

## About this Issue

The article "[Cancer's sweet cloak](#)" (9.7 readability score) describes how cancer cells coat themselves with extra sugars to avoid detection from the immune system, and how therapeutics in development might destroy that protective sugar coating. Students can focus on details in the article, follow connections to earlier articles about cancer, explore cross-curricular connections to other major science topics and analyze a graph of data from one of the cancer experiments featured in the article.

*Science News for Students* provides related articles written at lower Lexile levels. "[Implant traps cancer cells on the move](#)" (6.8 readability score) and "[Scientists say: Carcinogen](#)" (7.0 readability score) include [Power Words](#) that define key cancer-related terms for students.

## Connections to Curricula:

Molecular structures  
Sugars  
Proteins  
Lipids  
Cell signaling  
Cell cycle  
Cancer  
Immune system  
Biochemistry  
Nutrition  
Genetics  
Logarithmic scale  
Antibodies

## What's in this Guide?

- **Article-Based Observation:** These questions focus on reading and content comprehension by drawing on information found in the article "[Cancer's sweet cloak](#)." Observations about cell-surface sugars and their ability to hide cancer cells from the immune system are highlighted.
- **Quest Through the Archives:** Since uncontrolled cell growth was first recognized as a problem, scientists have been searching for effective therapies. With Internet access and your school's digital access to *Science News*, your students can use this short section to explore the history of cancer therapy research as reported by *Science News* since 1922.
- **Cross-Curricular Discussion:** These questions and extension prompts connect to the article "[Cancer's sweet cloak](#)" and encourage students to think in more detail about scientific areas related to the article. The section is subdivided roughly by science subdiscipline for educators who would like to focus on one particular topic area. The extension prompts are either more topic specific or more conceptually advanced. **Chemical and Physical Sciences** questions focus on molecular structures and properties of sugars, proteins, lipids and combinations of those molecules. **Biological Sciences** questions cover the immune system and cancer. **Engineering and Experimental Design** questions involve various potential applications of information from the article.
- **Activity:** Using a set of guided questions, students can work in pairs to analyze a graph of data from one of the cancer experiments described in "[Cancer's sweet cloak](#)." Analysis will require students to understand logarithmic scales and to explore cancer treatment possibilities.

## Standards Alignment

### Next Generation Science

From Molecules to Organisms: Structures and Processes: [HS-LS1-1](#), [HS-LS1-2](#), [HS-LS1-4](#), [HS-LS1-6](#)

Biological Evolution: Unity and Diversity: [HS-LS4-3](#), [HS-LS4-4](#), [HS-LS4-6](#)

Matter and Its Interactions: [HS-PS1-3](#)

Engineering Design: [HS-ETS1-1](#), [HS-ETS1-2](#)

### Common Core

ELA Standards: [Reading Informational Text \(RI\)](#): 1, 2, 4, 5, 7

ELA Standards: [Writing \(W\)](#): 1, 2, 3, 4, 6, 7, 9

ELA Standards: [Speaking and Listening \(SL\)](#): 1, 2, 4, 6

ELA Standards: [Reading for Literacy in Science and Technical Subjects \(RST\)](#): 1, 2, 3, 4, 5, 7, 8, 9

ELA Standards: [Writing Literacy in History/Social Studies and Science and Technical Subjects \(WHST\)](#): 1, 2, 4, 6, 7, 9