium equipment

Activated Carbon-Loose or Cartridge
Air Tubing - flexible
Air Tubing - rigid
Air Valve
Airstone - all types
Algae Scraper-all types
Alkalinity test kit
Ammonia test kit
Automatic Feeder (silicone)
Betta Barracks
Bio-balls
Box Filter
Breeding Grass
Breeding Net/Traps
Brine Shrimp Hatchery
Brine Shrimp Net
Chlorine test kit
Canister Filter
Diaphragm Air Pump
Diatomaceous Earth (Diatom) Powder
Dirt Magnet (sponge)
Filter
Dolomite
Feeding Block (Weekend Feeder)
Filter Floss
Fluorescent Bulb
Full Hood
Gang Valve
Glass Canopy
Gravel Vacuum/ Cleaner

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Heater
Hydrometer
Incandescent Bulb
Live rock
Net
Nitrate Test Kit (all types)
Peat Cartridge
pH Test Kit (strips/solutions)
Planting Stick
Power Head
Power filter with bio-wheel cartridge
Protein skimmer
Seatest Hydrometer
Siphon Tube for Power Filter
Siphon Tubing
Submersible Heater
Tank Divider
Thermometer - all types
Trickle Filter (wet-dry)
Ultraviolet light
Undergravel Filter
Water Hardness Test Kit (strips)
Worm Feeder
Zeolite - loose or cartridge

6. Aquarium plants

Amazon Swordplant
Ambula
Anacharis
Banana Plant
Cabomba
Corkscrew Vallisneria
Foxtail
Hairgrass
Hornwort
Hygrophilla
Jungle Vallisneria
Ludwigia
Water Sprite

7. Disease

Bacterial Fin and Tail Rot
Ichthyophthirius
Cotton Mouth
Dropsy
Fungal Fin and Tail Rot
Velvet

8. Foods

Blood Worms
Brine Shrimp
Brine Shrimp Eggs
Flake

Freeze-dried
Glass Worms
Granules
Pellets
Tubifex
Frozen

Practicum (75 points)

1. Four judges are required for this portion of the CDE. Each judge will judge all contestants. (See scorecards). Judges will NOT be able to explain or assist a contestant in any way.

2. All contestants will perform the same selected skills.

3. The 75 points allotted for the practicum will be divided between the 4 judges as follows:

Judge 1 20 points

Judge 2 20 points

Judge 3 20 points

Judge 4 15 points
75 possible points

4. Animals, products, and/or supplies to be tested will be limited to those listed in the identification portion of these rules.

Scoring Guide

1. Individual

Written test 75 points

Identification 50 points

Practicum 75 points

Total Maximum Individual Score 200 points

2. Team

200 points x 4 individuals = 800 points

References

The following references will be used to prepare the written portion of the test. Each reference or chapter will be assigned the following proportion of the 75 written questions.

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1. Small Animal Care and Management, Warren, Dean, Delmar, 2002
Chapter 20- Fish, 24 questions

2. The Everything Tropical Fish book, DeVito, Carlo and Skomal, Gregory, Adams Media Corporation, 2000
Chapter 1- 10 questions
Chapter 2- 10 questions
Chapter 3- 3 questions
Chapter 5- 5 questions
Chapter 6- 8 questions
Chapter 7(marine) - 15 questions

Additional reference material to aid in fish I.D.:

1. Freshwater Fish Identification Slide Set and Script, Collins, Penny, OSU Curriculum Materials Service, The Ohio State University, (614-292-4848)
2. Aquarium Fish, Mills, Dick, Dorling Kindersley Inc. 232 Madison Avenue, New York, 10016. 1993.

Aquarium Management Practicum Scorecard #1

Name _____

School _____

Judges will score student on ONE of the following skills for a total of 20 points. All students will be judged on the performance of the SAME skills.

Water Testing: Specific Gravity

1. Identify the correct equipment - hydrometer ____/5
- sea test
2. Use equipment correctly ____/5
3. Read specific gravity correctly ____/5
4. What is correct specific gravity for most marine tanks? ____/5

Water Testing: Read a PH Test

1. Select correct equipment - test strips ____/2
2. Run test correctly ____/3
3. Read pH correctly ____/5
4. Is range acid/neutral/basic? ____/5
5. Is this correct pH for this tank? ____/5

Water Testing: Nitrate Test Marine Tank (Color Block Method)

1. Select correct equipment ____/5
2. Ran test correctly ____/5

Aquarium Management Rules

3. Used non-contaminating techniques of adding chemicals and shaking vials ____/3
4. Read the level correctly ____/4

5. Is this an acceptable level? ____/3

Water Testing: Amonia

1. Select correct equipment - ____/5
2. Ran test correctly ____/5
3. Read the level correctly ____/5
4. Is this an acceptable level? ____/5

Total _____ /20

Aquarium Management Practicum Scorecard #2

Name _____

School _____

Judge will score student on ONE of the following skills for a total of 20 points. All students will be judged on the performance of the SAME skills.

Equipment Use: Siphon Starting

1. Select correct equipment ____/5
2. Siphon started with correct/safe procedure ____/5
3. Used gravel cleaner correctly ____/5
4. Little to no water spilled ____/5

Equipment Use: Start an Automatic Power Filter

1. Select correct equipment ____/5
2. Assemble equipment correctly ____/5
3. Use proper/safe procedure for starting the filter ____/5
4. Filter operates correctly ____/5

Equipment Use: Adjust a Heater

1. Select correct equipment ____/5
2. Use correct/safe procedure for installing heater ____/5
3. Explain how to adjust temperature ____/5
4. What is the ideal temperature? ____/5

Total _____ /20

Aquarium Management Practicum Scorecard #3

Name _____

School _____

Judge will score student on ONE of the following skills for a total of 20 points. All students will be judged on the performance of the SAME skills.

Troubleshooting: Decorating

1. Does tank have an appropriate plant selection/arrangement? _____/5

2. Does tank have appropriate selection/use of substrate material? _____/5

3. Does tank provide adequate hiding for both bottom dwellers and others? _____/5

4. Does this tank have adequate and appropriate decorations? _____/5

Troubleshooting: Filtration

1. Is under gravel filter installed/operating correctly? _____/5

2. Ability to correct problem _____/5

3. Explain how the UG filter works _____/5

4. Are additional filters necessary? If so, what type? _____/5

Troubleshooting: Overall

1. What is wrong with this tank? _____/5

2. Ability to correct the problem (s) _____/5

3. Identify type of lighting and cover used in this tank _____/4

4. Identify type of filtration used in this tank _____/4

5. Recommend changes to equipment _____/2

Total _____/20

Aquarium Management Practicum Scorecard #4

Name _____

School _____

Judge will score student on ONE of the following skills for a total of 15 points. All students will be judged on the performance of the SAME skills.

Sexing and Feeding Fish

1. Explain how to correctly identify sex of fish _____/5

2. Identify and select correct type of food _____/5

3. Feed appropriate amount/length of time _____/5

Catching and Bagging a Fish

1. Select correct equipment _____/5

2. Catch fish efficiently/easily _____/5

3. Correctly prepare and secure fish in bag (proper air/water, tie, no leaks

_____/5

Selecting Tank Mates

1. Determine temperament of fish (community/aggressive) _____/4

2. Suggest other species that could live in same tank _____/5

3. Name tank furnishings and /or plants that would be good for this fish _____/3

4. Name tank furnishings and/or plants that would be bad for this fish _____/3

Total _____/15