

**SD148 CCSS Summer Portfolio:  
Science 6<sup>th</sup>-8<sup>th</sup> Grade  
Activity 4: Investigating Complex Text**

Goals:

- The participants will investigate complex text
- The participant will connect with student issues while reading complex text

Purpose

- To understand the impact of text complexity on student learning

Procedure:

1. Read the **“Defining Complex Text”** section of this activity
2. Read the **Gordon Kane** article
3. Complete the **“Text Reflections”** on the graphic organizer based on the articles
4. Answer the questions about **“Making Student Connections”**
5. Place the completed graphic organizer in your portfolio

Timeline:

Read the “Defining Complex Text”, the Gordon Kane article, complete the graphic organizer, and answer the “making Student Connections” questions. 2 hours

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**“Defining Complex Text”**

The move to CCSS has the skills of the high school graduate in mind. Graduates need to be ready and at the level for college and career. We understand that there are basic skills related to this readiness of students. Student must be able to read to infer, interpret and draw conclusions. Students must be able to support arguments with evidence. They have to be able to resolve conflicting views encountered in source documents. We must teach them to solve complex problems with no obvious answer. We must give them the ability to navigate and comprehend complex text in any discipline.

What does that look like? How do we navigate complex text? How do we know if text is complex? Here are some questions for teachers to consider about the reader in relationship to the reading

Does the text:

- Use sophisticated language structure?
- Include unfamiliar vocabulary?
- Require or infer certain levels of background knowledge?
- Require the reader to “work it” to understand it?
- Require the reader to have an interest and motivation in the topic in order to be able to comprehend?
- Require scaffolding for the reader to become independent?

Text complexity is a problem for struggling readers and for those of us who teach them

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**Excerpt from Kane, Gordon. “The Mysteries of Mass” from Scientific American Special Edition December 2005**

Physicists are hunting for an elusive particle that would reveal the presence of a new kind of field that permeates all of reality. Finding that Higgs field will give us a more complete understanding about how the universe works.

Most people think they know what mass is, but they understand only part of the story. For instance, an elephant is clearly bulkier and weighs more than an ant. Even in the absence of gravity, the elephant would have greater mass--it would be harder to push and set in motion. Obviously the elephant is more massive because it is made of many more atoms than the ant is, but what determines the masses of the individual atoms? What about the elementary particles that make up the atoms--what determines their masses? Indeed, why do they even have mass?

We see that the problem of mass has two independent aspects. First, we need to learn how mass arises at all. It turns out mass results from at least three different mechanisms, which I will describe below. A key player in physicists' tentative theories about mass is a new kind of field that permeates all of reality, called the Higgs field. Elementary particle masses are thought to come about from the interaction with the Higgs field. If the Higgs field exists, theory demands that it have an associated particle, the Higgs boson. Using particle accelerators, scientists are now hunting for the Higgs.

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**Activity 4: Investigating Complex Text (use the Gordon Kane article)**

<b>Does the text. . .</b>	<b>Yes/No</b>	<b>If yes, show example from article. . .</b>	<b>Describe your thinking as you read. . .</b>
<b>Use sophisticated language?</b>			
<b>Include unfamiliar vocabulary?</b>			
<b>Require the reader to have specific background knowledge?</b>			
<b>Require the reader to have interest and motivation to read?</b>			

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**Making Student Connections**

How did you read the text in order to make meaning of the text? What strategies did you use?
Why is this considered a complex piece of text?
What would have helped you to make meaning of the text?
What connection can you make to your students reading the text in your class?
What consideration must you give to your students as they read text that is complex to them?