Microscope Comparison Chart

Model	109	131	134	160	161	162	163
List Price:	$149	$259	$429	$599	$674	$794	$1,019
Maker Shed Price:	$119	$235	$359	$479	$539	$629	$819
Head style	monocular	monocular	monocular	monocular	dual-head	binocular	trinocular
Viewing position	45° inclined	45° inclined	45° inclined	45° inclined	30° inclined	30° inclined	30° inclined
Illumination type	15 W tungsten	LED	LED	0 – 20W halogen	0 – 20W halogen	0 – 20W halogen	0 – 20W halogen
Power source	AC	AC	AC	AC	AC	AC	AC
Suitability							
Home Science Enthusiast	●	●	●	●	●	●	●
Middle School or Junior High School	●	●	●	●	●	●	●
High School		●	●	●	●	●	●
High School – AP			●	●	●	●	●
University				●	●	●	●
Graduate School				●	●	●	●
Optical Train and Mechanical Features							
Overall optical/mechanical quality	B/B	B+/B+	B+/B+	A/A	A/A	A/A	A/A
Nosepiece (positions / bearing type)	3 / friction	3 / ball-bearing	4 / ball-bearing	4 / ball-bearing	4 / ball-bearing	4 / ball-bearing	4 / ball-bearing
Nosepiece orientation	forward	forward	forward	reverse	reverse	reverse	reverse
4X / 10X / 40Xr DIN/achromat color-coded objectives	●	●	●	●	●	●	●
100Xr oil-immersion DIN/achromat color-coded objective			●	●	●	●	●
Widefield 10X (18mm) eyepiece (w/ pointer)	1	1	1	1	1	1	1
Widefield 10X (18mm) eyepiece					1	1	2
Magnifications w/ standard eyepiece(s)	40/100/400	40/100/400	40/100/400/1000	40/100/400/1000	40/100/400/1000	40/100/400/1000	40/100/400/1000
Focusing method	movable head	movable stage	movable stage	movable stage	movable stage	movable stage	movable stage
Coarse/fine focusing	separate	separate	separate	coaxial	coaxial	coaxial	coaxial
Graduated fine focus				●	●	●	●
Mechanical stage		optional	●	●	●	●	●
Condenser, fixed-focus, 0.65 NA		●					
Condenser, Abbe, spiral focus, 1.25 NA			●				
Condenser, Abbe, rack-and-pinion focus, 1.25 NA				●	●	●	●
Diaphragm	disc	disc	iris	iris	iris	iris	iris
Optional Upgrades							
Mechanical stage		add $45	standard	standard	standard	standard	standard
ASC (super high-contrast) achromatic objectives				add $81	add $81	add $81	add $81
Plan achromatic objectives				add $194	add $194	add $194	add $194
Cordless LED illuminator w/ rheostat (replaces tungsten)	add $23						
Physical and Packaging (approximate)							
Height (inches / centimeters)	11-3/4 / 29.5	14-1/8 / 36	14-1/2 / 36.5	16-1/2 / 42	18 / 45.5	15-1/2 / 39.5	18 / 45.5
Weight (pounds / kilograms)	3.7 / 1.7	6.8 / 3.1	7.4 / 3.4	13.9 / 6.3	14.2 / 6.5	14.7 / 6.7	15.8 / 7.2
Shipping weight (pounds / kilograms)	6 / 2.7	10 / 4.5	11 / 5.0	17 / 7.7	18 / 8.2	18 / 8.2	19 / 8.6
Warranty							
Warranty	5-year limited	Lifetime limited	Lifetime limited	Lifetime limited	Lifetime limited	Lifetime limited	Lifetime limited
Warranty exclusions	bulb, cord	bulb, cord, stage	bulb, cord, stage	bulb, cord, fuse	bulb, cord, fuse	bulb, cord, fuse	bulb, cord, fuse