Student Activity Guide: Model Performance Task®   Name: _____

Unit 1 Lesson 17

Digital representation of data has dramatically changed our experiences with information. It has changed how we interact with, access, and distribute information. To focus your work on this assignment, you and a partner will choose a single digital artifact and investigate how the information it encodes is represented.

General Requirements

- You must work with a partner(s) on the collaborative portion of this task.
- The digital artifact you choose should require some form of digital compression in its creation.
- The artifact you choose should be widely used and recognized.
- You must include at least two references to readily available information about the compression scheme and the resulting file type for the artifact you explored. At least one reference must be recent (published within the last 12 months).
- You will submit two documents (see the specifics below):
  - A **Collaborative Summary** written with your partner.
  - An **Individual Summary** written by yourself.

Collaborative Summary

Working with your partner, respond to each of the following prompts. Your document should be a maximum of 600 words and it may include illustrations.
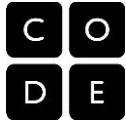
1. Explain why your group selected the digital artifact used in your investigation.
2. What type of data is compressed?
3. Describe the steps used in the compression. Be sure to include why it is used and what problem it is solving.
4. Describe the beneficial effects of the digital compression used in the creation of the digital artifact.
5. Describe the limitations of the digital compression.
6. Compare and contrast the digitally compressed version to an analog version of the same artifact. How does the compression impact our experience with this artifact?

Individual Summary

Respond to each of the following prompts.

Write a brief essay in which you reflect on the collaborative process your group used to research and report on the digital artifact selected. Answer the following questions in your essay, focusing on strategies and reasoning rather on operational details. For example, describe **how and why you divided the tasks** to accomplish the research and report, **NOT on your time and work schedule**. Your summary should be no more than 300 words. Include answers to the following questions:

    a. How did you share or divide the work?
    b. Why did you choose to divide the work in this way?
    c. How did you coordinate your efforts?
    d. What worked well, and what did not work well, in your collaboration?
    e. How did you benefit from working with a partner (or partners)?

Student Activity Guide: Peer Review   Name: _____

Unit 1 Lesson 17

In your role as a peer reviewer, your task is to critically read and provide constructive feedback for another student's work. Your purpose is to help them improve their project. Your comments must be specific and provide suggestions on how the writing can be improved. You may also add comments to the summary document to note spelling, grammar, or other technical errors.

What is the topic of the summary you are reviewing? _____

Answer the following questions for <u>each</u> of the Collaborative Summary prompts.

1. Explain why your group selected the digital artifact used in your investigation.
    What are the specific strengths of the explanation?

    What is missing from the explanation? How can it be improved?

2. Describe the advantages of the digital compression used in the creation of the digital artifact.
    What are the specific strengths of the explanation?
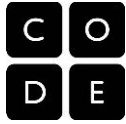

    What is missing from the explanation? How can it be improved?

3. Describe the limitations of the digital compression.
    What are the specific strengths of the explanation?

    What is missing from the explanation? How can it be improved?

4. Compare and contrast the digitally compressed version to an analog version of the same artifact.
    What are the specific strengths of the explanation?

    What is missing from the explanation? How can it be improved?

Unit 1 Performance Task Rubric

Collaborative Summary

Criteria	5 – 4	3 – 2	1 – 0	Score
Explanation of artifact and data	Explanation of the artifact is clear and includes the rationale for its selection. Explanation of the data compressed includes its type. Clear connection between the data and the artifact.	Explanation of both artifact and the data that was compressed is clear.	An explanation of the artifact, or the data, is missing.	
Explanation of compression steps and the problem solved.	Rationale for why compression is used is clear. Steps in compression are defined with detail.	Steps are clearly defined, as well as the problem solved.	An explanation of the steps, or the problem solved, is missing.	
Benefits and Limitations of compression.	Benefits of compression are explained with detail. Limitations of compression are explained in detail.	Both benefits and limitations are explained.	An explanation of the benefits or the limitations is missing.	
Compare and Contrast digital and analog	The digital and analog versions of the artifact are clearly explained, compared, and contrasted.	The digital and analog versions are compared (similarities) and contrasted (differences).	A comparison or contrast is missing. The explanation is minimal or vague.	

Individual Summary

Criteria	5 – 4	3 – 2	1 - 0	Score
Sharing and dividing work	Explanation of the sharing and dividing of work is clear and includes how and why the work was divided.	Explanation of the sharing and dividing of work is clear.	A clear explanation of the sharing or dividing of work in missing.	
Coordination	Explanation of how work was coordinated is clear and includes rationales and strategies.	Explanation of how work was coordinated is clear.	The explanation of how the work was coordinated is not clear.	
Analysis of collaboration	Analysis of the collaboration is detailed, specific, and insightful.	Analysis of the collaboration is detailed.	The analysis of the collaboration is unclear or lacks detail.	
Benefits of collaboration	Explanation of the benefits of collaboration is clear, detailed, and insightful.	Explanation of the benefits of collaboration is clear.	The explanation of the benefits of collaboration is unclear or missing.	