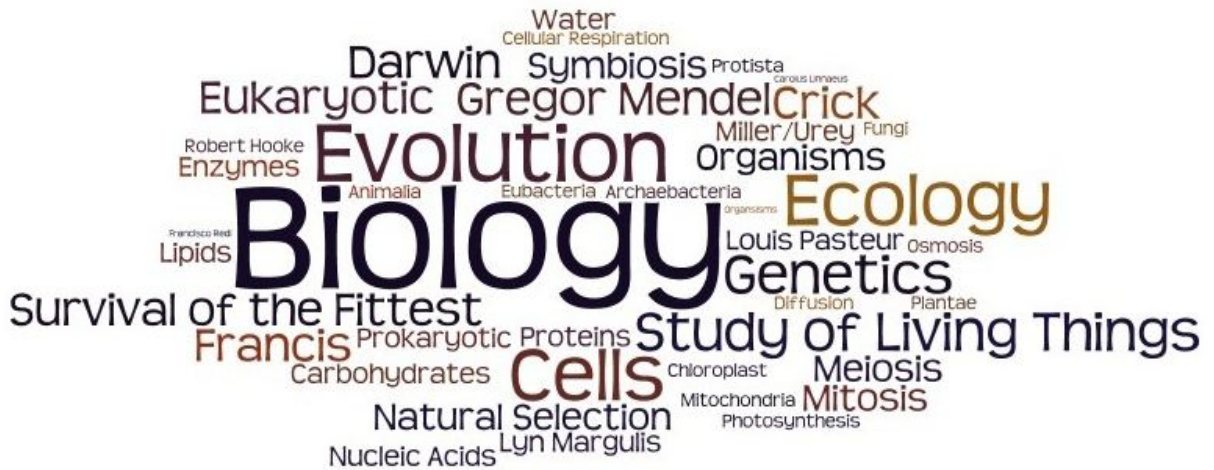


BIOLOGY EOC STUDY GUIDE

Answer Key and Content Focus

Report



2014-2015



Volusia County Schools

The Biology EOC

- The Biology 1 EOC assessment is delivered via computer-based test.
- The assessment is given in one 160 session with a 10 minute break after the first 80 minutes. Any student not finished by the end of the 160 minutes may continue working but, the test must be completed within the same school day.
- There are multiple forms of the assessment. There is a maximum of 66 multiple-choice items on each test form.
- Students are provided with four-page, hard-copy work folders to use as scratch paper. Used folders are secure materials that must be turned in after testing.

Biology EOC Study Guide

This Study Guide was developed by Volusia County teachers to help our students prepare for the Florida Biology End-Of-Course Exam. The Florida EOC is broken down by the following Measurement Topics (MT)...

Molecular and Cell Biology	Classification, Heredity, Evolution	Organisms, Populations, Ecosystems
35% of EOC	25% of EOC	40% of EOC
<ul style="list-style-type: none"> • The Nature of Science • Theories, Laws, Models • Properties of Water, Macromolecules, Enzymes • The Cell Theory • Cell Structure & Function • Cell Membrane & Transport • Photosynthesis & Cellular Respiration • DNA, RNA, Protein Synthesis • Mitosis, Meiosis 	<ul style="list-style-type: none"> • The Nature of Science • Theories, Laws, Models • Taxonomy • Genetics • Origins of Life • Evolution • Mechanisms of Change 	<ul style="list-style-type: none"> • The Nature of Science • Theories, Laws, Models • Energy in Ecosystems • Population Dynamics • Human Impact on the Environment • Plants • Biotechnology • Fetal Development • Parts of the Brain • Cardiovascular System • Immune System

UNIT 1: CELLS

#	BENCHMARK	CONTENT FOCUS	CORRECT ANSWER
1	SC.912.L.14.1	Cell Theory	C
2	SC.912.L.14.1	Technology & Science	C
3	SC.912.L.14.1	Cell Theory	B
4	SC.912.L.14.1	Cell Theory	A
5	SC.912.L.14.3	Prokaryotic/Eukaryotic	D
6	SC.912.L.14.3	Active Transport	A
7	SC.912.L.14.3	Nucleus	D
8	SC.912.L.14.3	Plant Cells	D
9	SC.912.L.14.3	Ribosome	A
10	SC.912.L.14.3	Mitochondria	D
11	SC.912.L.14.3	Osmosis: Hypertonic	D
12	SC.912.L.14.3	Rough ER	B
13	SC.912.L.14.3	Cell Membrane	B
14	SC.912.L.14.3	Plant Cell Wall	D
15	SC.912.L.14.3	Protein Channel	D
16	SC.912.L.14.3	Semi-permeable	B
17	SC.912.L.14.3	Osmosis: Hypertonic	A
18	SC.912.L.14.3	Mitochondria	B
19	SC.912.L.14.3	Vacuoles: Plant/Animal	B
20	SC.912.L.14.3	Prokaryotic	B
21	SC.912.L.14.3	Eukaryotic/Prokaryotic	D
22	SC.912.L.14.3	Plant Cell: cell wall	B
23	SC.912.L.14.3	Eukaryotic Cell	C
24	SC.912.L.14.3	Eukaryotic/Prokaryotic	D
25	SC.912.L.14.2	Cell Membrane Structure	B
26	SC.912.L.14.2	Surface Area vs. Volume	D
27	SC.912.L.14.3	Surface Area	A
28	SC.912.L.14.3	Lysosome	C
29	SC.912.L.14.3	Active Transport	A
30	SC.912.L.14.2	Cell Wall	B
31	SC.912.L.14.2	Active Transport	C
32	SC.912.L.14.2	Hypertonic/Hypotonic	A
33	SC.912.L.14.2	Hypotonic Solution	D
34	SC.912.L.14.2	Homeostasis	C
35	SC.912.N.1.1	Reading a Graph	A
36	SC.912.N.1.1	Making Inferences	C
37	SC.912.N.1.1	Control Group	D
38	SC.912.N.1.1	Independent Variable	A

UNIT 2: Macromolecules			
#	BENCHMARK	CONTENT FOCUS	CORRECT ANSWER
39	SC.912.L.18.12	Water: Specific Heat	C
40	SC.912.L.18.12	Water: Surface Tension	A
41	SC.912.L.18.12	Water: Cohesion/Adhesion	C
42	SC.912.L.14.12	Water: Water Expansion	B
43	SC.912.L.18.12	Water: Cohesion	C
44	SC.912.L.18.12	Water: High Heat Capacity	D
45	SC.912.L.18.12	Water: Water Expansion	B
46	SC.912.L.18.12	Water: Universal Solvent	B
47	SC.912.L.18.12	Water: High Heat Capacity	D
48	SC.912.L.18.1	Nucleic Acid Functions	D
49	SC.912.L.18.1	Nucleic Acid Functions	C
50	SC.912.L.18.1	Carbohydrate Structure	B
51	SC.912.L.18.1	Lipid Function	B
52	SC.912.L.18.1	Protein Function	C
53	SC.912.L.18.1	Lipid	B
54	SC.912.L.18.1	Nucleic Acid	A
55	SC.912.L.18.1	Enzymes	A
56	SC.912.L.18.1	Protein Structure	B
57	SC.912.L.18.1	Lipid Function	D
58	SC.912.L.18.1	Macromolecules	A
59	SC.912.L.18.1	Nucleic Acids	C
60	SC.912.L.18.1	Protein Structure	B
61	SC.912.L.18.11	Enzymes: Temperature	D
62	SC.912.L.18.11	Enzymes & Activation Energy	C
63	SC.912.L.18.11	Enzymes: Temperature	A
64	SC.912.L.18.11	Enzymes: pH	A
65	SC.912.L.18.11	Enzymes: pH	A
66	SC.912.L.18.11	Enzymes as Catalyst	A
67	SC.912.L.18.11	Enzyme Behavior	A
68	SC.912.L.18.11	Enzyme Behavior	D
69	SC.912.L.18.11	Enzyme Concentration	D
70	SC.912.L.18.9	Photosynthesis & Cell respiration	A
71	SC.912.L.18.9	Photosynthesis & Cell respiration	D
72	SC.912.L.18.9	Photosynthesis & Cell respiration	B
73	SC.912.L.18.9	Photosynthesis & Cell respiration	C
74	SC.912.L.18.9	Photosynthesis & Cell respiration	A
75	SC.912.L.18.9	Photosynthesis & Cell respiration	A
76	SC.912.L.18.7	Photosynthesis reactants	D
77	SC.912.L.18.7	Photosynthesis reactants	C
78	SC.912.L.18.7	Photosynthesis products	C
79	SC.912.L.18.7	Photosynthesis reactants	C

UNIT 2: Macromolecules

#	BENCHMARK	CONTENT FOCUS	CORRECT ANSWER
80	SC.912.L.18.7	Aerobic respiration	C
81	SC.912.L.18.7	Leaves	D
82	SC.912.L.18.7	Chloroplast	B
83	SC.912.L.18.8	Cellular Respiration	B
84	SC.912.L.18.8	Anaerobic Respiration	A
85	SC.912.L.18.8	Mitochondria	C
86	SC.912.L.18.10	ATP function	B
87	SC.912.L.18.10	ATP Production	A
88	SC.912.N.1.1.1	Control Group	C

Unit 2: Macromolecules

#	BENCHMARK	CONTENT FOCUS	Correct Answer
89	SC.912.L.15.6	Cladogram	B
90	SC.912.L.15.6	Fungi	C
91	SC.912.L.15.6	Genetic Evidence	A
92	SC.912.L.15.6	Changes in Classification	D
93	SC.912.L.15.6	Protists vs. Bacteria	D
94	SC.912.L.14.7	Stomata	B
95	SC.912.L.14.7	Plant Cell Division	A
96	SC.912.L.14.7	Xylem	D
97	SC.912.L.14.7	Plant Adaptations	B
98	SC.912.L.14.7	Function of Leaves	B
99	SC.912.L.14.7	Cambium	D
100	SC.912.L.14.7	Guard Cell	C
101	SC.912.L.14.7	Plant Reproduction	D
102	SC.912.L.14.7	Seed	A
103	SC.912.L.14.7	Guard Cell	A
104	SC.912.L.14.7	Stigma	B
105	SC.912.L.14.7	Plant Experiment	A

Unit: Ecology

#	BENCHMARK	CONTENT FOCUS	CORRECT ANSWER
106	SC.912.L.17.9	Roles: Omnivore	C
107	SC.912.L.17.9	Food Chain: Energy	A
108	SC.912.L.17.9	Change in Food Web	C
109	SC.912.L.17.9	Dynamic Equilibrium	D
110	SC.912.L.17.9	Heterotrophs	D
111	SC.912.L.17.9	Energy Pyramid	D
112	SC.912.L.17.9	Change in Food Web	A
113	SC.912.L.17.9	Food Web: Consumer	A
114	SC.912.L.17.9	Energy Pyramid	A
115	SC.912.L.17.9	Change Food Web	B
116	SC.912.L.17.9	Decomposer	D
117	SC.912.L.17.2	Abiotic Aquatic Factors	B
118	SC.912.L.17.5	Competition	B
119	SC.912.L.17.5	Sustainability	C
120	SC.912.L.17.5	Carrying Capacity	A
121	SC.912.L.17.5	Predator/Prey Population	C
122	SC.912.L.17.5	Carrying Capacity	A
123	SC.912.L.17.5	Carrying Capacity	C
124	SC.912.L.17.5	Carrying Capacity	B
125	SC.912.L.17.5	Population	A
126	SC.912.L.17.5	Population	D
127	SC.912.L.17.5	Population	B
128	SC.912.L.17.5	Population	B
129	SC.912.L.17.4	Succession	A
130	SC.912.L.17.4	Secondary Succession	C
131	SC.912.L.17.4	Primary Succession	D
132	SC.912.L.17.4	Pioneer Species	B
133	SC.912.L.17.20	Positive Human Impact	B
134	SC.912.L.17.20	Biodiversity	C
135	SC.912.L.17.20	Human Impact Negative	B
136	SC.912.L.17.20	Human Impact	D
137	SC.912.L.17.20	Society & Environment	B
138	SC.912.L.17.20	Human Impact Negative	B
139	SC.912.L.17.20	Nonrenewable resources	A
140	SC.912.L.17.20	Interconnectedness	A
141	SC.912.L.17.20	Human Impact Long Term	D
142	SC.912.L.17.20	Fertilizer Pollution	A
143	SC.912.L.17.20	Whaling	B
144	SC.912.E.7.1	Atmospheric Carbon	B
145	SC.912.E.7.1	Carbon Cycle	B
146	SC.912.E.7.1	Water Cycle	D
147	SC.912.E.7.1	Fossil Fuels	B

STUDENT:			
#	BENCHMARK	CONTENT FOCUS	Correct ANSWER
148	SC.912.L.16.1	Punnett Square	B
149	SC.912.L.16.1	Sex-linked Recessive	B
150	SC.912.L.16.1	Codominance	C
151	SC.912.L.16.1	Recessive Trait	A
152	SC.912.L.16.1	Genotypic Ratio	B
153	SC.912.L.16.1	Pedigree	D
154	SC.912.L.16.1	Independent Assortment	A
155	SC.912.L.16.1	Sex-linked Trait	C
156	SC.912.L.16.1	Independent Assortment	D
157	SC.912.L.16.1	Incomplete Dominance	B
158	SC.912.L.16.1	Dihybrid Cross	B
159	SC.912.L.16.3	DNA	C
160	SC.912.L.16.3	DNA	A
161	SC.912.L.16.3	DNA Bases	B
162	SC.912.L.16.3	DNA Sequence	D
163	SC.912.L.16.3	Human Gene	C
164	SC.912.L.16.3	DNA Replication	B
165	SC.912.L.16.3	DNA Replication	A
166	SC.912.L.16.3	DNA Molecule	B
167	SC.912.L.16.3	Codons	A
168	SC.912.L.16.3	Codons	B
169	SC.912.L.16.3	Insertion	B
170	SC.912.L.16.3	Translation	A
171	SC.912.L.16.3	tRNA	C
172	SC.912.L.16.3	Codon	C
173	SC.912.L.16.17	Mitosis	C
174	SC.912.L.16.17	Asexual/Sexual Reproduction	A
175	SC.912.L.16.17	Sexual Reproduction	C
176	SC.912.L.16.17	Cancer	C
177	SC.912.L.16.17	Meiosis	B
178	SC.912.L.16.17	Metaphase	B
179	SC.912.L.16.17	Zygote	A
180	SC.912.L.16.17	Meiosis vs. Mitosis	D
181	SC.912.L.16.17	Meiosis	A
182	SC.912.L.16.17	Crossing Over	D
183	SC.912.L.16.17	Chromosome Number	C

STUDENT:			
#	BENCHMARK	CONTENT FOCUS	CORRECT
184	SC.912.L.16.10	Biotechnology	D
185	SC.912.L.16.10	Biotechnology	B
186	SC.912.L.16.10	Biotechnology	D
187	SC.912.L.16.10	Biotechnology	B
188	SC.912.L.16.10	Biotechnology	D
189	SC.912.L.14.26	Parietal	B
190	SC.912.L.14.26	Temporal	D
191	SC.912.L.15.1	Common Ancestry	B
192	SC.912.L.15.1	Fossil Records	D
193	SC.912.L.15.1	Embryology	A
194	SC.912.L.15.1	Jaw Size	A
195	SC.912.L.15.1	Cladogram	D
196	SC.912.L.15.1	DNA Evidence	A
197	SC.912.I.15.8	Chemical Evolution	C
198	SC.912.I.15.8	Prokaryote	B
199	SC.912.I.15.8	Miller-Urey	C
200	SC.912.I.15.8	Endosymbiant Theory	C
201	SC.912.I.15.13	Limited Resources	B
202	SC.912.I.15.13	Natural Selection	C
203	SC.912.I.15.13	Mutations	A
204	SC.912.I.15.13	Natural Selection	A
205	SC.912.I.15.13	Genetic Disorders	D
206	SC.912.I.15.13	Genetic Drift	A
207	SC.912.I.15.13	Mechanisms of Natural Sel.	C
208	SC.912.I.15.13	Genetic Diversity	B
209	SC.912.I.16.13	Human Development	B
210	SC.912.I.16.13	Fertilization	A
211	SC.912.I.16.13	First Trimester	C
212	SC.912.I.16.13	Fertilization	C
213	SC.912.I.16.13	Embryo	A
214	SC.912.I.16.13	Vas Deferens	A
215	SC.912.I.16.13	Zygote	A
216	SC.912.I.16.13	Fetus	C
217	SC.912.I.16.13	First Trimester	A
218	SC.912.I.16.13	Epididymis	D
219	SC.912.I.16.13	Uterus	B
220	SC.912.I.14.36	Blood Flow	A
221	SC.912.I.14.36	Plaque	D
222	SC.912.I.14.36	Blood Pressure	C
223	SC.912.I.14.52	Antibiotics	D
224	SC.912.I.14.52	Vaccines	D
225	SC.912.I.14.52	Vaccines	A