Regents Physics June 2008
(N=4595 WNYRIC students)

#	*Major Understanding*	*D*	*R1*	*R2*	*R3*	*R4*	*NR*
50	5.3g The Standard Model of Particle Physics has evolved. . .	0.96	101	47	35	***4410***	2
09	5.1j When the net force on a system is zero, the system is in equilibrium.	0.91	237	***4172***	35	150	1
27	4.3c The model of a wave incorporates the characteristics of amplitude, wavelength. . .	0.87	364	***3976***	148	105	2
29	4.3j The absolute index of refraction is inversely proportional to the speed of a wave.	0.87	135	291	190	***3977***	2
02	5.1e An object in free fall accelerates due to the force of gravity. . .	0.86	***3974***	225	153	243	0
14	5.1p The impulse imparted to an object causes a change in its momentum.	0.86	222	***3932***	254	174	13
13	5.1n Centripetal force is the net force which produces centripetal acceleration. . .	0.85	344	292	***3889***	70	0
10	5.1n Centripetal force is the net force which produces centripetal acceleration. . .	0.84	495	***3881***	53	165	1
45	4.1e In an ideal mechanical system, the sum of the macroscopic kinetic and potential energies.	0.84	***3851***	323	249	171	1
26	4.3c The model of a wave incorporates the characteristics of amplitude, wavelength. . .	0.83	181	167	***3818***	425	4
49	5.3d The energy of a photon is proportional to its frequency.	0.83	278	303	***3814***	197	3
31	4.3m When waves of a similar nature meet, the resulting interference may be explained. . .	0.82	304	***3756***	155	378	2
19	4.1i Power is the time-rate at which work is done or energy is expended.	0.81	54	533	299	***3707***	2
01	5.1a Measured quantities can be classified as either vector or scalar.	0.80	***3694***	276	224	398	3
20	4.1o Circuit components may be connected in series or in parallel. . .	0.80	***3675***	311	158	450	1
08	5.1k According to Newton's Second Law, an unbalanced force causes a mass to accelerate.	0.78	337	343	***3573***	326	16
15	5.1q According to Newton's Third Law, forces occur in action/reaction pairs. . .	0.78	957	37	***3601***	---	0
25	4.3c The model of a wave incorporates the characteristics of amplitude, wavelength. . .	0.78	490	***3588***	21	495	1
30	4.3m When waves of a similar nature meet, the resulting interference may be explained. . .	0.78	630	126	247	***3591***	1
36	I3.2 Extend their use of powers of ten notation to understanding the exponential. . .	0.78	37	167	***3566***	825	0
28	4.3i When a wave moves from one medium into another, the wave may refract due. . .	0.77	159	791	115	***3530***	0
40	5.1k According to Newton's Second Law, an unbalanced force causes a mass to accelerate.	0.74	***3395***	377	309	522	2
51	5.3g The Standard Model of Particle Physics has evolved. . .	0.74	454	***3420***	237	481	3
23	4.1j Energy may be stored in electric* or magnetic fields. This energy may be. . .	0.72	393	564	321	***3309***	8
03	5.1i According to Newton's First Law, the inertia of an object is directly proportional. . .	0.69	131	773	517	***3171***	3
07	5.1d An object in linear motion may travel with a constant velocity or with acceleration.	0.69	130	303	***3149***	1011	2
11	5.1b A vector may be resolved into perpendicular components.	0.69	230	***3163***	362	830	10
37	5.1a Measured quantities can be classified as either vector or scalar.	0.69	17	1043	375	***3156***	4
42	5.1n Centripetal force is the net force which produces centripetal acceleration. . .	0.68	977	***3124***	181	312	1
04	5.1d An object in linear motion may travel with a constant velocity or with acceleration.	0.66	445	175	***3022***	945	7
32	4.3n When a wave source and an observer are in relative motion, the observed frequency. . .	0.66	86	122	1337	***3048***	2
38	5.1t Gravitational forces are only attractive, whereas electrical and magnetic forces can. . .	0.66	1161	257	***3017***	159	1
06	5.1g A projectile's time of flight is dependent upon the vertical component of its motion.	0.65	***2994***	762	771	67	1
34	5.3h Behaviors and characteristics of matter, from the microscopic to the cosmic levels. . .	0.65	1170	311	142	***2970***	2
47	4.1p Electrical power and energy can be determined for electric circuits. . .	0.63	***2898***	205	1260	231	1
21	4.1p Electrical power and energy can be determined for electric circuits. . .	0.62	***2844***	1269	478	---	4
17	4.1g When work is done on or by a system, there is a change in the total energy of the system.	0.60	***2768***	321	946	553	7
46	4.1l All materials display a range of conductivity. At constant temperature. . .	0.59	617	605	***2707***	649	17
22	5.1s Field strength and direction are determined using a suitable test particle. . .	0.57	***2621***	1724	103	142	5
05	5.1e An object in free fall accelerates due to the force of gravity. . .	0.56	1181	220	***2565***	623	6
16	5.1u The inverse square law applies to electrical and gravitational fields. . .	0.56	263	1486	***2567***	275	4
12	5.1o Kinetic friction is a force that opposes motion.	0.55	570	162	***2537***	1312	14
33	5.3b Charge is quantized on two levels. On the atomic level. . .	0.55	381	***2515***	1401	289	9
43	5.1r Momentum is conserved in a closed system.	0.55	451	1246	352	***2538***	8
18	4.1c Potential energy is the energy an object possesses by virtue of its position or condition. .	0.47	1931	***2182***	232	248	2
44	4.1g When work is done on or by a system, there is a change in the total energy of the system.	0.45	784	182	1572	***2055***	2
24	4.1l All materials display a range of conductivity. At constant temperature. . .	0.44	***2000***	1090	1165	338	2
41	5.1j When the net force on a system is zero, the system is in equilibrium.	0.42	2239	331	***1952***	72	1
35	5.3j The fundamental source of all energy in the universe is the conversion of mass into energy.	0.41	1436	447	806	***1896***	10
48	4.3e Waves are categorized by the direction in which particles in a medium vibrate. . .	0.41	2054	***1895***	82	562	2
39	5.1c The resultant of two or more vectors, acting at any angle, is determined by vector addition.	0.27	899	***1220***	547	1919	10

#	*Major Understanding*	*D*	*0*	*1*	*2*
68	5.1m The elongation or compression of a spring depends upon the nature of the spring. . .	0.97	153	4442	---
64	5.1f The path of a projectile is the result of the simultaneous effect of the horizontal and . . .	0.96	162	4433	---
55	5.1a Measured quantities can be classified as either vector or scalar.	0.94	285	4310	---
69	5.1m The elongation or compression of a spring depends upon the nature of the spring. . .	0.93	340	4255	---
73	4.3i When a wave moves from one medium into another, the wave may refract due. . .	0.93	337	4258	---
57	5.1b A vector may be resolved into perpendicular components.	0.88	548	4047	---
74	4.3i When a wave moves from one medium into another, the wave may refract due. . .	0.81	851	3744	---
72	4.3i When a wave moves from one medium into another, the wave may refract due. . .	0.79	697	573	3325
54	4.1d Kinetic energy is the energy an object possesses by virtue of its motion.	0.78	714	611	3270
67	4.1l All materials display a range of conductivity. At constant temperature. . .	0.76	774	677	3144
53	4.1c Potential energy is the energy an object possesses by virtue of its position or condition. . .	0.75	821	657	3117
60	4.1m The factors affecting resistance in a conductor are length, cross-sectional area, . . .	0.75	708	921	2966
75	5.3f Among other things, mass-energy and charge are conserved at all levels. . .	0.75	1114	3441	---
62	5.1b A vector may be resolved into perpendicular components.	0.72	846	896	2853
58	5.1s Field strength and direction are determined using a suitable test particle. . .	0.70	634	1525	2436
56	5.1c The resultant of two or more vectors, acting at any angle, is determined by vector addition.	0.68	1451	3144	---
66	4.1o Circuit components may be connected in series or in parallel. . .	0.68	1456	3139	---
59	4.1m The factors affecting resistance in a conductor are length, cross-sectional area, . . .	0.62	1736	2859	---
71	5.1m The elongation or compression of a spring depends upon the nature of the spring. . .	0.62	1751	2844	---
61	4.3c The model of a wave incorporates the characteristics of amplitude, wavelength. . .	0.60	1845	2750	---
65	4.1o Circuit components may be connected in series or in parallel. . .	0.58	1943	2652	---
70	4.1c Potential energy is the energy an object possesses by virtue of its position or condition. . .	0.45	1788	1481	1326
63	5.1e An object in free fall accelerates due to the force of gravity. . .	0.40	2177	1124	1294
52	5.1d An object in linear motion may travel with a constant velocity or with acceleration.	0.37	2918	1677	---
76	5.3j The fundamental source of all energy in the universe is the conversion of mass into energy.	0.26	3368	1187	---

Data Courtesy of WNYRIC Data Warehouse 10-29-08
Presented by J. Zawicki, SUNY Buffalo State College May 2009