

# DIVISION XXIV – MECHANICAL SCIENCE

Brian Coolbaugh, Superintendent – (360) 598-3823  
15121 Cedar Grove Rd NE Poulsbo, WA 98370

Open to members enrolled in Woodworking and Expressive Arts projects only

## SPECIAL DEPARTMENT RULES

1. Exhibits can be entered on Sunday, August 16<sup>th</sup> from 10:00 a.m. to 6:00 p.m.
2. All exhibits shall have a 3"x5" card telling how the exhibit was crafted, age of the youth and number of years in project.
3. Classroom projects that are not part of a 4-H Enrichment program are not eligible for exhibition at the State Fair.
4. Judging activity points are awarded as follows: Blue – 15, Red – 13, White – 10

## CLASS A WOODWORKING

Points Allowed  
Blue – 8, Red – 5, White – 3

Lot 1	Sandpaper block	Lot 8	Nail and tool box
Lot 2	Bench vise	Lot 9	Bench stop
Lot 3	Nest shelf for robins and phoebes	Lot 10	Bench hook
Lot 4	Horseshoe tie rack	Lot 11	Wind vane
Lot 5	Napkin holder	Lot 12	4-H bookends
Lot 6	Letter holder	Lot 13	Creative design and forms
Lot 7	4-H key holder	Lot 14	Any other of equal skill

Points Allowed  
Blue – 10, Red – 7, White – 4

Lot 15	How to read and use drawings	Lot 23	Pencil holder
Lot 16	Tool box	Lot 24	Book jack
Lot 17	Bird feeder	Lot 25	Salt and peppers shakers
Lot 18	Thread and scissor holder	Lot 26	Note pad dispenser
Lot 19	Foot stool	Lot 27	Bird house
Lot 20	"Steer-horn" clothes hanger	Lot 28	Tie rack
Lot 21	Candle holder	Lot 29	Swizzle stick
Lot 22	Wren house	Lot 30	Any other of equal skill

Points Allowed  
Blue – 12, Red – 9, White – 6

Lot 31	Shadow boxes	Lot 38	Miter box
Lot 32	Car top carrier	Lot 39	Sleeve board
Lot 33	Book rack	Lot 40	Workshop saw horse
Lot 34	Shoeshine kit	Lot 41	Cutting boards
Lot 35	Box hockey	Lot 42	Garage creeper
Lot 36	Gun rack	Lot 43	Furniture
Lot 37	Game Boards	Lot 44	Any other of equal skill

Points Allowed  
Blue – 15, Red – 13, White – 10

Lot 45	Work Bench	Lot 51	Non-folding picnic table
Lot 46	Roll away tool rack	Lot 52	Ranch style martin house
Lot 47	Knife rack	Lot 53	Two story martin house
Lot 48	Camping kitchen	Lot 54	Martin house pole
Lot 49	Study desk	Lot 55	Any other of equal skill
Lot 50	Folding picnic table and benches		

**CLASS B SMALL ENGINES****Open to enrolled Small Engine project members only**

		Points Allowed		
		Blue	Red	White
Lot 1	Small engine scrapbook	8	4	2
Lot 2	Poster or display designed & made by member which emphasizes some phase of small engine safety	9	6	3
Lot 3	Panel display showing working parts of small internal combustion engine	15	12	8
Lot 4	Display of internal combustion engine showing minor repairs by member, properly labeled & including detail of repair cost	12	8	5
Lot 5	Overhauled or rebuilt internal combustion engine or related mechanical function properly labeled showing improvement, maintenance or repair by member	20	14	10

**CLASS C BICYCLE****Open to enrolled 4-H Bicycle Project members only**

		Points Allowed		
		Blue	Red	White
Lot 1	Safety poster	9	6	3
Lot 2	Bicycle Repair Kit – Label tools and tell how they are used	9	6	3
Lot 3	Educational display made by member featuring mechanical system of a bicycle	10	6	4
Lot 4	Bicycle ride planned by member (Give mileage, include map, note the landmarks, points of interest and hazards)	10	6	4
Lot 5	Bicycle project scrapbook	12	8	5

**CLASS D ROCKETRY****Open to enrolled 4-H Rocketry Project members only**

1. Shall be on a stand or hanging, with or without background, no live engines
2. Shall have 3 x 5 card telling make, model and skill level of rocket, how the rocket was assembled and how it flies, age of child and number of years in rocketry
3. Judging shall be: Functional apparatus-50%; Workmanship-35%; Display (Rules 1, 2)-15%
4. Group display shall be judged individually, than as a group
5. Maximum of 4 entries (Lots 1-10) per exhibitor
6. All rockets need safety caps on top of launch rod
7. All rockets must have been successfully flown prior to exhibiting. "A completed certificate of flight" must accompany each entry. Forms are available at the Kitsap County Extension office
8. Model rocketry will be judged on workmanship and stability according to degree of challenge as determined in model rocket catalogs

		Points Allowed		
		Blue	Red	White
Lot 1	Plastic pre-assembled (first year Junior, only)	7	5	4
Lot 2	Skill level 1, single stage	12	10	7
Lot 3	Skill level 1, multi-stage	15	12	10
Lot 4	Skill level 2, single stage	15	12	10
Lot 5	Skill level 2, multi-stage	17	15	12
Lot 6	Skill level 3, single stage	20	17	14
Lot 7	Skill level 3, multi-stage	23	20	17
Lot 8	Any kit rocket, skill level 4 or above	25	22	19
Lot 9	Rocket from commercial plans	30	22	19
Lot 10	Rocket from exhibitors own plans (Entries in Lots 9 and 10 must be accompanied by plans.)	35	30	25

**CLASS E            COMPUTERS**

**Open to enrolled 4-H Computer Project members, only  
Maximum of four (4) entries (any lot numbers) per exhibitor**

		Points Allowed		
		Blue	Red	White
Lot 1	Computer Poster	15	11	9
Lot 2	Exhibit made by member featuring how components of a computer relate to each other	12	8	6
Lot 3	Book of computer programs, listings (coding), input screens and output (minimum 10 programs)	15	12	8
Lot 4	Chart of computer language syntax	10	6	4
Lot 5	Computer project scrapbook	12	8	6
Lot 6	Model of parts of a computer with an explanation of how they work	20	17	14
Lot 7	A big program (200 lines of coding), including Flow Chart. Manual of how to run the program, listing program of coding with comments (comments are not counted as executable lines) and input screens and outputs	35	30	25
Lot 8	Using existing database program, create a useful database & explain what it is used for	10	6	4
Lot 9	Using existing spreadsheet program, create a useful spreadsheet & explain what it is used for	10	6	4
Lot 10	Using existing word processing program, create stories, reports, field trips, etc. and bind them	10	6	4
Lot 11	Create web page and explain what it is used for, with an address and listing of coding	15	12	9
Lot 12	Live Computer Display – Computer set up & running a slide show 20 – 50 plus minutes	20	17	14
Lot 13	Programming exam pointing out the errors in the program and math quiz (Judging Monday only)	10	6	4

**CLASS F            MODEL BUILDING**

**Open to members enrolled in Mechanical Sciences projects**

Points Allowed  
Blue – 12, Red – 9, White – 6

Lot 1	Static Models	Lot 4	Lego
Lot 2	Operating Models	Lot 5	Kinex
Lot 3	Diorama	Lot 6	Any other of equal skill

**CLASS G            FISHING PROJECT**

**Open to members enrolled in Mechanical Sciences projects**

Points Allowed  
Blue – 20, Red – 17, White – 14

Lot 1	Hand-built rod	Lot 3	Any other of equal skill
Lot 2	Hand tied fly pattern		