

**Cross-Curricular Discussion: Q**

**Directions:** In order to fully appreciate the Top 10 science stories of this year, you've got to have some scientific background knowledge! Use this section to gain a better understanding of the key vocabulary and concepts in the *SN* Top 10. The following list of discussion questions is provided to help you take notes, brainstorm ideas and test your thinking in order to be more actively engaged in the class discussion.

You may be prompted by your teacher to work in your group on one specific article. Your group should explain what concepts and key vocabulary you have to know in order to understand the article's content. Define the vocabulary in terms of how it relates to the article. Identify scientific topic areas that connect to the article. Then prepare to present this information to the rest of the class. Be creative! You could create a poster, infographic or another visual that relates all the terms to the central topic. Alternatively, you might write a two-minute commercial, skit or story about the article to present to your classmates.

**1) Cosmic mysteries unlocked in neutron star collision**

**Physics and Astronomy: What is a neutron star?**

**Physics and Astronomy: What are gravitational waves?**

**2) CRISPR gene editing moves into humans, spurs debate**

**Biological Sciences: What is CRISPR/Cas9?**

**Biological Sciences: What is genetic discrimination?**

**3) Larsen C ice break invites groundbreaking research**

**Earth Sciences: What are the Antarctic ice shelves?**

**4) Fossils join genetic evidence to revise human origin story**

**Biological Sciences: What are hominids?**

**5) Seven Earth-sized planets orbit the same ultracool star**

**Physics and Astronomy: What are exoplanets?**

**Physics and Astronomy: What is a dwarf star?**

**Physics and Astronomy: What is a stellar flare?**

**6) Quantum communication goes global**

**Physics and Astronomy: What is quantum entanglement?**

**Physics and Astronomy: What is quantum teleportation?**

**7) Climate change may silently steal nutrients from crops**

**Earth Sciences: What is the atmospheric CO<sub>2</sub> level?**

**Earth Sciences: What is climate change?**

**8) FDA approves gene therapy for two rare blood cancers**

**Biological Sciences: What is a T cell?**

**Biological Sciences: What makes a cell a cancer cell?**

**Biological Sciences: What is a chimeric antigen receptor?**

**9) CTE may be common among pro football players**

**Biological Sciences: What is tau protein?**

**Biological Sciences: What is chronic traumatic encephalopathy?**

**10) Zika is not gone for good**

**Biological Sciences: What is Zika virus?**

**Biological Sciences: What is a viral reservoir?**