

North Carolina End-of-Course Biology Test

In October 2013, the State Board of Education (SBE) adopted college-and-career readiness Academic Achievement Standards and Academic Achievement Descriptors for the End-of-Grade (EOG) and End-of-Course (EOC) tests and their alternate assessments. After considering much input on the importance of student achievement reporting, in August 2019, the State Board of Education (SBE) adopted new college-and-career readiness Academic Achievement Standards and Academic Achievement Descriptors for the End-of-Grade (EOG) and End-of-Course (EOC) science tests and their alternate assessments. Effective with the 2019-20 school year, the State will report four levels on the Biology EOC as follows:

Achievement Level	Meets On-Grade-Level Proficiency Standard	Meets Career-and-College Readiness Standard
Level 5	Yes	Yes
Level 4	Yes	Yes
Level 3	Yes	No
Not Proficient	No	No

*Detailed achievement level descriptors are available on the following pages.

Biology Achievement Level Ranges (Cut Scores)

Test	Not Proficient	Level 3	Level 4	Level 5
Biology	≤ 249	250-251	252-260	≥ 261

Biology Achievement Level Descriptors

Not Proficient

*Students who are Not Proficient demonstrate **inconsistent** understanding of grade level content standards and will need support.*

Students identify some basic structures and functions of cells. They identify some components involved in the flow of energy and cycling of matter and recognize some interactions between organisms within their ecosystem (including the impact of human activity). Students identify basic structures and functions of DNA, the inheritance and expression of genetic traits, and the application of DNA technology. They identify species change over time and can recognize biological classification systems. Students can identify some biological molecules and recognize that organisms acquire and use energy.

Achievement Level 3:

*Students at Level 3 demonstrate **sufficient** understanding of grade level content standards though some support may be needed to engage with content at the next grade/course.*

Level 3 students identify basic structures and functions of cells and describe how cells can adapt to the environment. They identify components in the flow of energy and cycling of matter and describe interactions between organisms within their ecosystem (including the impact of human activity). Students recognize a relationship between the structure and function of DNA, the inheritance and expression of genetic traits, and the application of DNA technology. They identify natural selection as a mechanism for species change over time and can interpret biological classification systems. Students can identify major biological molecules and recognize biochemical processes and energy use in the cell.

Achievement Level 4:

*Students at Level 4 demonstrate a **thorough** understanding of grade level content standards and are on track for career and college.*

Level 4 students compare the structure and function of cells and analyze how cells adapt to their environment. They analyze the flow of energy and cycling of matter and understand interactions between organisms within their ecosystem (including the impact of human activity). Students understand the relationship between the structure and function of DNA, the inheritance and expression of genetic traits, and the application of DNA technology. They understand natural selection as a mechanism for species change over time and can analyze biological classification systems. Students understand the relationship between the major biological molecules and analyze biochemical processes and energy use in the cell.

Achievement Level 5:

*Students at Level 5 demonstrate **comprehensive** understanding of grade level content standards, are on track for career and college, and are prepared for advanced content at the next grade/course.*

Level 5 students distinguish relationships between the structure and function of cells and analyze how the cell can adapt to the environment. They can deconstruct the flow of energy and cycling of matter and analyze interactions between organisms within their ecosystem (including the impact of human activity). Students understand and analyze the relationship between the structure and function of DNA, the inheritance and expression of genetic traits, and the application of DNA technology. They understand and attribute natural selection as a mechanism for species change over time and can analyze and evaluate biological classification systems. Students analyze the relationship between the major biological molecules and evaluate biochemical processes and energy use in the cell.