



Fruits and Vegetables

Purpose

The New Jersey FFA Fruit and Vegetable Career Development Event allows students to identify various fruits and vegetables that are grown in New Jersey and throughout the United States. Students also have the opportunity to select produce by identifying the variety and judging classes of apples and vegetables for uniformity, variety, color, freedom from blemish, trueness to variety, etc. FFA activities are an integral part of the instructional program in Agriculture, Food, and Natural Resources Education.

Objectives

Students will be able to

- Identify various fruits and vegetables.
- Select quality fruits and vegetables based on uniformity, variety, color, freedom from blemish and trueness to variety.
- The written exam will encourage students to be knowledgeable consumers and to understand the significance of this industry in New Jersey.

Event Rules

The complete rules, policies and procedures relevant to all New Jersey FFA Career and Leadership Development Events may be found in the CDE & LDE Event Participation Policy: https://nj.gov/agriculture/ag_ed/ffa/activity/CDE_LDE_Policy.pdf

- A team will consist of four members. The three highest individual scores will be totaled for the team score. Teams that have fewer than three members are not eligible for team awards, but students may receive individual awards.
- Under no circumstances will any participant be allowed to touch or handle any of the produce during the event.
- Each participant must have a clipboard, at least two No. 2 pencils, and a calculator.
- Participants are NOT allowed to use (or have visible) electronic devices during the event, unless for medical reasons or a portion of the event requires usage. This includes cell phones, tablets, etc. Participants will be allowed to use calculators, if specified for that event; however, cell phone calculators and graphing calculators are not permitted! **Failure to adhere to these rules will result in disqualification.**
- All individuals participating will judge in a cooperative manner following the rules set forth by the event coordinator.
- No school/chapter will use Rutgers University or Delaware Valley University facilities or locations for the training of teams. Contact with University faculty and staff is permissible. **Penalty will be disqualification.**
- This event will be scored using “Scan-tron” sheets. It is important for students to listen to directions and fill out the sheets correctly in order to receive credit. Sample scan-tron sheets are available for practice on the State Activity Guide. This event will use the Horticulture (Multipurpose) Scan-tron sheet.
- There will be no separate alternate teams.
- Official Dress is required during the event.
- No individuals from the same school/chapter may talk, confer or judge together. Penalty will be loss of score for that section of the event or disqualification for the event. Event coordinator has the authority to make disqualifications.
- A student may not compete in more than one event during the New Jersey FFA Fall Career Development Events.
- The State level competition fee of \$11 per contestant will be paid by the competing school. If a chapter is at least **blue** affiliated, registration to state FFA career development events is waived.

Event Format

EQUIPMENT

Materials to be provided by the student:

- Two no. 2 pencils
- Clipboard
- Calculator

Materials provided by the CDE committee:

- All paper and other supplies
- Identification List

Participants are not to bring:

- Glass of any kind to the event
- Cell phones or other electronic devices

EVENT SNAPSHOT

Below is a brief overview of the Fruits and Vegetables CDE:

This event consists of three (3) phases:

- Phase I - Identification (30 seconds at each specimen; 40 fresh specimens)
- Phase II - Judging (5 minutes, one minute per class)
- Phase III- Written Exam (30 minutes, 25 questions)

A chapter may have a team of three (3) or four (4). The top three (3) scores are used in determining the team's rank.

Scantron will be used to score this event. At the end of this document is a sample of the sheet used, highlighting where to enter answers. You can get practice sheets here:

https://nj.gov/agriculture/ag_ed/ffa/activity/Scantron.pdf

INDIVIDUAL ACTIVITIES

Identification – 400 points

- Students will be given 30 seconds at each specimen (40 fresh specimens).
- Ten minutes will be provided at the end for students to finish filling out the scan-tron

Judging – 300 points

- Students will first identify the specimen in the class.
- Next they will judge the plates of specimens in the class first (best), second (middle), third (least best).
- Students will be given 1 minute at each class (5 classes).
- Students will be provided 5 minutes to finish filling out the scan-tron.

Written Exam – 100 points

- The written exam will focus on consumer awareness – things like basic food safety, seasonal availability of NJ fruits & vegetables, calculating cost of produce, basic nutrition, and statistics of NJ production rankings. The intention of the written exam is to encourage students to be knowledgeable consumers and to understand the significance of this industry in New Jersey.

Scoring

Activities	Points	Individual Points	Team Points
Written exam	100	100	300
Identification*	400	400	1,200
Judging* - (50 points will be received for placing class. An additional ten (10) points will be given for each variety named correctly.)	300 Judging – 250 ID – 50	300	900
TOTAL		800	2,400

*denotes a hands-on practicum area

TIEBREAKERS

If ties occur, the following events will be used to determine award recipients:

TEAM

1. Written Exam
2. Judging
3. Identification

INDIVIDUAL

1. Written Exam
2. Judging
3. Identification

Awards

Awards will be presented to individuals and the first team based on their rankings at the CDE awards ceremony at the New Jersey State FFA Convention. Awards are sponsored by the New Jersey FFA Foundation, Inc., New Jersey FFA Association, and/or the National FFA Organization.

Individual

- Overall Medals
 - Medals – Top three individuals
- H.O. Sampson Certificates (hands-on practicum areas ONLY)
 - Certificate – Top five individuals

Team

- Banner Sponsored by the New Jersey FFA Association - 1st place

This is a state-level event; therefore, the first-place team will not advance to further competition.

Resources

This list of resources is not intended to be all-inclusive.

- Availability of Fruits & Vegetables in New Jersey: <https://findjerseyfresh.com/JerseyFresh/availability>
- Food Safety - <https://nj.gov/agriculture/farmtoschool/farmers/food-safety/>
- Nutrition Information - <https://www.myplate.gov/eat-healthy/what-is-myplate>
- New Jersey Farm Facts - <https://findjerseyfresh.com/JerseyFresh/statistics>
- MyCAERT Question Bank – www.mycart.com
- Introduction to Horticulture. 3rd Edition, 2000. Interstate Publishers, Inc. Danville, IL.
- Introductory Horticulture. 5th Edition, 1996. Delmar Publishers, Inc. Albany, NY.
- Ornamental Horticulture: Science, Operations and Management. 2nd Edition, 1994. Delmar Publishers Inc., Albany, NY.

Request for Reasonable Accommodations

The New Jersey FFA Association is committed to providing equal access to our events and activities for all people. Use this form to request a reasonable accommodation or assistance at least 3 weeks before any state-level events: <https://form.jotform.com/NJFFA/accommodations-request>. A new form will need to be submitted for each event in which a reasonable accommodation is being requested. This information will be kept confidential and will be used only to process the request. Our staff will review the request upon receipt and contact the requestor with additional information. The association cannot guarantee accommodations or assistance if a form is received less than 3 weeks before an event. Accommodations being requested that require the assistance of another person (nurse, interpreter, scribe, reader, etc.) is the responsibility of the school/requestor. It is also the school/requestor's responsibility to provide any approved equipment to aid in the accommodation process, if applicable.

Fruits and Vegetables and Related Careers

CAREER OPPORTUNITIES FOUND IN THE CAREER CLUSTERS

Agricultural, Food & Natural Resources

- Farmer
- orchard Owner
- produce Stand Operator

Marketing

- Fruit and Vegetable Grader

Finance

- Produce Merchandiser

Science Technology, Engineering & Mathematics

- Nutritionist
- Food Scientist

Education & Training

- Educator
- Writer/Editor for Produce Magazine
- Agricultural Extension Agent

SAE OPPORTUNITIES

- Employment at a farm stand or orchard
- Employment at an agricultural research lab
- Experiment with sugar levels in different fruits

EDUCATIONAL REQUIREMENTS/OPPORTUNITIES

- Associate degree and/or industry training – orchard owner, produce stand operator
- Bachelor's degree – fruit and vegetable grader, produce merchandiser, nutritionist
- Graduate Degree – agricultural extension agent, postsecondary educator

PROFICIENCY AWARD AREAS

- Diversified Crop Production
- Fruit Production
- Vegetable Production
- Specialty Crop Production
- Agriculture Sales and/or Services

New Jersey FFA Fruit and Vegetable CDE

PHASE 1: IDENTIFICATION

Directions: Record your answer in the first Identification section on the back of your scan-tron. Make sure you look at the specimen number where you are starting and enter your answer in the corresponding box.

#	NAME	#	NAME	#	NAME
101	Apples, <i>Golden Delicious</i>	136	Chard, Swiss	171	Parsley
102	<i>Braeburn</i>	137	Chives	172	Parsnips
103	<i>Fuji</i>	138	Collards	173	Pear, Bartlett
104	<i>Gala</i>	139	Corn, Sweet	174	Pear, Bosc
105	<i>Granny Smith</i>	140	Cucumbers, Pickle	175	Peas, Sugar Snap
106	<i>Honey Crisp</i>	141	Cucumber, Slicer	176	Pepper, Bell
107	<i>Macoun</i>	142	Dandelion Greens	177	Pepper, Cubanelle
108	<i>McIntosh</i>	143	Date	178	Pepper, Habanero
109	<i>Pink Lady</i>	144	Dill	179	Pepper, Jalapeno
110	<i>Red Delicious</i>	145	Eggplant	180	Plum
111	<i>Rome Beauty</i>	146	Elderberry	181	Potato, Russet Type
112	<i>Stayman</i>	147	Endive, Belgiums	182	Potato, Sweet
113	Apricot	148	Endive, Chicory	183	Potato, White or Irish
114	Asparagus	149	Escarole	184	Pumpkin
115	Artichoke	150	Fig	185	Radicchio
116	Avocado	151	Florence Fennel	186	Radish
117	Basil, Sweet	152	Garlic	187	Radish, Black
118	Beets	153	Ginger	188	Raspberry
119	Beans, French (Haricot Vert)	154	Guava	189	Rhubarb
120	Beans, Snap	155	Horseradish	190	Rosemary
121	Bean Sprouts	156	Kale	191	Rutabaga or Swede Turnip
122	Blackberry	157	Kiwi Fruit	192	Shallots
123	Blueberries	158	Kohlrabi	193	Spinach
124	Broccoli	159	Leek	194	Squash, Acorn Type
125	Broccoli Rabe	160	Lettuce, Butterhead	195	Squash, Butternut
126	Brussel Sprouts	161	Lettuce, Cos or Romaine	196	Squash, Patty Pan
127	Cabbage, Chinese	162	Lettuce, Leaf Type	197	Squash, Yellow Summer-Type
128	Cabbage, Green (round head)	163	Melon, Honeydew	198	Squash, Zucchini Type
129	Cabbage, red	164	Mushrooms	199	Strawberry
130	Cabbage, Savoy	165	Muskmelon	200	Tomato, Cherry
131	Carrots	166	Mustard Greens	201	Tomato, Oblate Fruit
132	Cauliflower	167	Nectarines	202	Tomato, Plum or Pear
133	Cranberry	168	Okra	203	Tomatillo
134	Celeriac (knob celery)	169	Onion, Globe	204	Turnip
135	Celery	170	Onion, Bunching (Scallion)	205	Watermelon

New Jersey FFA Fruit and Vegetable CDE

PHASE 2: JUDGING

Directions: Please carefully read directions in their entirety before filling out Scan-tron sheets!

For Phase II: Judging, you will identify and judge five (5) classes of fruits or vegetables. Each class of fruits or vegetables will consist of three plates numbered 1, 2, & 3. There are five specimens on each plate.

Step 1:

First, identify the variety of fruits or vegetables in the class. Find the name and corresponding number of the fruit or vegetable on the Fruit and Vegetable Identification Sheet. On the back of the Scan-tron sheet, write the three-digit ID number in the bottom Identification section (Number of Specimen). Be sure to enter the answer in the number section that corresponds to the class you are identifying. (Example, if you are starting at class #3, be sure to fill in your answer in box number 3.) Again, be sure to bubble in the corresponding numbers on the Scan-tron sheet. Repeat these steps for all five classes of fruits and vegetables.

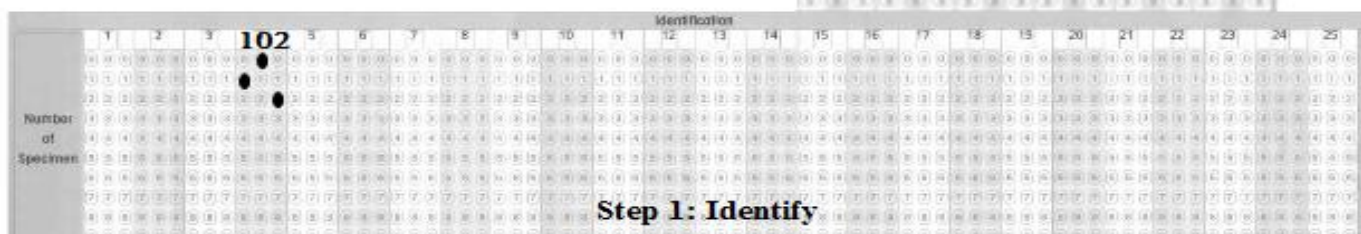
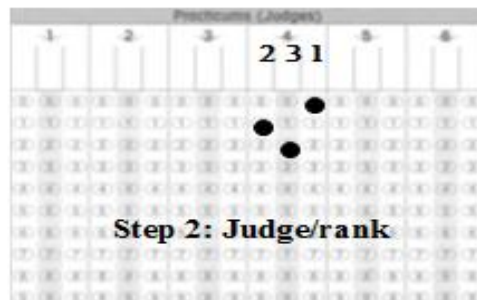
Step 2:

Second, Judge the plates within the class first (best), second (middle), third (least best), considering the following criteria in your decision:

Form:	10%	Freedom from blemishes:	30%
Size:	15%	Uniformity:	25%
Color:	20%		

Rank the plates in order – Best, Middle, and Least Best. This information will be entered on the front of the scan-tron in the “Practicum (Judges)” section. For example, if you feel the plates in class #2 should be ranked 2 (best), 1 (middle), 3 (least best), you would enter and bubble in 2-1-3 in the 2nd Practicum box on the front of the scan-tron. Be sure to bubble in the corresponding numbers on the Scan-tron sheet. Repeat this step for all five classes of fruits and vegetables.

EXAMPLE



SCORING

1. Ten (10) points received if variety is named correctly.
2. Placing points will be received even if variety is not named correctly.
3. The contestant will be scored according to the following schedule:

(Correct placing by judge: 123)

(Use cut cards supplied by State FFA Office to score)

123 - 50 points	231 - 20 points
132 - 40 points	312 - 10 points
213 - 30 points	321 - 0 points

New Jersey FFA Fruit and Vegetable CDE

PHASE 3: WRITTEN EXAM - SAMPLE

1. In 2012, New Jersey ranked ___ in the United States for cranberry production.
 - a. 1st
 - b. 3rd
 - c. 7th
 - d. 15th
2. The _____ program, coordinated by the New Jersey Department of Agriculture, is a national recognized marketing program highlighting New Jersey's abundance of crops.
 - a. New Jersey Produce
 - b. Jersey Fresh
 - c. JerZee Produce
 - d. Jersey Pride
3. Which costs more: 4 pounds of apples at \$2.49 a pound, or 6 pounds of potatoes at 1.29 cents a pound or 8 ounces of blueberries at 10.00 per pound?
 - a. Apples
 - b. Potatoes
 - c. Blueberries
4. Perishable fresh fruits and vegetables should be stored in a clean refrigerator at a temperature of _____ or below.
 - a. 30° F
 - b. 40° F
 - c. 50° F
 - d. 60° F
5. When preparing any fresh produce, begin with clean hands. Wash your hands for at least _____ seconds with soap and warm water before and after preparation.
 - a. 10 seconds
 - b. 15 seconds
 - c. 20 seconds
 - d. 25 seconds

Answers:

1. *b*
2. *b*
3. *a*
4. *b*
5. *c*



HORTICULTURE

CDE# 105482

Incorrect Marks Correct Mark

Team Name

This sheet is for demonstration and practice only. You must use a real scan sheet for actual competition.

Team Number	State	Last Name	First Name
0 0 0 0			
1 1 1 1	A	A A A A A A A A A A A A	A A A A A A A A
2 2 2 2	B	B B B B B B B B B B B B	B B B B B B B B
3 3 3 3	C	C C C C C C C C C C C C	C C C C C C C C
4 4 4 4	D	D D D D D D D D D D D D	D D D D D D D D
5 5 5 5	E	E E E E E E E E E E E E	E E E E E E E E
6 6 6 6	F	F F F F F F F F F F F F	F F F F F F F F
7 7 7 7	G	G G G G G G G G G G G G	G G G G G G G G
8 8 8 8	H	H H H H H H H H H H H H	H H H H H H H H
9 9 9 9	I	I I I I I I I I I I I I	I I I I I I I I
	J	J J J J J J J J J J J J	J J J J J J J J
	K	K K K K K K K K K K K K	K K K K K K K K
	L	L L L L L L L L L L L L	L L L L L L L L
	M	M M M M M M M M M M M M	M M M M M M M M
	N	N N N N N N N N N N N N	N N N N N N N N
	O	O O O O O O O O O O O O	O O O O O O O O
	P	P P P P P P P P P P P P	P P P P P P P P
	Q	Q Q Q Q Q Q Q Q Q Q Q Q	Q Q Q Q Q Q Q Q
	R	R R R R R R R R R R R R	R R R R R R R R
	S	S S S S S S S S S S S S	S S S S S S S S
	T	T T T T T T T T T T T T	T T T T T T T T
	U	U U U U U U U U U U U U	U U U U U U U U
	V	V V V V V V V V V V V V	V V V V V V V V
	W	W W W W W W W W W W W W	W W W W W W W W
	X	X X X X X X X X X X X X	X X X X X X X X
	Y	Y Y Y Y Y Y Y Y Y Y Y Y	Y Y Y Y Y Y Y Y
	Z	Z Z Z Z Z Z Z Z Z Z Z Z	Z Z Z Z Z Z Z Z

Code

0 0
1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9

Place	Class	Placing Classes									Place	
		1	2	3	4	5	6	7	8	9		
1	1234	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1234	1
2	1243	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1243	2
3	1324	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1324	3
4	1342	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1342	4
5	1423	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1423	5
6	1432	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1432	6
7	2134	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2134	7
8	2143	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2143	8
9	2314	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2314	9
10	2341	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2341	10
11	2413	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2413	11
12	2431	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2431	12
13	3124	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3124	13
14	3142	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3142	14
15	3214	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3214	15
16	3241	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3241	16
17	3412	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3412	17
18	3421	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3421	18
19	4123	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4123	19
20	4132	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4132	20
21	4213	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4213	21
22	4231	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4231	22
23	4312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4312	23
24	4321	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4321	24

Team Activity	
Team	Ind.
0 0 0 0 0 0	0 0 0 0 0 0
1 1 1 1 1 1	1 1 1 1 1 1
2 2 2 2 2 2	2 2 2 2 2 2
3 3 3 3 3 3	3 3 3 3 3 3
4 4 4 4 4 4	4 4 4 4 4 4
5 5 5 5 5 5	5 5 5 5 5 5
6 6 6 6 6 6	6 6 6 6 6 6
7 7 7 7 7 7	7 7 7 7 7 7
8 8 8 8 8 8	8 8 8 8 8 8
9 9 9 9 9 9	9 9 9 9 9 9

Practicums (Judges)					
1	2	3	4	5	6
0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1
2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2
3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3
4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4 4
5 5 5 5 5 5	5 5 5 5 5 5	5 5 5 5 5 5	5 5 5 5 5 5	5 5 5 5 5 5	5 5 5 5 5 5
6 6 6 6 6 6	6 6 6 6 6 6	6 6 6 6 6 6	6 6 6 6 6 6	6 6 6 6 6 6	6 6 6 6 6 6
7 7 7 7 7 7	7 7 7 7 7 7	7 7 7 7 7 7	7 7 7 7 7 7	7 7 7 7 7 7	7 7 7 7 7 7
8 8 8 8 8 8	8 8 8 8 8 8	8 8 8 8 8 8	8 8 8 8 8 8	8 8 8 8 8 8	8 8 8 8 8 8
9 9 9 9 9 9	9 9 9 9 9 9	9 9 9 9 9 9	9 9 9 9 9 9	9 9 9 9 9 9	9 9 9 9 9 9

**Placings
for Judging
Classes**

Assessment and Solution				
1 A B C D	6 A B C D	11 A B C D	16 A B C D	21 A B C D
2 A B C D	7 A B C D	12 A B C D	17 A B C D	22 A B C D
3 A B C D	8 A B C D	13 A B C D	18 A B C D	23 A B C D
4 A B C D	9 A B C D	14 A B C D	19 A B C D	24 A B C D
5 A B C D	10 A B C D	15 A B C D	20 A B C D	25 A B C D

Exam	
1 A B C D	26 A B C D
2 A B C D	27 A B C D
3 A B C D	28 A B C D
4 A B C D	29 A B C D
5 A B C D	30 A B C D
6 A B C D	31 A B C D
7 A B C D	32 A B C D
8 A B C D	33 A B C D
9 A B C D	34 A B C D
10 A B C D	35 A B C D
11 A B C D	36 A B C D
12 A B C D	37 A B C D
13 A B C D	38 A B C D
14 A B C D	39 A B C D
15 A B C D	40 A B C D
16 A B C D	41 A B C D
17 A B C D	42 A B C D
18 A B C D	43 A B C D
19 A B C D	44 A B C D
20 A B C D	45 A B C D
21 A B C D	46 A B C D
22 A B C D	47 A B C D
23 A B C D	48 A B C D
24 A B C D	49 A B C D
25 A B C D	50 A B C D

Written Exam

Exam 2/Team	
1 A B C D	
2 A B C D	
3 A B C D	
4 A B C D	
5 A B C D	
6 A B C D	
7 A B C D	
8 A B C D	
9 A B C D	
10 A B C D	
11 A B C D	
12 A B C D	
13 A B C D	
14 A B C D	
15 A B C D	
16 A B C D	
17 A B C D	
18 A B C D	
19 A B C D	
20 A B C D	
21 A B C D	
22 A B C D	
23 A B C D	
24 A B C D	
25 A B C D	

	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	
Number of Specimen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Identification

	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
Number of Specimen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Identification

	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	
Number of Specimen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Identification for Judging Classes

	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
Number of Specimen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9