

Teacher's Guide

Including Common Core Standards, Sample Questions, and Activities

All About Stephen Hawking

Common Core Literacy Scaffolding Questions

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Note to teachers and parents: The standards listed here are taken from the Common Core Standards: *Grades 6-12, Literacy in History/Social Studies, Science, & Technical Subjects* from the subset standards for grades 6 – 8. The standards listed here are 6-8.1 – 6-8.10. These Common Core Standards can be viewed in greater detail at this website:

<http://www.corestandards.org/ELA-Literacy/RH/6-8/>

Some states have decided not to adopt the Common Core standards, but the new state standards are uniformly similar. Teachers who choose to use these questions in a state that has not adopted Common Core standards are encouraged to apply their own state standards to these questions. Teachers who choose to use these questions for grades other than 6 – 8 can find all of the Common Core standards at: <http://www.corestandards.org/ELA-Literacy/>.

Teachers, please note that these questions are designed only to provide a very basic literacy scaffold and to provide examples. There is plenty of room for you to add your creativity and use your expertise to develop “why” questions and to help students make connections to other texts.

The questions below should be answered using a complete sentence and with textual evidence from the reading. The questions for the Preface are answered as examples.

Preface

1. What is Stephen Hawking’s main interest as a scientist?

Sample Answer: Stephen Hawking’s main interest as a scientist has been “...trying to figure out what happens at the edge of black holes.”

2. Who does Stephen Hawking write his books for?

Sample Answer: Stephen Hawking writes his books so that they are “...understandable to everyone.”

Chapter One

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.3, CCSS.ELA-Literacy.RH.6-8.5

1. Why were Frank and Isobel Hawking living in Oxford when Stephen was born in 1942?
2. What did Stephen Hawking enjoy doing while he was a child?
3. What effect did Dikran Tahta have on Stephen Hawking?

Chapter Two

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.4

1. How did Stephen Hawking gain entrance into Oxford in 1959?
2. Why didn't Stephen Hawking work very hard while a student at Oxford?
3. Who was Dr. Dennis Sciama and what was his relationship with Stephen Hawking?

Chapter Three

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.3, CCSS.ELA-Literacy.RH.6-8.4.

1. How did Stephen Hawking meet Jane Wilde?
2. How did the first date between Hawking and Wilde go?
3. What is ALS and how did Stephen Hawking find out he had it?

Chapter Four

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.3, CCSS.ELA-Literacy.RH.6-8.5

1. What scientific idea did Stephen Hawking have trouble believing and why?
2. What caused Jane Hawking to become frustrated about her life with Stephen and their family?
3. What happened to Stephen Hawking in Switzerland and how did Jane react?

Chapter Five

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.3

1. What did Walter Woltoz do for Stephen Hawking?
2. How has Stephen Hawking controlled his computer since 2005?

Chapter Six

Standards: CCSS.ELA-Literacy.RH.6-8.6, CCSS.ELA-Literacy.RH.6-8.8

1. What did almost dying make Stephen want to do?
2. Why did Stephen choose Bantam Books to publish his work?
3. What did Stephen Hawking say about space and time in his book?

Chapter Seven

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.3

1. When Jane and Stephen separated, whom did Stephen start seeing as his girlfriend?
2. What did Stephen Hawking talk about during the Millennium Evening Series?
3. Give an example of something that Jane Hawking did after she and Stephen broke up.

Chapter Eight

Standards: CCSS.ELA-Literacy.RH.6-8.6, CCSS.ELA-Literacy.RH.6-8.8

1. What was one book that Stephen Hawking wrote or co-wrote in the 21st Century?
2. How did Stephen Hawking act as an advocate for people in wheelchairs?
3. What was Stephen Hawking's sixtieth birthday party like?

Chapter Nine

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.6

1. What was Stephen Hawking's daughter, Lucy, worried about after her dad got married for the second time?
2. Name a book that Stephen Hawking and Lucy wrote together.

3. What do Robert and Tim Hawking do for a living?

Chapter Ten

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.6

1. How did Stephen Hawking feel about going into space in 2007?
2. Give an example of well-known person that Stephen Hawking visited.
3. What is one idea that got expressed in *The Grand Design*?

Chapter Eleven

Standards: CCSS.ELA-Literacy.RH.6-8.1, CCSS.ELA-Literacy.RH.6-8.6

1. What did the cartoon character version of Stephen Hawking talk about with Homer Simpson in 1999?
2. What happened at the “time traveler” party that Stephen Hawking through on Into the Universe?
3. What did Eddie Redmayne win for portraying Stephen Hawking in the 2014 movie *The Theory of Everything*?

Chapter Twelve

1. Give an example of one of Stephen Hawking’s political beliefs.
2. Give an example of one award that Stephen Hawking won because of his scientific achievements.

Text Analysis Questions

Standards: CCSS.ELA-Literacy.RH.6-8.2, CCSS.ELA-Literacy.RH.6-8.4, CCSS.ELA-Literacy.RH.6-8.9, CCSS.ELA-Literacy.RH.6-8.8

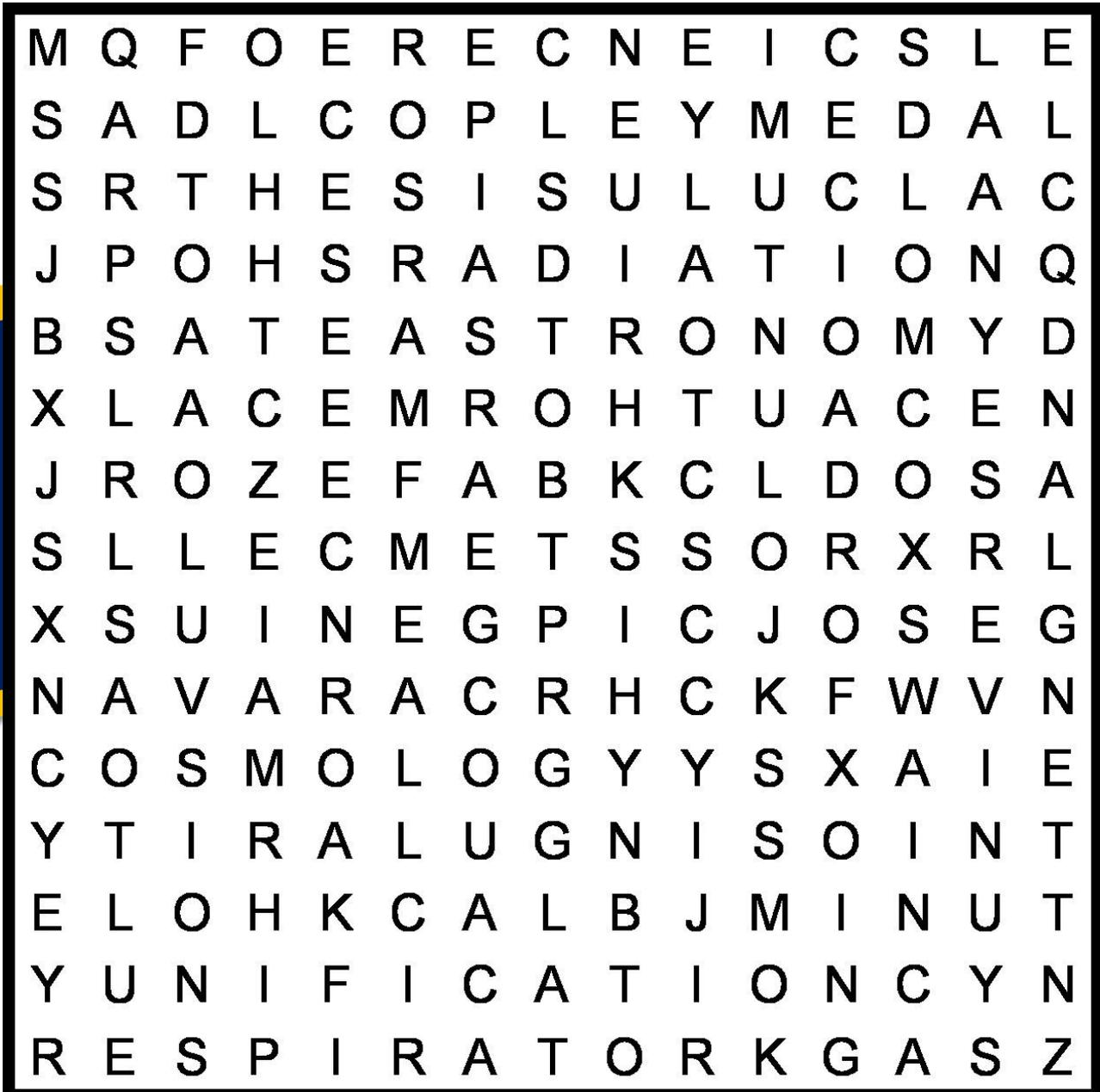
Essay: Read the quote below from the astrophysicist Neil Degrasse Tyson. Dr. Degrasse Tyson is another one of the greatest scientists in the world. He also happens to be African-American. Given what you know about Stephen Hawking, what is one part of the quote below that you think Dr. Hawking would agree with and why?

Question: What would you say to a young person...looking to be the next Dr. Tyson?

Neil Degrasse Tyson: I have two answers: One is, there’s no one person that I wanted to become, growing up. In fact, I think the concept of role model is overrated. If I required a black person who became a scientist who grew up in the Bronx to have come before me, I would have never become what I am. Role models work if you want to work your way into well-represented professions, or professions in which the black community is highly represented. Astrophysics is not among them. If

I wanted to be an astrophysicist, I cobbled together, in parts, the role model that I then sought to be. So, I found someone who had total mastery of the physics, and I thought, "I want to be that..." So, if you like what I do scientifically, then you call me up and I'll tell you what I did scientifically. If there's someone else who has other features that you prefer, you call them up, and you piece it together. But in the end, maybe the thing you piece together doesn't exist in anyone at all, and you have to create it out of whole cloth. And in so doing, you become the first of a kind rather than the next of a kind that already exists.

All About Stephen Hawking Word Search



ALS

ASTRONOMY

AUTHOR

BLACK HOLE

CALCULUS

CARAVAN

COPLEY MEDAL

COSMOLOGY

COXSWAIN

ENGLAND

GENIUS

MATHEMATICS

OXFORD

PHYSICS

RADIATION

RESPIRATOR

SCIENCE

SINGULARITY

SPACE

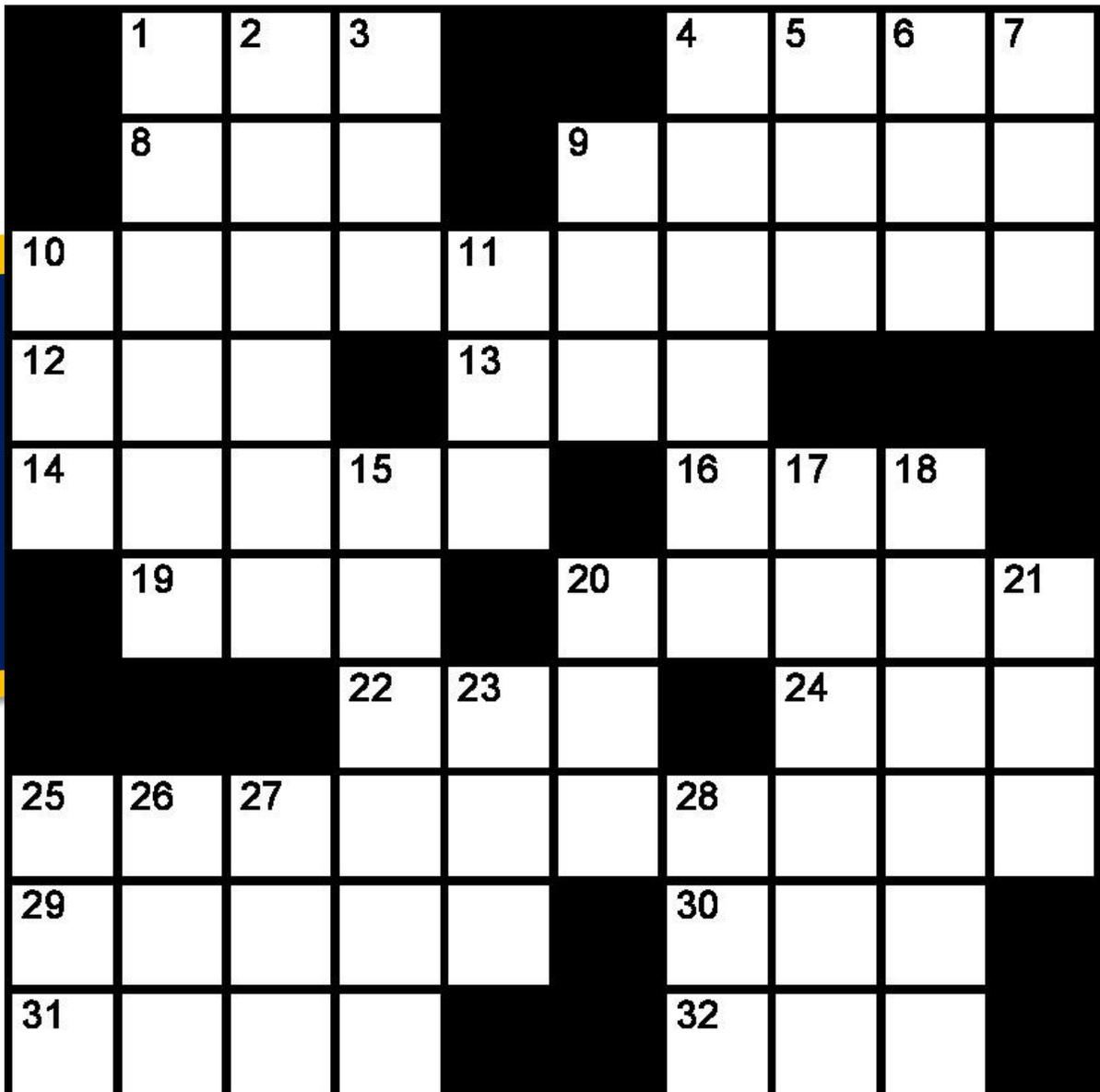
STARS

STEM CELLS

THESIS

UNIFICATION

UNIVERSE



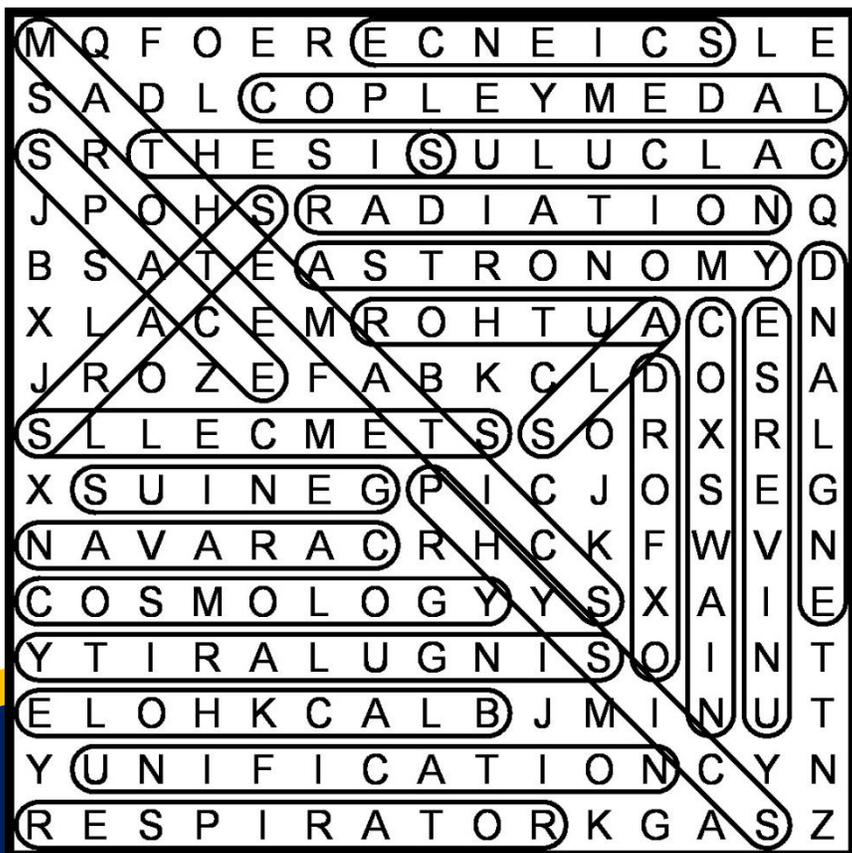
Across

- 1. Gov. agency that controls air quality
- 4. Land in the ocean
- 8. Use scissors
- 9. Villain's expression
- 10. Hawking's mode of getting around
- 12. Steal
- 13. As easy as ____
- 14. Dog sounds
- 16. No longer working (Abbr.)
- 19. Do-re-mi-fa-____
- 20. Newspapers, radio, TV etc.
- 22. Most of North America (Abbr.)
- 24. Sick
- 25. Hawking's fellow scientists
- 29. Tearful one
- 30. Bartender on "The Simpsons"
- 31. Kitchen measurements (Abbr.)
- 32. "Batman ____ Robin"

*All About
Stephen
Hawking
Crossword
Puzzle*

Down

- 1. Cave sound effects
- 2. Indian home
- 3. Had lunch in the school cafeteria
- 4. Response to "Where are you?" (2 wds.)
- 5. Caribbean or Mediterranean
- 6. Hawaiian floral necklace
- 7. Make a mistake
- 9. ____-fi (film type)
- 10. Like some of Hawking's humor
- 11. Stereo records before CDs (Abbr.)
- 15. + + +
- 17. Inventor of the light bulb
- 18. At an incline
- 20. Big ____ (burger)
- 21. Hawking's disease
- 23. Man's title of respect
- 25. % (Abbr.)
- 26. Lots of mins.
- 27. Puppy bark
- 28. "____ Little Teapot" (2 wds.)



All About Stephen Hawking Answer Key

