

# Benchmark Assessment Results: Science

## Grades 8 & 11

### Percent Proficient

Years 2001-2002 through 2006-07

		Grade 8					
	Benchmark	2002	2003	2004	2005	2006	2007
A	Explain cause & effect of earthquakes & volcanoes.	60	61	71	73	62	61
B	Identify the characteristics of rocks & minerals.	68	49	52	55	47	51
C	Understand how the organ systems of humans interact to maintain life.	70	78	75	72	69	74
D	Explain how organisms survive in a constantly changing environment.	55	61	63	66	65	69
E	Compare & contrast properties of matter & energy.	74	72	77	75	69	69
F	Apply physical science concepts using mathematical formulas.	54	51	50	52	40	42
G	Apply Newton's Laws of Motion.	X	73	76	75	76	75
H	Use a periodic table to provide basic information about elements.	67	68	73	78	67	70
I	Interpret a graph.	76	74	78	78	82	81
J	Given a problem, form a hypothesis, plan an investigation with controlled variables, record data, & draw one or more conclusions.	69	71	73	76	72	77
K	Explain how parts of an Iowa ecosystem interact.	77	65	61	65	63	67
L	Analyze humans' positive & negative impacts on Iowa's environment.	58	62	67	65	66	73
M	Identify the major female & male reproductive organs of the human body.	60	89	90	89	90	90
N	Describe the developmental stages of male & females from conception to maturity.	74	72	70	72	70	69
O	State the physical, social, & emotional consequences of being sexually active as a teenager.	87	83	83	85	90	83
P							
Q							

		Grade 11					
	Benchmark	2002	2003	2004	2005	2006	2007
	Analyze a weather map.	63	67	61	64	60	66
	Understand the unique qualities of the earth that make life possible.	54	69	74	75	76	55
	Identify natural factors that affect the earth's surface.	46	41	68	62	63	60
	Understand that populations of organisms change over time.	66	67	66	67	75	79
	Identify factors affecting transmission of disease.	66	67	84	82	72	85
	Understand that DNA is the common thread of living organisms.	62	76	62	67	66	72
	Understand the structure of the atom.	69	69	74	75	82	74
	Understand forces acting on macroscopic and microscopic objects.	58	54	65	62	62	69
	Identify forms of energy and energy transfer.	63	62	52	51	76	66
	Understand the properties of matter through physical & chemical changes.	59	83	97	91	73	82
	Construct or develop a graph from experimental data.	73	76	64	67	43	60
	Determine relationship between variables by interpreting graph/chart table (visual representation of data).	68	71	65	69	54	64
	Be able to make & interpret accurate & precise measurements.	60	60	57	61	58	55
	Explain the effect of population growth on the earth's resources.	65	74	74	72	40	71
	Understand the cyclical nature of the earth's resources.	63	64	65	65	65	69
	Understand the basic functions of the human body.	X	78	59	65	60	56
	Identify key components of a healthy lifestyle.	63	82	87	86	81	93