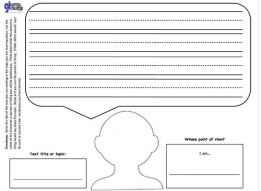








# Nonfiction Choice Board:

## Thinking with *Depth & Complexity* \*

**Directions:** Choose a nonfiction article/book to accompany the following activities or use the attached article. This choice board is meant to prompt conversations that can lead to deep thinking and problem-solving. It is suggested that you allow your child to choose one activity a day or complete them as you see fit. Set a goal with your child on how many sections to complete this week. Have fun digging deep with your child!

<p><b>1 Multiple Perspective:</b> Take the perspective of a scientist, teacher, or doctor. What would this person say about the text you read about? Complete the speech bubble and draw the person's face.</p>  	<p><b>2 Unanswered Questions:</b> After reading the article or another nonfiction text, what questions do you still have about this topic?</p> <ul style="list-style-type: none"> <li>• Choose one or two questions and do research to find the answer</li> <li>• Share your answer with a member of your family.</li> </ul> 	<p><b>3 Details:</b> Using the details from the text, create a new cover page that includes:</p> <ul style="list-style-type: none"> <li>• Illustration</li> <li>• Title</li> <li>• Author</li> <li>• Short Summary</li> </ul> 
<p><b>4 Ethics:</b> Pretend you can interview the author. How would you say the author would answer these questions:</p> <ul style="list-style-type: none"> <li>• Why did you write this article/nonfiction text?</li> <li>• What is the most important thing you want your readers to remember about this article/nonfiction text? Why?</li> <li>• Act out the interview for your family</li> </ul> 	<p><b>5 Real World:</b> What is a piece of information that you learned that you can connect to either with:</p> <ul style="list-style-type: none"> <li>• Someone you know</li> <li>• Another article you read</li> <li>• Something that has happened before</li> <li>• Create a poster with your connection</li> </ul> 	<p><b>6 Big Idea:</b> What is the Big Idea the author is trying to share?</p> <ul style="list-style-type: none"> <li>• Draw a picture</li> <li>• Write a poem</li> <li>• Sing a song about the big idea in this article/nonfiction text</li> </ul> 

7

**Trends:**

What event(s) in the article/nonfiction text made something else

happen?

- Draw a picture that shows how one event caused another event to happen
- Can you make more connections? Use arrows to show how one event is connected to another event



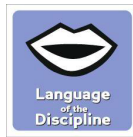
8

**Language of the Discipline:**

Go back through the article and find words or phrases you think

are interesting or are important to the big idea.

- Create a symbol for each word or phrase
- Act out some of the words or phrases



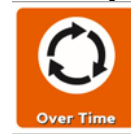
9

**Change Over Time:**

Teach someone about the topic in your text. Include the following ideas

and questions:

- Tell about the topic
- How might the topic change in 10 years?
- When do you think someone might use this in the future?
- Teach your lesson to a family member over the phone or by FaceTime



**More on Depth & Complexity-** To find out how you can incorporate more Depth and Complexity into your family discussions, feel free to visit Gifted Guru, Lisa VanGemert's website:

<http://www.giftedguru.com/why-i-love-depth-and-complexity/>

## Pluto: The Planet That Wasn't



NASA

*Pluto*

Poor Pluto!

It's bad enough to be the runt of the group, but to be told after 75 years that you're not even a member of the club - what an insult!

Pluto was first discovered in 1930. Until 2006, students were taught that it was the ninth and smallest planet in the solar system. Smaller than Earth's moon, it is not even as wide as the United States.

Pluto is made up almost entirely of rock and ice. It is so far away from Earth that the NASA New Horizons spacecraft took almost 10 years to get very close to it. Pluto's full orbit around the sun lasts almost 250 Earth years!

But as small as it is, as cold as it is, as far from the sun as it is, for all those years it was considered the ninth planet of the solar system... until Eris came around.

Eris was discovered in 2005. It is about the same size as Pluto. And like Pluto, it is part of the Kuiper Belt, a ring of objects that circle the outer edge of the solar system.

After Eris was discovered, scientists had to make a decision. Either Eris was the 10th planet in the solar system or it was not a planet at all! And if Eris weren't a planet, could Pluto be considered one?

Scientists made new rules for what is counted as a planet, and decided that neither Pluto nor Eris qualified.

A new category was created: dwarf planet. The official list of planets in the solar system went from nine to eight, and Pluto and Eris became members of the dwarf planet club. So long for Planet Pluto-but at least it no longer has to be the littlest guy in the club. In fact, Pluto is one of the bigger dwarf planets! Maybe Pluto doesn't have it so bad after all.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Pluto used to be considered a planet. Today, what is it considered to be?
  - A. It is considered to be a dwarf planet.
  - B. It is considered to be a star.
  - C. It is considered to be a comet.
  - D. It is considered to be an asteroid.
  
2. How does the text describe Pluto?
  - A. Pluto is made up entirely of ice, and it is bigger than Venus.
  - B. Pluto is made up entirely of rock and ice, and it is bigger than Earth's moon.
  - C. Pluto is made up entirely of gas, and it is bigger than Earth's moon.
  - D. Pluto is made up entirely of rock and ice, and it is smaller than Earth's moon.
  
3. Read these sentences from the text.

After Eris was discovered, scientists had to make a decision.

Either Eris was the 10th planet in the solar system or it was not a planet at all! And if Eris weren't a planet, could Pluto be considered one?

Scientists made new rules for what is counted as a planet, and decided that neither Pluto nor Eris qualified.

Based on this information, what did the discovery of Eris make scientists do?

- A. The discovery of Eris made scientists rethink the rules for what is counted as a star.
- B. The discovery of Eris made scientists rethink the rules for what is counted as a dwarf planet.
- C. The discovery of Eris made scientists rethink the rules for what is counted as a planet.
- D. The discovery of Eris made scientists add more planets to the group of planets.

4. After Eris was discovered, scientists had to decide whether to count it as a planet. Why did this make them question whether Pluto should still be counted as a planet?

- A. because Pluto and Eris are both space objects
- B. because Pluto and Eris were discovered at the same time
- C. because Pluto and Eris are very different
- D. because Pluto and Eris are very similar

5. What is the main idea of this text?

- A. Pluto was no longer considered a planet after the discovery of Eris made scientists come up with new rules for what is counted as a planet.
- B. Pluto is so far away from Earth that the NASA New Horizons spacecraft took almost 10 years to get very close to it.
- C. Eris is about the same size as Pluto, and like Pluto, it is part of a ring of objects that circle the outer edge of the solar system.
- D. Scientists come up with rules for what is counted as a planet and what is not.

6. Read these sentences from the text.

A new category was created: dwarf planet. The official list of planets in the solar system went from nine to eight, and Pluto and Eris became members of the dwarf planet club. So long for Planet Pluto-but at least it no longer has to be the littlest guy in the club. In fact, Pluto is one of the bigger dwarf planets! Maybe Pluto doesn't have it so bad after all.

What does the author mean by stating, "Maybe Pluto doesn't have it so bad after all"?

- A. Even though Pluto is no longer counted as a planet, it is in a new group called dwarf planets.
- B. Even though Pluto is no longer counted as a planet, it is one of the bigger dwarf planets.
- C. Even though Pluto is no longer counted as a planet, it is still part of the ring of objects that circle the outer edge of the solar system.
- D. Even though Pluto is now counted as a dwarf planet, it isn't alone as other space objects are counted as dwarf planets.

7. Choose the answer that best completes the sentence.

After scientists made new rules for what is counted as a planet, Pluto was no longer considered a planet. \_\_\_\_\_, the official list of planets in the solar system went from nine to eight.

- A. Therefore
- B. Although
- C. On the other hand
- D. Especially

8. According to the text, what were students taught about Pluto until 2006?

9. What decisions did scientists have to make after Eris was discovered?

10. Explain what made scientists decide to no longer count Pluto as a planet. Support your answer with evidence from the text.

**Directions:** Write the title of the text you are reading or the topic you are learning about. List the name of the character or person or thing you will be speaking as. Think about what this person or thing would say about the topic. Write as if you are this person or thing. THINK- What would I say? Be sure to use any new vocabulary you have learned.

A large speech bubble with a tail pointing down towards the person icon. Inside the bubble are ten sets of primary writing lines, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

**Text title or topic:**

A rectangular box with a horizontal line inside, intended for writing the text title or topic.



**Whose point of view?**

A rectangular box containing the text "I am..." followed by a horizontal line, intended for students to write the name of the character or person whose point of view they are using.



FIGURE 4.8:

## QUESTIONING FOR HIGH-LEVEL THINKING

Engaged students should elaborate, clarify, and support ideas with examples, paraphrase as they build on and question input from others, and synthesize and reach decisions as group work concludes. Provide time for academic conversations so students use key vocabulary in context, learn from one another, benefit from multiple points of view, and extend meaning beyond prior knowledge. To facilitate critical and creative thinking, ask these questions as you interact with students or provide a selection of these questions as guides to small groups applying respectful questioning.

- “Tell me about your work.”
- “What do you already know and understand about this?”
- “How would you \_\_\_\_\_?”
- “Why did you \_\_\_\_\_?”
- “How do you know \_\_\_\_\_?”
- “How did you decide whether \_\_\_\_\_?”
- “Describe what you did.”

### AS STUDENTS WORK, ASK...

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- “Elaborate what you mean.”
- “How did you figure that out?”
- “Why do you think that?”
- “Is that a reasonable answer? Why?”
- “What if \_\_\_\_\_?”
- “How is this like \_\_\_\_\_?”
- “How could you do this another way?”
- “What is a significant question you would ask?”
- “Identify a potential problem or issue.”



### AFTER STUDENTS FINISH, ASK...

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- “How did you arrive at your answer?”
- “What evidence do you have to support that?”
- “Who might have a different perspective? Why?”
- “How might someone get the same answer but by a different way of reasoning?”
- “How would you explain this to someone else?”
- “What question is essential to this topic?”
- “How could you use this to \_\_\_\_\_?”
- “What is the most important thing you learned?”
- “What do you not understand?”
- “What is something you are doing to help yourself learn?”
- “Does this lead you to another question or problem? Explain.”