

Living Environment		2005-06	2006-07	2007-08	Totals
1. K.I. 1-Sim. And Differ.	1.1a Populations can be categorized by the function they serve. . .	MC11 MC36 MC37 CR52	MC01 MC38 MC47	MC01 CR48	9
	1.1b An ecosystem is shaped by the nonliving environment as well as its interacting. . .			MC25	1
	1.1d The interdependence of organisms in an established ecosystem often results. . .	MC31		MC02	2
	1.1e Ecosystems, like many other complex systems, tend to show cyclic changes around a state of...			MC42	1
	1.1f Every population is linked, directly or indirectly, with many others in an ecosystem.		CR48		1
	1.2a Important levels of organization for structure and function include organelles, cells. . .	MC01	MC02		2
	1.2b Humans are complex organisms. They require multiple systems for digestion. . .	CR54			1
	1.2d If there is a disruption in any human system, there may be a corresponding imbalance. . .		MC03		1
	1.2h Many organic and inorganic substances dissolved in cells allow necessary. . .	MC06 CR53	MC07	MC09	4

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	1.2i Inside the cell a variety of specialized structures, formed from many different. . .	MC03		MC05	2
	1.2j Receptor molecules play an important role in the interactions between cells. Two. . .	MC34	MC04 CR44 CR45	MC35 MC36 CR53	7
	1.3a The structures present in some single-celled organisms act in a manner similar to. . .		MC05	MC04	2
2. K.I. 2-Genetic Info.	2.1a Genes are inherited, but their expression can be modified by interactions with the. . .		MC06		1
	2.1c Hereditary information is contained in genes, located in the chromosomes of each cell.	MC04		MC10	2
	2.1d In asexually reproducing organisms, all the genes come from a single parent. . .	MC35	MC08	MC07	3
	2.1e In sexually reproducing organisms, the new individual receives half of the genetic. . .			CR50	1
	2.1f In all organisms, the coded instructions for specifying the characteristics of the. . .	MC07	MC33	MC11	3
	2.1h Genes are segments of DNA molecules. Any alteration of the DNA sequence is a. . .	MC50		MC38	2

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	2.1i The work of the cell is carried out by the many different types of molecules it assembles. . .	MC12	MC09		2
	2.1k The many body cells in an individual can be very different from one another, even. . .	MC05	MC10	MC03	3
	2.2a For thousands of years new varieties of cultivated plants and domestic animals. . .			MC12	1
	2.2b In recent years new varieties of farm plants and animals have been engineered. . .	CR51	MC11		2
	2.2e Knowledge of genetics is making possible new fields of health care, for example, finding. . .		CR59		1
3. K.I. 3-Change Over Time	3.1a The basic theory of biological evolution states that the Earth's present-day species. . .	MC02			1
	3.1b New inheritable characteristics can result from new combinations of existing genes. . .	MC08	MC13		2
	3.1c Mutation and the sorting and recombining of genes during meiosis and fertilization. . .	MC09	MC15 MC23	MC16 CR54	5
	3.1d Mutations occur as random chance events. Gene mutations can also be caused by such agents. . .	CR56	MC12	CR65	3

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	3.1e Natural selection and its evolutionary consequences provide a scientific explanation. . .		MC22		2
	3.1f Species evolve over time. Evolution is the consequence of the interactions of (1) the. . .			MC08	1
	3.1g Some characteristics give individuals an advantage over others in surviving and. . .	MC10	MC37	MC13	3
	3.1h The variation of organisms within a species increases the likelihood. . .			MC40	1
	3.1k Evolution does not necessitate long-term progress in some set direction.			MC41	1
	3.1l Extinction of a species occurs when the environment changes. . .		MC14	MC14	2
4. K.I. 4-Reprod. & Devel.	4.1a Reproduction and development are necessary for the continuation of any species.			MC37	1
	4.1b Some organisms reproduce asexually with all the genetic information coming from. . .	MC14		MC21	2
	4.1c The processes of meiosis and fertilization are key to sexual reproduction in a wide. . .	MC15 MC16		MC17	3
	4.1d The zygote may divide by mitosis and differentiate to form the specialized cells. . .	MC17	MC16	MC22	3

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	4.1e Human reproduction and development are influenced by factors. . .	MC18	MC18		2
	4.1f The structures and functions of the human female reproductive system, as in. . .	CR58	MC17	MC18	3
	4.1g The structures and functions of the human male reproductive system, as in other. . .		MC39 MC40 MC41		3
	4.1h In humans, the embryonic development of essential organs occurs in early stages of pregnancy.	CR59			1
5. K.I. 5-Dynamic Equil.	5.1a The energy for life comes primarily from the Sun. Photosynthesis provides a vital. . .		MC24		1
	5.1b Plant cells and some one-celled organisms contain chloroplasts. . .	MC27 CR48	MR43	CR49	4
	5.1c In all organisms, organic compounds can be used to assemble other molecules. . .	MC19	MC19	MC15	3
	5.1d In all organisms, the energy stored in organic molecules may be released during. . .	MC20	MC20 CR53	MC19	4
	5.1e The energy from ATP is used by the organism to obtain, transform, and transport materials. . .	CR55			1
	5.1f Biochemical processes, both breakdown and synthesis, are made possible by a. . .	MC13 CR60	CR60		3

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	5.1g Enzymes and other molecules, such as hormones, receptor molecules, and antibodies. . .	CR61	MC26		2
	5.2d Some white blood cells engulf invaders. Others produce antibodies that attack. . .	MC20	MC20 CR53	MC19	4
	5.2e Vaccinations use weakened microbes (or parts of them) to stimulate the immune. . .		MC21		1
	5.2g Some allergic reactions are caused by the body's immune responses. . .	MC49		MC20	2
	5.3b Feedback mechanisms have evolved that maintain homeostasis. Examples include. . .	MC21	CR54 MC55	CR56 CR57 CR64	6
6. K.I. 6-Dependence	6.1a Energy flows through ecosystems in one direction, typically from the Sun. . .	MC28 MC40 MC41 MC42	MC25 MC42 MC46	MC27	8
	6.1b The atoms and molecules on the Earth cycle among the living and nonliving components. . .			MC24 CR66	2
	6.1c The chemical elements, such as carbon, hydrogen, nitrogen and oxygen. . .		MC27		1
	6.1d The number of organisms any habitat can support (carrying capacity) is limited by. . .	MC25			1

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	6.1e In any particular environment, the growth and survival of organisms depend on the . . .	MC43			1
	6.1g Relationships between organisms may be negative, neutral, or positive. Some. . .		MC32 MC36	CR55 CR60 CR61 CR62	6
	6.2a As a result of the evolutionary processes, there is a diversity of organisms and roles in. . .		MC28		1
	6.3b Through ecological succession, all ecosystems progress through a sequence of. . .	MC24		MC28	2
	6.3c A stable ecosystem can be altered, either rapidly or slowly, through the activities of. . .		MC30		1
7. K.I. 7-Human Decisions	7.1a The Earth has finite resources; increasing human consumption of resources places. . .	MC33		CR46	2
	7.1c Human beings are part of the Earth's ecosystems. Human activities can, deliberately. . .	MC29	CR58 CR60	MC29 CR47 CR67	6
	7.2a Human activities that degrade ecosystems result in a loss of diversity of the living. . .	CR62	CR57		2
	7.2b When humans alter ecosystems either by adding or removing specific organisms. . .	MC26 MC30		MC26 MC30 CR58	5

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	7.2c Industrialization brings an increased demand for and use of energy and other resources. . .		MC29	CR45	2
	7.3a Societies must decide on proposals which involve the introduction of new technologies.	MC22 MC23			2
L. L1 Relation/Biodiversity	Ecology Content			CR73 MC74	2
	Genetics Skill	CR63 CR64 CR65	MC65 MC66 CR67	MC68 CR72	8
	Lab skill	MC66		MC69 CR71	3
L. L2 Making Connections	Human Physiology Content		MC64	MC70	2
	Human Physiology Skill	CR67 CR68			2
	Scientific Method Content		MC63		1
	Scientific Method Skill		MC62		1
L. L3 Beaks of Finches	Evolution Content	MC69 MC70 MC71		MC75	4
	Evolution Skill		CR68 MC68 MC70		3
L. L5 Diffusion/Osmosis	Transport Content	MC72	MC72	CR78 MC79	4

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	Transport Skill	MC73 CR74	MC71 CR73	CR76 CR77 MC80	7
S. Standard 1	3.1 Use various methods of representing and organizing observations (e.g., diagrams, tables. . .)			CR43 CR44	2
	S1.1c Science provides knowledge, but values are also essential to making effective and ethical...			MC32	1
	S1.3a Scientific explanations are accepted when they are consistent with experimental. . .			MC33 MC34	2
	S2.1 Devise ways of making observations to test proposed explanations.	CR57			1
	S2.2a Development of a research plan involves researching background information. . .		CR61		1
	S2.3 Develop and present proposals including formal hypotheses to test explanations;			CR63	1
	S2.3a Hypotheses are predictions based upon both research and observation.		CR56		1
	S3.1a Interpretation of data leads to development of additional hypotheses, the formulation. . .	MC32 MC39 CR44 CR45 CR46 CR47	MC34 CR49 CR50 CR51 CR52	MC39	12