

## About this Issue

The “News in Brief” section of this issue summarizes new research in “[Extreme gas loss dried out Mars](#)” (11.3 readability), “[Thinning ice creates undersea greenhouses in the Arctic](#)” (10.5 readability), “[Food odors entice tired brains](#)” (11.6 readability) and “[More brain differences seen between girls, boys with ADHD](#)” (10.5 readability).

Students can focus on details reported in each of these news briefs, follow connections to earlier articles about these topics, explore International Science and Engineering Fair research conducted by high school students from around the world, engage in a classroom discussion of how research reports can prompt student research and do guided activities to develop original ideas for potential research projects.

This research-focused guide is inspired by the Intel International Science and Engineering Fair, or Intel ISEF, which is being held in Los Angeles from May 14 to May 19, 2017. Intel ISEF is the world’s largest international pre-college science competition and brings together approximately 1,800 high schools students from more than 74 countries. During the week of the fair, students are awarded the opportunity to showcase their independent research and compete for prizes.

Exploring what inspired students to do research, as well as the steps required for building a research question and testable hypothesis, will be covered in this guide. After this year’s Intel ISEF, encourage your students to search for information about the winners and other projects that might relate to a topic that interests them.

*Science News for Students* provides related articles written at lower Lexile levels. “[Food smells better to sleepyheads](#)” (7.0 readability score) and “[Study links ADHD to five brain areas](#)” (6.9 readability score) include [Power Words](#) that define key terms for students.

Want to introduce your students to an interesting research-based career in STEM? Have them look through [all of the Cool Jobs stories](#) by *Science News for Students*, pick one that interests them and explain the research involved in the career.

### Connections to Curricula:

- Solar system
- Mars
- Climatology
- Greenhouse gases
- Olfaction
- Sleep deprivation
- Planetary science
- Isotopes
- Geology
- Astronomy

## What's in this Guide?

- **Article-Based Observation:** These questions focus on reading and content comprehension by drawing on information found in the news briefs "[Extreme gas loss dried out Mars](#)," "[Thinning ice creates undersea greenhouses in the Arctic](#)," "[Food odors entice tired brains](#)" and "[More brain differences seen between girls, boys with ADHD](#)." Students will examine the research described in each brief and discuss how each demonstrates sound scientific inquiry.
- **Quest Through the Archives:** With Internet access and your school's digital access to *Science News*, your students can use this short section to explore articles about past ISEF research as reported by *Science News* since the fair became international in 1958.
- **Cross-Curricular Discussion:** These questions and extension prompts connect to the news briefs and encourage students to think in more detail about what scientific details are not fully defined in each brief and how the research reports can lead students to explore related topics and conduct original research. The section is subdivided according to the four articles in the "News in Brief" section.
- **Activity:** By drawing inspiration from *Science News* articles and past Intel ISEF projects, students can work through guided activities to develop scientific questions for potential research projects.

## Standards Alignment

Next Generation Science	Common Core
From Molecules to Organisms: Structures and Processes: <a href="#">HS-LS1-2</a> , <a href="#">HS-LS1-3</a> , <a href="#">HS-LS1-5</a>	ELA Standards: <a href="#">Reading Informational Text</a> (RI): 1, 2, 4, 5, 7, 8
Earth's Place in the Universe: <a href="#">HS-ESS1-1</a> , <a href="#">HS-ESS1-6</a>	ELA Standards: <a href="#">Writing</a> (W): 1, 2, 3, 4, 5, 6, 7, 8, 9
Earth's Systems: <a href="#">HS-ESS2-2</a> , <a href="#">HS-ESS2-6</a> , <a href="#">HS-ESS2-7</a>	ELA Standards: <a href="#">Speaking and Listening</a> (SL): 1, 2, 3, 4, 5
Earth and Human Activity: <a href="#">HS-ESS3-4</a> , <a href="#">HS-ESS3-5</a>	ELA Standards: <a href="#">Reading for Literacy in Science and Technical Subjects</a> (RST): 1, 2, 4, 5, 7, 8
Engineering Design: <a href="#">HS-ETS1-1</a> , <a href="#">HS-ETS1-2</a> , <a href="#">HS-ETS1-3</a>	ELA Standards: <a href="#">Writing Literacy in History/Social Studies and Science and Technical Subjects</a> (WHST): 1, 2, 3, 4, 5, 6, 7, 8, 9