



Learning Project 1 Understanding Graphs

Inquiry Activity 1-4: Recognizing Points on a Time Line

(Note: *Italicized portions should be directed to the students.*)

1. Identifying the Problem (Items 20-23 Social Studies PA)

In this Inquiry Activity, we move from the single question graph to a larger graphical display along with several small passages that relate to it, but do not explain it. In addition to the challenges of reading the time line, learners will also have to draw conclusions that they will derive from the passage and the graphic.

The reading strategy used for this passage is the question-asking strategy, which is presented in *Language Arts, Reading, Learning Project 7-1*. You may also wish to model the Think Aloud process as shown in Appendix B of the Reading volume, pages 104-106.

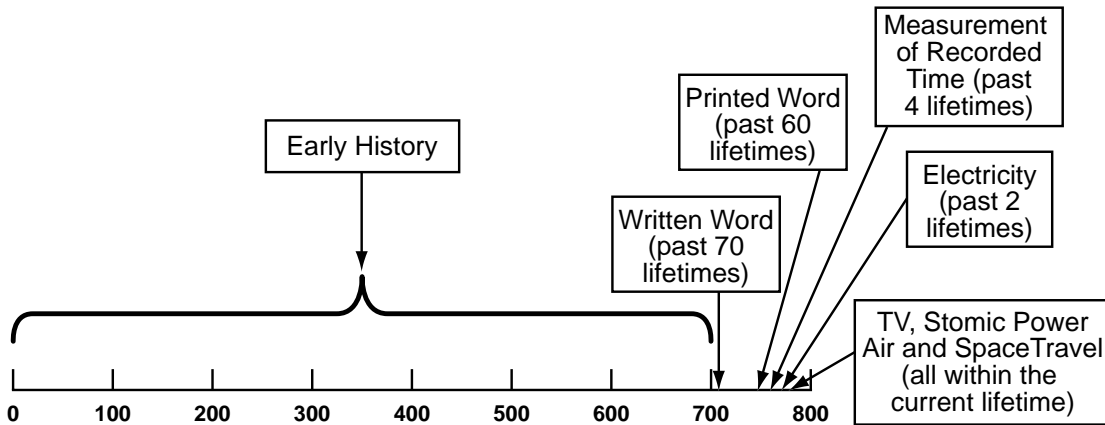
Both the passage and the question stems have some difficult vocabulary. You may want to use this passage for an extended vocabulary lesson.

Look over the graphic, the passage, and the title. From the title of the graphic, what do you think you will be asked to do?

What are you being asked to read? What will you have to do to be successful in this Activity?

Dot down your thoughts, or share them with a partner.

**Humanity's Lifelines
(62 Years in Each Lifetime)**



Source: Adapted from Alvin Toffler, 1970.

Alvin Toffler, a famous “futurist,” developed the above time line in 1970. He divided the past 50,000 years of history into lifetimes of 62 years each. According to Toffler’s “800 lifetimes,” many of humanity’s major technological benefits have been developed within a few “lifetimes.”



The quality of many people’s lives depends on how technology is used. But the challenge to society is how skillfully people can adapt to such great changes in technology, lifestyles, and environment. In 1970, Charles Reich warned people of the dangers of uncontrolled technology when he wrote:

“Technology and production can be benefactors of man, but they are mindless instruments. If undirected they careen along with a momentum of their own . . .

“Organizations and bureaucracy, which are applications of technology to social institutions, increasingly dictate how we shall live our lives, with the logic of organizations taking precedence over any other value.”

Source: James O. Lugo, adapted from *Living Psychology*, 4th ed. (CAT Publishing Company, Calif. 1991) 240-51.

20. According to the time line, which of the following statements most accurately describe the historical development of technological changes?
- (1) Technological changes have developed at a steady pace.
 - (2) Every human “lifetime” has produced major technological changes
 - (3) Most important technological changes occurred during the same ten-year period.
 - (4) Technological change has slowed down in the past 100 years.
 - (5) Technological changes have happened more frequently in the past two lifetimes than before.
21. What would Charles Reich have called the nuclear weapons that proliferated during the twentieth century?
- (1) a bureaucracy
 - (2) mindless instruments
 - (3) logical organization
 - (4) social organizations
 - (5) controlled technology
22. Which of the following is an example of people adapting to the new technology of the latest lifetime shown in the time line?
- People:
- (1) are less likely to travel
 - (2) read books from other countries
 - (3) adjust their activities to seasonal changes
 - (4) exchange information rapidly
 - (5) grow their own food
23. How does the passage defend the idea that technological developments challenge people in their daily lives in the twentieth century?
- By claiming that:
- (1) technology was expensive
 - (2) people did not want to belong to organizations
 - (3) many societies did not have modern technology
 - (4) people needed skills that helped them live with new technology
 - (5) technological changes took too long to occur for people to benefit from them



Where have you seen graphs like this before?

What words or symbols might be important to understand in order to answer the question, and what are they telling you?

Is there anything in the time line you do not understand?

2 Becoming Familiar with the Problem

Ask yourself questions like the following, taking note of those that were helpful so you can use them again.

Re-read the questions. What are you being asked to find out?

From reading the title, what do you already know about the topic of this graph?

What do the numbers on the timeline mean?

What information given in the boxes is relevant to what you need?

Does the topic attract your attention?

Preview the Passage. *How is the passage organized? What kind of punctuation is used? What is bold and what is not? What do these things tell you?*

Set a Purpose. *The purpose is to study the timeline and then read the passage, asking questions as you read.*

3. Planning, Assigning, and Performing Tasks

Planning: *Determine if you want to work individually, with a partner, or in a small group.*

Assigning: *Discuss the information given on the timeline. Read the passage aloud or in groups. Determine who will start reading and where you will stop to ask questions. You might want to stop after each sentence.*

Doing the Work: *As you read the passage, consider these strategies:*

Clarify: *Find and mark any words you might not know. See if the passage gives you enough information to clarify the meaning of the words. If not, find the meaning by asking someone or looking it up.*

Write down questions as you read. *As you read the passage, stop occasionally to write questions that have occurred to you. These could be questions like the following:*

I wonder what a _____ does?

I am confused by the word _____.

Why is technology a challenge?

Were there any parts of the timeline or phrases in the passage you did not understand?

Now answer the questions in the problem any way that you can, even if you have to guess. Be aware of the reasoning and the steps you use. The following questions can be helpful:

What are the questions asking you to do?

What information does the timeline provide to answer the questions?

What information is found only in the passage?

Find your answers to the questions.

The answer to 20 is choice (5) Technological changes have happened more frequently in the past two lifetimes. The timeline shows six changes within the time frame; the most depicted by the graph.



The answer to 21 is (2) mindless instruments. The other choices refer to organizations; the weapons do not control themselves.

The answer to 22 is (4) exchange information rapidly. The advances shown on the time line refer to TV and travel; the other choices are technologies developed in earlier lifetimes.

The answer to 23 is (4) people needed skills that helped them live with new technology. The passage refers to a need for skillful adaptation to great technological changes.

Be able to defend your answers and the ways you found them.

4. Sharing with Others

Telling other people what you know helps you to understand the material better. So take this opportunity not only to share the knowledge, but also to learn it more completely.

Small groups: Compare your answer choices with the others in the group. Explain why you selected these answers and why you think they are correct. Agree on the correct answers and the steps you would recommend for solving this problem.

Whole class: Share with the whole class the steps you used in order to answer the questions.

Take notes on any different ways of answering the questions the other groups had.

5. Reflecting, Extending, Evaluating

Reflecting: Think about what you have learned.

Here are some questions to start you thinking about the experience you just had. Thinking about what you have learned and experienced is part of the learning process. When the focus is only on the answer, you don't get much time to think about what was learned.

1. Look again at the timeline. If you were telling someone else what information it provided, what would you tell that person?
2. What would you say is the most important idea shown on this graph?
3. Why do you think the far end of the timeline has so much information on it?

Extending: Extend what you learned to new situations.

In extending, you are being asked to transfer the information presented in the Practice Test question to other information or situations.

1. From looking at this time line, what would you guess the value of the written word is to the progress of technology?
2. Write an essay on the value of technology to your life.

The topic here is purposely vague. If you wish, you may ask for an essay on a more defined title of your choosing.

3. Many science fiction books and movies often consider the role of technology. What are some movies or stories you have read that address this topic?

Movies in the science fiction genre address many of the serious issues created by technology, whether the subject is radiation, as in the always-popular *Godzilla* movies, cloning or psychological controls in the *Star Wars* series, machine over man in *The Matrix*, or the widespread mayhem of the *Terminator* movies.



Evaluating: Assess what you learned and how you learned it.

In this last step, you get a chance to review the content of what you learned and the methods used to learn. These questions have no right or wrong answers; it is your chance to look more closely at your learning style and the opportunity to state how you benefited or didn't benefit from the content and/or the methods presented in this IA.

1. *What parts of the activity worked best for you? Explain.*
2. *What parts did not work well for you? Explain.*
3. *What parts of this Inquiry Activity will you use when taking the GED test? Why?*
4. *How does following this 5-step format make you feel?*