

Stage D (Grades 3, 4, 5) ISBE Content and Processes Required by Illinois Learning Standards-Based Performance Descriptors for Science

PROCESSES SPECIFIED IN PERFORMANCE DESCRIPTORS

The following verbs are included in the performance descriptors. This set of charts is intended to provide information for teachers about the processes required by Illinois Learning Standards—for students to apply and to understand—at lower grade levels.

absorb	adapt	analyze	apply
associate	brainstorm	categorize	change
collect	communicate	compare	conduct
consider	construct	contrast	convert
create	demonstrate	describe	detect
determine	diagram	display	distinguish
document	examine	experiment	explain
explore	follow	formulate	function
generate	graph	identify	incorporate
ingest	inhale	interact	introduce
investigate	link	map	outline
predict	prepare	present	produce
propose	record	reflect	refract
refute	report	research	select
separate	sketch	suggest	summarize
synthesize	transmit	travel	validate
verify			

CONTENT REQUIRED BY PERFORMANCE DESCRIPTORS

The following nouns are listed below the standard for which they appear in the performance descriptors. This set of charts is intended to provide information for teachers about content required by Illinois Learning Standards at lower grade levels.

ILS 11A: Know and apply the concepts, principles, and processes of scientific inquiry.

accuracy	charts	contextual inquiry questions	data
data points	data table	data trends	dependant variable
discrepancies	equipment	evidence	explanations
hypothesis	hypothesis statement	inferences	independent variable
investigation hypothesis	investigatory process	logical sequence	materials
metric units	observation	outliers	procedural steps
procedure	qualitative data	quantitative data	safety measures
safety precautions	scientific knowledge	scientific skills	technology
trials	visualizations		

ILS 11B: Know and apply the concepts, principles and processes of technological design.

adaptability	applications	design dilemma	design modifications
design parameters	design plans	design procedures	design prototype
design questions	design selection	design solution	graphic display
heat	investigations	pendulum	processes
ranges	results	sources of error	success criteria
success criteria indicators	technological design		

ILS 12A: Know and apply concepts that explain how living things function, adapt and change.

animals	appendages	body functions	body structures
characteristics	coloration	fossils	functional features
generalizations	generations	habit	immaturity
inherited characteristic	learned behavior	learned characteristic	life cycles
macroscopic life forms	maturity	metamorphosis variations	microscopic life forms
nature of inheritance	observed patterns	offspring	parents
pattern	patterns of change	plants	rules of probability
stages	structural features	structures	surveys
teeth			

ILS 12B: Know and apply concepts that describe how living things interact with each other and with their environment.

adaptations	behavioral patterns	consumer	ecosystem
environment	habitat	host	moisture
organisms	parasite	physical features	predator
prey	producer	relationship	seasons
simple food chain	simple food web	temperature	

ILS 12C: Know and apply concepts that describe properties of matter and energy and the interactions between them.

chemical combinations	chemical energy	chemical properties	common compounds
common elements	electrical energy	energy	heat distribution
heterogeneous samples	homogenous samples	interactions	interrelationships
light	matter	mechanical energy	physical combinations
physical properties	properties	requirements	resources
simple mixtures	sound	sources of power	

ILS 12D: Know and apply concepts that describe force and motion and the principles that explain them.

constant motion	Earth	force	friction
initial energy inputs	length	mass	mechanical advantage
moon	motion	periodic motion	planets
simple machines	variable motion	variations	weight

ILS 12E: Know and apply concepts that describe the features and process of the Earth and its resources.

atmospheric conditions	barometric observation	biotic communities	climate
climatic changes	cloud observation	effects	erosion
features	global climate	human activities	land
natural resource supplies	supplies	water	water cycle
weather conditions	weather patterns	weathering	

12F: Know and apply concepts that explain the composition and structure of the universe and Earth's place in it.

benefits	categories of stars	celestial objects	composition
constellations	cycles	distance	moon
paths	phases	planetary objects	planetary orbits
position	risks	sky	solar system
solar system cycles	space	space flights	space research advances
stars	universe		

ILS 13A: Know and apply the accepted practices of science.

accidents	assumptions	chemicals	clean-up
collections	creative thinking	critical thinking	inquiry
laws	practices	predictions	preparation
safety	scientific equipment	steps	theories
tools			

ILS 13B: Know and apply concepts that describe the interaction between science, technology and society.

data collection	data retrieval	data storage	impact
microscopy	phenomenon	physical environmental settings	radar
scientists	technology innovations		