

CATA Curricular Code Change Proposal

Submission Instructions, please read in full before submitting your proposal:

1. Fill in all the below information.
2. Download the current code from the CATA Website: [Curricular Activities Code](#)
 1. Do not delete anything from the code. Strikethrough parts to delete. Any new wording, type into the code and highlight in yellow.
 2. Upload "Proposed Code" below.
 3. Upload any additional documents if needed
 4. Scroll all the way to the bottom and sign the form.
3. **IMPORTANT - Answering "Yes" to any of the questions requires the Host Site's Contest Coordinator's signature.**
 1. After all information is filled out, codes are updated and you have signed the form, hit "Save" on the bottom right-hand corner. **DO NOT** hit "SUBMIT".
 2. Once you hit "Save" a box will appear with a link. This link is specific to your proposal. You can email the link to yourself and also copy from this box.
 3. Email this link to the Host Site coordinator to review your proposal. When emailing the Host Site, request that they review your proposal and sign in the "Host Site Coordinator's" Signature box. Request that they hit "Save" after signing the document and let you know that the signature is complete.
 4. Using the link, pull up your proposal and confirm that the signatures are complete and hit "Submit". Once you hit "Submit", you will no longer be able to make any changes to your submission.

Name of Contest:
Nursery/Landscape

Curricular Codes Open - List A

Out of Rotation Curricular Codes
Nursery/Landscape

Revive a Contest: Please enter the name of the contest below and contact the CATA office for a copy of the Code.

Proposed by:
Russell Zimmerman

School:
Nipomo

Email:
russell.zimmerman@lmusd.org

Issue:
Remove Judging and Reasons. Rationale: There is no judging or reasons component at the National Contest

Add in Landscape Estimating. Rationale: This would help balance the contest between nursery and landscape content while making the contest less nursery-heavy overall. Landscape estimating is also a component of the National Contest and could likely be implemented in the same rotation as the written test, allowing approximately 30 minutes for each component or one hour total as most students finish the test fairly quickly.

Add in Verbal Customer Assistance. Rationale: This is a national contest component that still requires students to demonstrate communication skills while replacing reasons. National FFA already provides past practicum materials on the CDE/LDE page, which would help coaches adequately prepare students. My thought is that there would probably need to be 4 judges with a member of each team assigned to a judge for fairness.

Add in Propagation Practicum. Rationale: At the national level, the hands-on practicum alternates between transplanting and propagation, making propagation a major component of the contest structure.

THIS MEETING WILL BE TO DEVELOP PRACTICUMS TO BE RESUBMITTED NEXT YEAR FOR APPROVAL!

This proposal will require a contest to open out of rotation: (Please note: It is highly recommended that you, or a representative, attend the pre-conference governing board meeting to answer any questions regarding proposed curricular code changes to contests that are requested to be opened out of rotation.)

Yes

The change will affect General Rules:

No

The change will affect the awards needed:

Yes

The proposed change will affect contest forms:

No

The proposed change will affect contest hosting site (e.g. additional facilities, new sections, additional scoring, etc.)

Yes

If you answered YES to any of the above questions, please explain:

This contest is set to open next year but opening it this year will provide us a chance to fix what works and what does not when it opens next year.

This will affect the sub contest awards that are offered. Removing the judging sub contest and the reasons sub contest. It would add landscape estimating sub contest and verbal customer assistance sub contest. It would also change the transplanting sub contest to nursery practicums sub contest.

The same judging card scan sheet can still be used.

Biggest changes are changing the contest format. No Judging and reasons. This rotation will be filled with verbal customer assistance but will require at least two judges to speed up the process. Preferably 4. This means 2 additional judges than what has previously been done, however hosting it can take place where judging/reasons was traditionally done. Additional materials: Customer items, information boards.

Landscape estimating will be implemented in the same rotation as the test, so no additional space is needed. Additional materials: 11x17 landscape plans, landscape plans questions.

Propagation practicum: This practicum is similar to transplanting so will require the same amount of space. Additional materials: mother stock, rooting hormone, soil, cell packs, and labels.

Which JudgingCard scorecard will be used for tabulations?

#105482

Is this a New Contest Proposal?

No

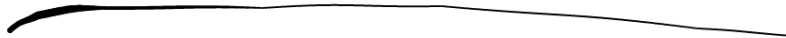
If you answered YES to this being a New Contest Proposal, please indicate who will be sponsoring the contest. New Contest Proposals require a 3-year sponsor. Contact information for Sponsor:

If you answered yes to any of the above questions, you need to include the following signature:

Host Site Contest Coordinator's Name:

Tiffany Faulstich

CDE Host Site Contest Coordinator's Signature (agreeing that changes are able to be accommodated by the host site.)



Upload code with tracked changes:

Nursery Landscape Proposed Changes 2026 (2).pdf

Upload any additional information you would

like:

Please sign below:

Russell Zimmerman

NURSERY/LANDSCAPE

Revised 6/2024

Purpose and Standards

The Nursery/Landscape contest prepares students for careers in the nursery and landscaping industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, as well as landscape design, installation, and maintenance.

Foundation Standards: Mathematics Algebra, 15.0 and Geometry 8.0, 11.0. History & Social Science Principles of Economics: 12.2.2, 12.2.5, 12.2.6, 12.2.7. Communication: 1.1, 2.2, 1.8.

Ornamental Horticulture Pathway Standards: F1.1-1.5, F2.1-2.6, F3.1-3.3, F4.1-4.4, F5.1-5.5, F6.1-6.4, F7.1-7.3, F8.1-8.4, F9.1-9.4, F10.1-10.5.

Contestants

Teams consist of four members, with all four individual scores counting as the team score. All team members are eligible for individual awards.

Judging Card

It is recommended that the Nursery/Landscape Contest uses Judging Card Scan Sheet #105482, but General Rules state that contest hosts may use the card they see fit.

Classes

Class	Individual Points	Team Points
Trees class placed	50	200
Shrub class placed	50	200
Flat class placed	50	200
Reasons 1	50	200
Reasons 2	50	200
Verbal Customer Assistance	50	200
Nursery Practicum: Propagation	50	200
Nursery Practicum: Transplanting	50	200
Identification	400	1600
Written Test	150	600
Landscape Estimating	100	400
TOTAL	850 800	3400 3200

Tie Breaker

1. The team or individual scoring the highest total ~~reason score(s)~~ **Verbal Customer Assistance score(s)** will be the winner.
2. If a tie still exists, the written test ~~(or other class)~~ will be used to determine the high individual or team.
3. If a tie still exists, the total score of the individual or team will be used to determine the high individual or team.

Sub-contest Awards

Sub-contest awards will be given for high teams and individuals in the following areas: ~~Judging (Trees, Shrubs, Flats combined), Reasons,~~ **Nursery Practicums (Transplanting, Propagation), Verbal Customer Assistance, Landscape Estimating,** ~~Transplants, ID, and Written Test. (Reasons are not included in judging sub-contest score.)~~

Rules

I. Judging

- ~~A. All Plants used for judging shall come from the Curricular Code Nursery/Landscape Identification list.~~
- ~~B. Three classes will be judged. They will be labeled 1, 2, and 3.~~
- ~~C. The three classes shall consist of:

 - ~~1. One class of trees (The trees will be growing in 5 gallon cans.)~~
 - ~~2. One class of shrubs (The shrubs will be growing in 5 gallon cans.)~~
 - ~~3. One class of standard flats of marketable bedding plants~~~~
- ~~D. Contestants will be awarded 0-50 points for each placing.~~
- ~~E. Ten minutes will be allowed for judging each class.~~
- ~~F. Contestants are not allowed to handle any contest material.~~

II. Reasons

- ~~A. Reasons will be given on two of the three classes judged.~~
- ~~B. Reasons will be given immediately following the class that was judged.~~
- ~~C. Contestants will be given two minutes for presenting oral reasons in each class.~~
- ~~D. 0-50 points will be given based on the following criteria:~~

Category	Points Possible
Subject Matter	30 Points
Logic and Force	15 Points
Bearing and address	5 Points
Total	50 Points

I. ~~Score cards~~

Tree Judging Score Card		Value
	—	
A. Size		20%
1)	Height of tree	
2)	Spread of branches	
3)	Circumference of trunk	
	—	
B. Framework		20%
1)	Distribution of branches	
2)	General symmetry	
C. Pruning		20%
1)	Systems should be in accord with length of growth—severe, moderate or light	
2)	Flowering wood evenly distributed	
3)	Interfering branches and dead wood removed	
4)	Pruning cuts properly made and treated	
	—	
D. Vigor		20%
1)	Good color and large leaves	
2)	Sufficient new wood	
3)	New wood in good condition—not spindling	
	—	
E. Health		20%
1)	Fungus or bacterial disease	
2)	Insect pests	
3)	Physiological diseases	
4)	Mechanical injury	
5)	Sunburn	
6)	Frost injury	
	TOTAL	100%
	—	

Shrubs Judging Score Card		Value
	-	
A	Size	40%
	1) Height of plant	
	2) Spread of branches	
	3) Form	
	-	
B	Framework	20%
	1) Distribution well placed	
	2) General symmetry -- well shaped	
	-	
C	Pruning	10%
	1) Systems should be in accord with length of growth - severe, moderate or light	
	2) Flowering wood evenly distributed	
	3) Interfering branches and dead wood removed	
	4) Pruning cuts properly made and treated	
	-	
E	Health and Vigor	30%
	1) Good color and large leaves	
	2) Sufficient new wood past season	
	3) New wood in good condition -- not spindling	
	4) Fungus or bacterial disease	
	5) Insect pests	
	6) Physiological diseases	
	7) Mechanical injury	
	8) Sunburn	
	9) Frost injury	
	TOTAL	100%

Flat Judging Score Card		Value
	-	
A	Uniformity	40%
	1) Size of plant	
	2) Number of plants	
	3) Uniformity of spotting	
	-	
B	Health and Vigor	40%
	1) Sufficient growth	
	2) Good color and large leaves	
	3) New growth in good condition not spindling	
	4) Fungus or bacterial disease	
	5) Insect pests	
	6) Physiological diseases	
	7) Mechanical injury	
	8) Sun damage	
	9) Soil condition	
	-	
C	Salability	20%
	TOTAL	100%

IV. Verbal Customer Assistance

- A. This interpersonal relations practicum is designed to evaluate participant knowledge of and ability in the following areas:
 1. Verbal communication
 2. Sales and customer assistance skills
 3. Plant materials, plant culture and problems
 4. Nursery and landscape supplies and equipment
- B. The participant will assume the role of a business customer service representative (garden center or other related business or an educational agency) responding to an assistance need of the customer or client (the judge). General themes might include, but are not limited to, the following: clinical diagnosis or recommendations; care advice; sales of plants, equipment, materials or treatments; dealing with complaints.
- C. Each participant will be located at a separate station with one minute allotted to review the materials and information provided prior to arrival of the judge. These materials may be handled and referred to as appropriate for the conversation with the judge.
- D. Contestants will have 8 minutes to interact with the customer and make the sale.
- E. The scenario will be the National FFA scenario from 2 years prior. Example: 2027 will utilize the 2025 Verbal Customer Assistance Scenario. Student brochure and host site/judges guide can be found at <https://ffa.app.box.com/v/Nurs-Landsc-Past-Tests-Prac>
- F. 4 judges will be selected for this event with 1 member from each team assigned to a specific judge to keep scoring fair across the contest.

G. Verbal Customer Assistance Scoring rubric:

Indicator	Very strong evidence of skill is present 5–4 points	Moderate evidence of skill is present 3–2 points	Weak evidence of skill is present 1–0 points	Points earned
First impression	Individual identifies themselves with a good first impression.	Individual mostly identifies themselves with a good first impression.	Individual poorly identifies themselves with a good first impression.	
Personal rapport	Individual asks questions and utilizes information from answers in an attempt to build personal rapport.	Individual mostly asks questions and utilizes information from answers in an attempt to build personal rapport.	Individual poorly asks questions and utilizes information from answers in an attempt to build personal rapport.	
Clarifying questions	Individual asks questions to learn about the customer's situation and to confirm preliminary customer information.	Individual mostly asks questions to learn about the customer's situation and to confirm preliminary customer information.	Individuals poorly asks questions to learn about the customer's situation and to confirm preliminary customer information.	
Needs and wants	Individual confirmed and discovered customer needs and wants.	Individual mostly confirmed and discovered customer needs and wants.	Individual poorly confirmed and discovered customer needs and wants.	
Features and benefits	Individual applied features and benefits of their product to the customer's needs/wants.	Individual mostly applied features and benefits of their product to the customer's needs/wants.	Individual poorly applied features and benefits of their product to the customer's needs/wants	
Matching needs and wants	Individual allows customer to participate in matching their wants/needs to the product features.	Individual mostly allows customer to participate in matching their wants/needs to the product features.	Individual poorly allows customer to participate in matching their wants/needs to the product features.	
Trial close	Individual uses appropriate technique to confirm customer understanding.	Individual mostly uses appropriate technique to confirm customer understanding.	Individual poorly uses appropriate technique to confirm customer understanding.	
Objections	Student listens and clarifies customers objections and discusses the features/benefits of the product information to address the customers objections.	Student mostly listens and clarifies customers objections and discusses the features/benefits of the product information to address the customers objections.	Student poorly listens and clarifies customers objections and discusses the features/benefits of the product information to address the customers objections.	
Close transaction	Student closes or attempts to close the transaction.	Student mostly closes or attempts to close the transaction	Student poorly closes or attempts to close the transaction.	
Active listening	Individual actively listens to comments and answers from the customer.	Individual mostly listens to comments and answers from the customer.	Individual poorly listens to comments and answers from the customer.	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE				

V. Landscape Estimating

- A. This practicum is designed to evaluate participant knowledge of and ability in the following areas:
 - 1. Evaluating a landscape design
 - 2. Reading a landscape drawing
 - 3. Determining materials needed to execute a landscape plan
 - 4. Maintenance, estimating and bidding
 - 5. Evaluating factors that affect profitability of a landscape business
- B. A landscape drawing and scratch paper will be provided to the participants. There will be objective questions about the landscape plan. Participants will record their answers using a scan form in the “Exam 2/Team” section.
- C. This section will be completed in the same rotation as the General Knowledge Objective Test section of the contest.
- D. Contestants will have 30 minutes to complete it.
- E. The number of questions can vary with 10, 20, or 25 questions at the discretion of the contest host with point values varying from 10 points per question, 5 points per question or 4 points per question for a total of 100 points per contestant. All questions must be of equal weight.
- F. Contestants will not be able to ask any contest personnel questions which seek interpretation of or answers to questions during the administration of the test.
- G. Landscape Design to interpret will be printed on an 11x17 sheet of paper.
- H. Plants on the landscape design plan must be from the identification list (Appendix 2)
- I. An example landscape design plan is provided with practice questions. (Appendix 1)
 - 1. Additional examples can be found on the “Past Tests and Practicums” from National FFA. <https://ffa.app.box.com/v/Nurs-Landsc-Past-Tests-Prac>

VI. Nursery Practicum: Propagation

- A. Contestants will propagate 1 cell pack of stem cuttings, which will be worth 50 points: 25 points for the mechanics and 25 points for the explanation of the process to a judge. A ten (10) point deduction will be made if the explanation exceeds three (3) minutes.
- B. Score Card

Propagation Score Card	Value
Mechanics	
1. Checking soil for moisture (rib test)	5
2. Filling cell pack with soil (sufficient)	5
3. Removal of cutting (quality, clean cuts, appropriate length)	5
4. Application of hormone (correct amount)	5
5. Sticking the cuttings (centered, divot made, compacted)	5
Explanation of Process	
Explanation of the steps outlined in the mechanics of the process.	25
TOTAL	50

VII. **Nursery Practicum:** Transplanting

- A. Contestants will transplant one liner to a 1-gallon container, which will be worth 50 points: 25 points for the mechanics and 25 points for the explanation of the process to a judge. A ten (10) point deduction will be made if the explanation exceeds three (3) minutes.

B. **Score Card**

Transplant Score Card	Value
Mechanics	
1. Checking soil for moisture (rib test)	5
2. Removing liner from pot (Proper procedure, does not harm plant)	5
3. Centering plant in can	5
4. Proper level of plant/soil level (Freeboard line)	5
5. Watering the transplanted liner (Sufficient, not waterlogged, does not harm transplant)	5
Explanation of Process	
Explanation of the quality of the liner and the steps outlined in the mechanics of the process.	25
TOTAL	50

VIII. Identification

- A. There will be identification of:

1. Bedding Plants (6)
2. Perennials (7)
3. Ferns (2)
4. House Plants (10)
5. Shrubs (30)
6. Trees (17)
7. Vines (5)
8. Ground Covers (5)
9. Cacti and Succulents (3)
10. Buds and Grafts, Tools and Materials (15)

- B. Plant, tool, buds, graft and materials identification:

1. The contest host will provide to each contestant with the Nursery/Landscape Identification List (~~Attached~~) (**appendix 2**)
2. One hundred (100) identification items worth 4 points each will be bubbled in on the JudgingCard Scan Sheet.
3. ID will be split into two sections of 1-50 A and 1-50 B but will all be completed in the same rotation within 60 minutes.
4. Each contestant will receive a minimum of 60 minutes.
5. The plant list will align with the California Certified Nursery Professional Plant List and will be updated on each curricular code cycle.
6. Identification items will be typical of container stock found in a retail nursery. Six (6) bedding plants, seven (7) perennials, two (2) ferns, ten (10) house plants, thirty (30) shrubs, seventeen (17) trees, five (5) vines, five (5) ground covers, three (3) cacti &

- succulents and fifteen (15) buds, grafts, tools and materials will be selected from their respective groups on the Nursery/Landscape Identification List.
- C. Identification exam shall be on the JudgingCard scantron sheet. A sample is on the CATA website for the Curricular Code. **For contests not utilizing judging card, use the identification answer sheet (appendix 3)**
 - D. Contestants are not allowed to handle any contest material.
- IX. General Knowledge Objective Test
- A. A 50 question general knowledge objective test shall consist of:
 - 1. Fifteen true/false questions
 - 2. Fifteen multiple choice questions
 - 3. Twenty matching questions
 - B. All questions will be drawn from the most current text, Retail Nurseryman's Manual, prepared by California Association of Nurseries and Garden Centers, as well as Landscaping: Principles & Practices (Ingels) - Chapter 3: Principles of Design, Chapter 12: Pricing the Proposed Design, Chapter 14: Landscape Calculations. ~~The test will also include questions referring to landscape and landscape design, as well as cost estimating, reading, and interpreting landscape design plans, and assessing an area for installation.~~
 - C. Contestants will be given ~~forty-five~~ **thirty (30)** minutes to complete the test.
 - D. Contestants will not be able to ask any contest personnel questions which seek interpretation of or answers to test questions during the administration of the objective test.
 - E. Each question will be worth three points with 150 points total possible.
 - F. **Participants will record their answers using a scan form in the "Exam" section.**

Nursery/Landscape Career Development Event
LANDSCAPE ESTIMATING EXAMPLE from National FFA

Notes:

- This is just an example of what kinds of questions could be asked
- Questions pertaining to plants will have plants from the Identification List (addendum2)
- Landscape design plans will be based on a California location.

This is a landscape plan for an existing business in downtown Indianapolis, IN. The client is requesting a bid for maintenance work for the upcoming year. All questions are based on the provided plan.

1. One of the small trees has died. What is a good replacement option?
 - a. Acer saccharum
 - b. Tilia cordata
 - c. Malus spp.
 - d. Platanus x acerifolia
2. Evergreen shrubs take a labor factor of .25 man hours per shrub to prune. Evergreen shrubs need to be pruned twice per year for this contract. How many man hours will it take to prune all the evergreen shrubs for the whole year?
 - a. 16 man hours
 - b. 4.5 man hours
 - c. 6 man hours
 - d. 2.75 man hours
3. How many square feet of annuals will you need for this site?
 - a. 120 sq. ft.
 - b. 75 sq. ft.
 - c. 60 sq. ft.
 - d. 103 sq. ft.
4. The annuals the client selected need to be planted 8" on center. Based on your sq. ft. of annual beds, how many annuals will you need?
 - a. 232 plants
 - b. 118 plants
 - c. 157 plants
 - d. 259 plants
5. How many linear feet of string trimming is there indicated in the area labeled as string trim section?
 - a. 62.5 linear ft.
 - b. 425 linear ft.
 - c. 150 linear ft.
 - d. 302 linear ft.
6. What is the title block of this plan missing?
 - a. Nothing; it is complete
 - b. North arrow and scale
 - c. Scale and location
 - d. Location and design firm

7. Mulch needs to be installed at a 2" depth in the spring. 1 cubic yard of mulch covers 324 square feet at a 1" depth. This site has 1,116 sq. ft. of mulch beds. How many cubic yards of mulch will you need?
 - a. 12.33
 - b. 3.25
 - c. 6.88
 - d. 4.6
8. A fall clean up includes cutting down perennials and grasses at a labor factor of .08 hours per plant. You charge \$65 per hour. How much will you charge for the fall clean up service?
 - a. \$198.00
 - b. \$185.00
 - c. \$213.00
 - d. \$312.00
9. Pruning at the correct time is essential to maintaining plants properly. As a general rule, when is the best time to prune flowering shrubs?
 - a. Just after they finish flowering
 - b. In the fall
 - c. As soon as you see buds
 - d. Anytime that works with your schedule
10. The client would like a proposal for 2 new annual beds indicated on the plan with squares and labeled. You have figured that you will need 5 flats. Each flat costs \$16.50 and needs a 1.5 factor mark up. How much will you charge for these 2 new beds?
 - a. \$433.80
 - b. \$123.75
 - c. \$98.32
 - d. \$267.83

Appendix 2 - Nursery/Landscape Identification List

TREES	BOTANICAL NAME	COMMON NAME
TR 001	<i>Acer palmatum</i>	Japanese Maple
TR 002	<i>Arbutus unedo</i>	Strawberry Tree
TR 003	<i>Archontophoenix cunninghamiana</i>	King Palm
TR 004	<i>Cedrus deodara</i>	Deodar Cedar
TR 005	<i>Cercis occidentalis</i>	Western Redbud
TR 006	<i>Chamaerops humilis</i>	Mediterranean Fan Palm
TR 007	<i>Cinnamomum camphora</i>	Camphor Tree
TR 008	<i>Citrus 'Improved Meyer'</i>	Improved Meyer Lemon
TR 009	<i>Cupaniopsis anacardioides</i>	Carrot Wood
TR 010	<i>Cupressus sempervirens</i>	Italian Cypress
TR 011	<i>Elaeocarpus decipiens</i>	Japanese Blueberry Tree
TR 012	<i>Eucalyptus polyanthemos</i>	Silver Dollar Gum
TR 013	<i>Geijera parviflora</i>	Australian Willow, (Wilga)
TR 014	<i>Ginkgo biloba</i>	Maidenhair Tree
TR 015	<i>Jacaranda mimosifolia</i>	Jacaranda
TR 016	<i>Lagerstroemia indica</i>	Crape Myrtle
TR 017	<i>Liquidambar styraciflua</i>	American Sweet Gum
TR 018	<i>Magnolia grandiflora</i>	Southern Magnolia, (Bull Bay)
TR 019	<i>Maytenus boaria</i>	Mayten
TR 020	<i>Morus alba 'Fruitless'</i>	Fruitless Mulberry
TR 021	<i>Olea europaea</i>	Olive
TR 022	<i>Pinus canariensis</i>	Canary Island Pine
TR 023	<i>Pinus thunbergii</i>	Japanese Black Pine
TR 024	<i>Pistachia chinensis</i>	Chinese Pistache
TR 025	<i>Pyrus calleryana</i>	Flowering Pear
TR 026	<i>Quercus agrifolia</i>	Coast Live Oak
TR 027	<i>Quercus lobata</i>	Valley Oak
TR 028	<i>Sequoia sempervirens</i>	Redwood, (Coast Redwood)
TR 029	<i>Syagrus romanzoffiana (romanzoffianum), (Arecastrum romanzoffianum)</i>	Queen Palm
TR 030	<i>Trachycarpus fortunei</i>	Windmill Palm
SHRUBS	BOTANICAL NAME	COMMON NAME
SH 031	<i>Abelia 'Edward Goucher'</i>	Pink Abelia 'Edward Goucher'
SH 032	<i>Abutilon hybrids</i>	Flowering Maple, (Chinese Lantern)
SH 033	<i>Alyogyne (Hibiscus) huegelii</i>	Blue Hibiscus
SH 034	<i>Anisodonteia x hypomandarum</i>	Cape Mallow
SH 035	<i>Aucuba japonica 'Variegata'</i>	Gold Dust Plant, (Japanese Aucuba)
SH 036	<i>Bambusa multiplex (glaucescens) 'Golden Goddess'</i>	Golden Goddess Bamboo
SH 037	<i>Brunfelsia pauciflora (calycina) 'Floribunda'</i>	Yesterday-Today-And-Tomorrow
SH 038	<i>Buddleja davidii</i> ¹	Butterfly Bush, (Summer Lilac)
SH 039	<i>Buxus microphylla japonica</i>	Japanese Boxwood
SH 040	<i>Calliandra haematocephala</i>	Pink Powder Puff

1

SH 041	<i>Callistemon viminalis</i> 'Little John'	Dwarf Bottlebrush
SH 042	<i>Camellia japonica</i>	Japanese Camellia
SH 043	<i>Camellia sasanqua</i>	Sasanqua Camellia
SH 044	<i>Carissa macrocarpa</i> 'Tuttle', ('Nana Compacta Tuttlei')	Natal Plum
SH 045	<i>Ceanothus griseus horizontalis</i>	Carmel Creeper
SH 046	<i>Cestrum nocturnum</i>	Night Jessamine
SH 047	<i>Cistus x purpureus</i>	Orchid Rockrose
SH 048	<i>Coleonema pulchellum (pulchrum)</i>	Sunset Gold Coleonema
SH 049	<i>Cotoneaster horizontalis</i>	Rock Cotoneaster
SH 050	<i>Cuphea hyssopifolia</i>	False (Hawaiian, Mexican) Heather
SH 051	<i>Cycas revoluta</i>	Sago Palm
SH 052	<i>Daphne odora</i> 'Aureomarginata' ('Aureo-marginata', 'Marginata')	Winter Daphne
SH 053	<i>Dodonaea viscosa</i> 'Purpurea'	Purple Hop Bush, (Purple Hopseed Bush)
SH 054	<i>Echium candicans (fastuosum)</i>	Pride of Madeira
SH 055	<i>Escallonia x exoniensis</i> ('Frades')	Escallonia
SH 056	<i>Euonymus japonicus</i> 'Aureovariegatus'	Gold Spot Euonymus
SH 057	<i>Fatsia japonica</i>	Japanese Aralia
SH 058	<i>Feijoa (Acca) sellowiana</i>	Pineapple Guava
SH 059	<i>Forsythia x intermedia</i>	Forsythia
SH 060	<i>Gardenia jasminoides (augusta)</i> 'Veitchii'	Everblooming Gardenia
SH 061	<i>Grevillea</i> 'Noellii'	Grevillea
SH 062	<i>Hibiscus rosa-sinensis</i>	Chinese Hibiscus, (Tropical Hibiscus)
SH 063	<i>Hibiscus syriacus</i>	Rose of Sharon, (Shrub Althaea)
SH 064	<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea, (Garden Hydrangea)
SH 065	<i>Juniperus chinensis</i> 'Kaizuka', ('Torulosa')	Hollywood Juniper
SH 066	<i>Juniperus procumbens</i> 'Nana'	Dwarf Japanese Garden Juniper
SH 067	<i>Juniperus rigida conferta</i> 'Blue Pacific'	Shore Juniper
SH 068	<i>Laurus nobilis</i>	Sweet Bay, (Grecian Laurel) ²
SH 069	<i>Lavatera maritima</i>	Tree Mallow
SH 070	<i>Leonotis leonurus</i>	Lion's Tail
SH 071	<i>Leptospermum scoparium</i>	New Zealand Tea Tree
SH 072	<i>Ligustrum japonicum</i> 'Texanum'	Wax-Leaf Privet, Japanese Privet
SH 073	<i>Loropetalum chinense</i>	Chinese Fringe Flower
SH 074	<i>Lycianthes (Solanum) rantonnetii</i>	Blue Potato Bush
SH 075	<i>Myrsine africana</i>	African Boxwood
SH 076	<i>Myrtus communis</i> 'Compacta'	Dwarf Myrtle
SH 077	<i>Nandina domestica</i> 'Gulf Stream'	Gulf Stream Heavenly Bamboo
SH 078	<i>Nerium oleander</i>	Oleander
SH 079	<i>Philodendron bipinnatifidum (selloum)</i>	Philodendron
SH 080	<i>Phoenix roebelenii</i>	Pygmy Date Palm
SH 081	<i>Phormium tenax</i>	New Zealand Flax
SH 082	<i>Photinia x fraseri</i>	Photinia
SH 083	<i>Pieris (Andromeda) japonica</i>	Lily-Of-The-Valley Shrub

SH 084	<i>Pinus mugo (mugo mugo)</i>	Mugo Pine
SH 085	<i>Pittosporum tenuifolium (nigricans)</i>	Kohuhu
SH 086	<i>Pittosporum tobira 'Wheeler's Dwarf'</i>	Wheeler's Dwarf Mock Orange
SH 087	<i>Platyclusus (Thuja) orientalis 'Aurea Nana'</i>	Dwarf Golden Arborvitae
SH 088	<i>Plumbago auriculata (capensis)</i>	Cape Plumbago
SH 089	<i>Podocarpus gracilior</i>	Fern Pine
SH 090	<i>Polygala x dalmaisiana</i>	Sweet Pea Shrub
SH 091	<i>Pyracantha crenatoserrata (fortuneana) 'Graber'</i>	Graber Pyracantha
SH 092	<i>Rhaphiolepis indica</i>	Indian Hawthorn
SH 093	<i>Rhododendron (Azalea) indica</i>	(Southern) Indica Azalea
SH 094	<i>Schefflera arboricola</i>	Hawaiian Elf Schefflera
SH 095	<i>Strelitzia reginae</i>	Bird of Paradise
SH 096	<i>Syringa vulgaris</i>	Common Lilac
SH 097	<i>Syzygium paniculatum (Eugenia myrtifolia)</i>	Brush Cherry, (Australian Brush Cherry)
SH 098	<i>Tecoma (Tecomaria) capensis</i>	Cape Honeysuckle
SH 099	<i>Teucrium fruticans</i>	Bush Germander
SH 100	<i>Tibouchina urvilleana (semidecandra)</i>	Princess Flower
SH 101	<i>Viburnum opulus 'Roseum' ('Sterile')</i>	Common Snowball
SH 102	<i>Viburnum tinus 'Spring Bouquet'</i>	Spring Bouquet Viburnum
SH 103	<i>Westringia fruticosa (rosmariniformis)</i>	Coast Rosemary
SH 104	<i>Xylosma congestum</i>	(Shiny) Xylosma
VINES		
	BOTANICAL NAME	COMMON NAME
VI 105	<i>Bougainvillea hybrids</i>	Bougainvillea
VI 106	<i>Clematis hybrids</i>	Clematis
VI 107	<i>Clytostoma callistegioides</i>	Violet Trumpet Vine
VI 108	<i>Gelsemium sempervirens</i>	Carolina Jessamine
VI 109	<i>Hardenbergia violacea</i>	Lilac Vine
VI 110	<i>Jasminum polyanthum</i>	Pink Jasmine
VI 111	<i>Mandevilla x 'Alice du Pont'</i>	Alice Du Pont Mandevilla
VI 112	<i>Pandorea jasminoides 'Rosea'</i>	Pink Bower Vine
VI 113	<i>Parthenocissus tricuspidata</i>	Boston Ivy
VI 114	<i>Passiflora spp.</i>	Passion Vine
VI 115	<i>Solanum laxum (jasminoides)</i>	Potato Vine
VI 116	<i>Stephanotis floribunda</i>	Madagascar Jasmine
VI 117	<i>Thunbergia alata</i>	Black-Eyed Susan Vine
VI 118	<i>Trachelospermum jasminoides</i>	Star Jasmine
VI 119	<i>Wisteria sinensis</i>	Chinese Wisteria
FERNS		
	BOTANICAL NAME	COMMON NAME
FE 120	<i>Asplenium bulbiferum</i>	Mother Fern
FE 121	<i>Athyrium niponicum pictum</i>	Japanese Painted Fern
FE 122	<i>Cyathea cooperi</i>	Australian Tree Fern
FE 123	<i>Dicksonia antarctica</i>	Tasmanian Tree Fern
FE 124	<i>Dryopteris erythrosora</i>	Autumn Fern
FE 125	<i>Polystichum munitum</i>	Western Sword Fern
FE 126	<i>Rumohra adiantiformis</i>	Leatherleaf Fern
FE 127	<i>Woodwardia fimbriata</i>	Giant Chain Fern

PERENNIALS	BOTANICAL NAME	COMMON NAME
PE 128	<i>Achillea millefolium</i>	Common Yarrow
PE 129	<i>Acorus gramineus</i> hybrids	Japanese Sweet Flag
PE 130	<i>Agapanthus</i> hybrids	Lily-of-the-Nile (Lily of the Nile)
PE 131	<i>Alstroemeria</i> hybrids	Peruvian Lily (Alstroemeria)
PE 132	<i>Anigozanthus</i> hybrids	Kangaroo Paw
PE 133	<i>Argyranthemum (Chrysanthemum) frutescens</i>	Marguerite
PE 134	<i>Aquilegia</i> hybrids	Columbine
PE 135	<i>Asclepias</i> spp.	Milkweed
PE 136	<i>Bergenia cordifolia</i>	Heartleaf Bergenia
PE 137	<i>Canna</i> hybrids	Canna
PE 138	<i>Carex comans</i>	New Zealand Hair Sedge
PE 139	<i>Centaurea cineraria</i>	Dusty Miller
PE 140	<i>Clivia miniata</i>	Clivia
PE 141	<i>Coreopsis grandiflora</i>	Coreopsis
PE 142	<i>Delphinium elatum</i>	Candle Delphinium
PE 143	<i>Digitalis purpurea</i>	Common Foxglove
PE 144	<i>Ensete ventricosum (Musa ensete)</i>	Abyssinian Banana
PE 145	<i>Erigeron karvinskianus</i>	Mexican Daisy, (Santa Barbara Daisy)
PE 146	<i>Gaillardia x grandiflora</i> hybrids	Gaillardia
PE 147	<i>Gaura lindheimeri</i> 'Siskiyou Pink'	Pink Gaura
PE 148	<i>Geranium sanguineum</i>	Bloody Cranesbill
PE 149	<i>Helleborus orientalis</i>	Lenten Rose
PE 150	<i>Hemerocallis</i> hybrids	Daylily
PE 151	<i>Hesperaloe</i> spp.	Hesperaloe
PE 152	<i>Heuchera sanguinea</i>	Coral Bells, (Alum Root)
PE 153	<i>Hosta</i> hybrids	Plantain Lily
PE 154	<i>Iberis sempervirens</i>	Evergreen Candytuft
PE 155	<i>Juncus patens</i>	California Gray Rush
PE 156	<i>Lamium maculatum</i>	Dead Nettle, (Spotted Nettle)
PE 157	<i>Lavandula angustifolia</i>	English Lavender
PE 158	<i>Leucanthemum x superbum (Chrysanthemum maximum)</i>	Shasta Daisy
PE 159	<i>Limonium perezii</i>	Statice, (Sea Lavender)
PE 160	<i>Liriope gigantea (Ophiopogon jaburan)</i>	Giant Lily Turf
PE 161	<i>Miscanthus sinensis</i> hybrids	Eulalia (Japanese Silver Grass)
PE 162	<i>Nemesia caerulea (fruticans) hybrids</i>	Nemesia
PE 163	<i>Pelargonium x hortorum</i>	Common Geranium, (Garden Geranium)
PE 164	<i>Penstemon x</i> hybrids	Border Penstemon, (Garden Penstemon)
PE 165	<i>Salvia greggii</i>	Autumn Sage
PE 166	<i>Salvia leucantha</i>	Mexican Bush Sage
PE 167	<i>Scabiosa columbaria</i> 'Butterfly Blue'	Pincushion Flower
PE 168	<i>Scaevola aemula</i>	Fan Flower
PE 169	<i>Sutera cordata</i>	Bacopa
PE 170	<i>Tulbaghia violacea</i>	Society Garlic
PE 171	<i>Zantedeschia aethiopica</i>	Common Calla

BEDDING PLANTS		
	BOTANICAL NAME	COMMON NAME
BP 172	<i>Ageratum houstonianum</i>	Floss Flower
BP 173	<i>Antirrhinum majus</i>	Snapdragon
BP 174	<i>Begonia semperflorens</i>	Bedding Begonia, (Fibrous Begonia)
BP 175	<i>Bellis perennis</i>	English Daisy
BP 176	<i>Calendula officinalis</i>	Calendula, (Pot Marigold)
BP 177	<i>Calibrachoa hybrids</i>	Million Bells
BP 178	<i>Catharanthus roseus (Vinca rosea)</i>	Madagascar Periwinkle, (Vinca)
BP 179	<i>Celosia plumosa</i>	Cockscomb
BP 180	<i>Cosmos bipinnatus</i>	Cosmos
BP 181	<i>Cyclamen persicum</i>	Florists' Cyclamen
BP 182	<i>Dahlia hybrids</i>	Bedding Dahlia
BP 183	<i>Eustoma grandiflorum (Lisianthus russellianthus)</i>	Lisianthus
BP 184	<i>Impatiens walleriana</i>	Impatiens
BP 185	<i>Lobelia erinus</i>	Lobelia
BP 186	<i>Lobularia maritima</i>	Sweet Alyssum
BP 187	<i>Matthiola incana</i>	Stock
BP 188	<i>Papaver nudicaule</i>	Iceland Poppy
BP 189	<i>Pericallis x hybrida (Senecio x hybridus)</i>	Cineraria
BP 190	<i>Petunia hybrids</i>	Petunia
BP 191	<i>Phlox drummondii</i>	Phlox
BP 192	<i>Portulaca grandiflora</i>	Rose Moss
BP 193	<i>Primula x polyantha</i>	English Primrose
BP 194	<i>Salvia farinacea</i>	Mealycup Sage
BP 195	<i>Solenostemon scutellarioides (Coleus x hybridus)</i>	Coleus
BP 196	<i>Tagetes hybrids</i>	Marigold
BP 197	<i>Viola x wittrockiana</i>	Pansy
BP 198	<i>Zinnia elegans</i>	Zinnia
GROUND COVERS		
	BOTANICAL NAME	COMMON NAME
GC 199	<i>Ajuga reptans</i>	Carpet Bugle
GC 200	<i>Aptenia cordifolia</i>	Red Apple
GC 201	<i>Campanula poscharskyana</i>	Serbian Bellflower
GC 202	<i>Drosanthemum floribundum</i>	Rosea Ice Plant
GC 203	<i>Festuca glauca (cineria)</i>	Common Blue Fescue
GC 204	<i>Hedera helix</i>	English Ivy
GC 205	<i>Hypericum calycinum</i>	Aaron's Beard, (Creeping St. Johnswort)
GC 206	<i>Lantana montevidensis (sellowiana)</i>	Trailing Lantana
GC 207	<i>Mentha requienii</i>	Corsican Mint
GC 208	<i>Ophiopogon japonicus</i>	Mondo Grass
GC 209	<i>Osteospermum fruticosum</i>	Trailing African Daisy, (Freeway Daisy)
GC 210	<i>Pachysandra terminalis</i>	Japanese Spurge
GC 211	<i>Pratia pedunculata (Laurentia fluviatilis)</i>	Blue Star Creeper
GC 212	<i>Rosmarinus officinalis</i>	Trailing Rosemary

GC 213	<i>Sagina subulata</i>	Irish Moss
GC 214	<i>Soleirolia (Helxine) soleirolii</i>	Baby's Tears
GC 215	<i>Thymus serpyllum (praecox arcticus)</i>	Woolly Thyme (Mother-Of-Thyme)
GC 216	<i>Trachelospermum asiaticum</i>	Asian Jasmine
GC 217	<i>Verbena peruviana (chamaedrifolia)</i>	Verbena
GC 218	<i>Vinca minor</i>	Dwarf Periwinkle
HOUSE PLANTS		
	BOTANICAL NAME	COMMON NAME
HP 219	<i>Alpinia vittata</i>	Variegated Ginger
HP 220	<i>Anthurium andraeanum</i>	Anthurium (Spathe Flower)
HP 221	<i>Aspidistra elatior</i>	Cast-iron plant
HP 222	<i>Beaucarnia (Nolina) recurvata</i>	Bottle Palm, Ponytail Palm
HP 223	<i>Caladium bicolor</i>	Fancy-leafed Caladium
HP 224	<i>Chamaedorea elegans</i>	Areca Palm
HP 225	<i>Chlorophytum comosum</i>	Spider Plant
HP 226	<i>Cissus rhombifolia</i>	Grape Ivy
HP 227	<i>Cymbidium hybrids</i>	Cymbidium Orchid
HP 228	<i>Ficus benjamina</i>	Weeping Fig
HP 229	<i>Ficus lyrata</i>	Fiddleleaf Fig
HP 230	<i>Howea forsteriana</i>	Paradise Palm, (Kentia Palm)
HP 231	<i>Kalanchoe blossfeldiana</i>	Kalanchoe
HP 232	<i>Nephrolepis exaltata 'Bostoniensis'</i>	Boston Fern
HP 233	<i>Phalaenopsis hybrids</i>	Moth Orchid
HP 234	<i>Plumeria rubra</i>	Plumeria
HP 235	<i>Rhapsis excelsa</i>	Lady Palm
HP 236	<i>Sanseveria trifasciata</i>	Snake Plant, (Mother-In-Law's Tongue)
HP 237	<i>Schefflera (Dizygotheca) elegantissima</i>	Threadleaf (False) Aralia
HP 238	<i>Tillandsia cyanea</i>	Air Plant
HP 239	<i>Tolmiea menziesii</i>	Piggyback Plant
HP 240	<i>Tradescantia zebrina (Zebrina pendula)</i>	Wandering Jew
CACTI AND SUCCULENTS		
	BOTANICAL NAME	COMMON NAME
CS 241	<i>Agave americana</i>	Century Plant
CS 242	<i>Aloe vera</i>	Medicinal Aloe
CS 243	<i>Calandrinia grandiflora</i>	Rock Purslane
CS 244	<i>Crassula spp.</i>	Crassula
CS 245	<i>Echeveria spp.</i>	Echeveria
CS 246	<i>Euphorbia tirucalli 'Sticks on Fire'</i>	Red Pencil Tree
CS 247	<i>Kalanchoe luciae 'Flapjack'</i>	Paddle Plant
CS 248	<i>Opuntia spp.</i>	Opuntia
CS 249	<i>Sedum spp.</i>	Stonecrop
CS 250	<i>Sempervivum spp.</i>	Sempervivum

Buds & Grafts:

251.	Tee
252.	Cleft
253.	Side
254.	Whip

Tools and Materials:

255.	#1 Container
256.	#15 Container
257.	#5 Container
258.	Action Hoe (ex: Hula Hoe)
259.	Ammonium Sulfate
260.	Atmospheric Breaker
261.	Azalea Pot
262.	Blood Meal
263.	Bone Meal
264.	Broadcast Spreader
265.	Bulb Planter
266.	Carrying Flat
267.	Cell Pack
268.	Class 200 PVC Pipe
269.	Core Aerator
270.	Cut Off Riser
271.	Decorative Bark
272.	Dibble
273.	Drip Emitter
274.	Drop Spreader
275.	Flaring Rose Nozzle
276.	Flex Riser
277.	Forest Humus
278.	Garden Hoe
279.	Garden Rake
280.	Garden Trowel
281.	Gypsum
282.	Hand Cultivator
283.	Hand Pruners (Anvil Type)
284.	Hand Pruners (Bypass Type)
285.	Hedge Shears
286.	Hose End Fogging Nozzle
287.	Hose End Sprayer
288.	Hose Mender
289.	Hose-on Proportioner
290.	Impact Sprinkler
291.	Landscape Rake
292.	Lawn Rake
293.	Liner
294.	Lopper

295.	Manual Valve
296.	Mattock Planter
297.	Minimum/Maximum Thermometer
298.	Nursery Tape
299.	Peat Moss
300.	Peat Pot
301.	Perlite
302.	Pick
303.	Plant Label
304.	Plant/Tree Stake
305.	Pole Pruner
306.	Polyethylene Drip Tube
307.	Pop Up Spray Head
308.	Pot Label
309.	Propagation Flat
310.	Pruning Saw
311.	Root Feeder
312.	Rotor Sprinkler
313.	Round Point Shovel
314.	Sand
315.	Schedule 40 PVC Pipe
316.	Schedule 80 Riser
317.	Screed
318.	Scuffle Hoe
319.	Slow Release Fertilizer (ex: Osmocote)
320.	Soil Probe
321.	Soil Thermometer
322.	Solenoid Valve
323.	Spading Fork
324.	Sphagnum Moss
325.	Spotting Board
326.	Square Point Shovel
327.	Standard Pot
328.	Sulfur
329.	Superphosphate
330.	Swing Arm Riser
331.	Tamp
332.	Tank Sprayer
333.	Trenching Shovel
334.	Vermiculite
335.	Water Breaker

Appendix 3 - Nursery/Landscape Contest
Identification Answer Sheet for Contests Without Access to JudgingCard

Name: _____ Chapter: _____ Score (x4) _____

1.	26.	51.	76.
2.	27.	52.	77.
3.	28.	53.	78.
4.	29.	54.	79.
5.	30.	55.	80.
6.	31.	56.	81.
7.	32.	57.	82.
8.	33.	58.	83.
9.	34.	59.	84.
10.	35.	60.	85.
11.	36.	61.	86.
12.	37.	62.	87.
13.	38.	63.	88.
14.	39.	64.	89.
15.	40.	65.	90.
16.	41.	66.	91.
17.	42.	67.	92.
18.	43.	68.	93.
19.	44.	69.	94.
20.	45.	70.	95.
21.	46.	71.	96.
22.	47.	72.	97.
23.	48.	73.	98.
24.	49.	74.	99.
25.	50.	75.	100.