

SCALE – EVOLUTION AND LIFE TIMELINE

Preparation

- Class Timeline

Note: This is the third activity in which students work on the class timeline. (The first is Scale—Changing Views, in Lesson 2.1; the second is Scale—Timelines and Periodization, in Lesson 3.2.) You will need the timeline on hand to complete the following activity. If you skipped either of these timeline activities, a sample timeline is included in the teacher version of the worksheet for Lesson 2.1: Scale—Changing Views.

Purpose

Students have been creating timelines regularly at this point in the course, and they should be getting the hang of them and the ways in which they can be useful. Creating timelines adds another dimension to student understanding by providing yet another way to contextualize and understand historical content. This type of analysis is different from those used when reading, watching videos, or having class discussions.

Process

Students are going to add Darwin, Crick, Watson, and Franklin to the class timeline that represents how these scientists understood matter and elements. Explain that they will use the same method they used earlier when looking at our understanding of the Earth, the Solar System, the Universe, and periodization.

Ask every student to revisit the following, on their own:

- Voyage of the Beagle: Reading and Gallery
- “Crick, Watson, and Franklin”

Ask students to do the following:

1. Read the articles.
2. Add the following information about each of the scientists (Darwin, Crick, Watson, and Franklin) to the class timeline:
 - Birth and death dates of the scientists
 - The major discoveries they made
 - Who and what influenced their thinking?
3. Ask students to compare these scientists to those that were covered in the two earlier versions of the timeline.

Once they’ve finished adding to or redrawing their timelines, have students get into small groups to answer the following questions:

- What did the scientists that came after Darwin add to our understanding of life?

Sample answer: Darwin predicted that life evolved over time, but he didn’t know why. Crick, Watson, and Franklin explained how evolution works.

- Does it seem like our acceptance of scientific concepts related to life and evolution has changed over time?

Sample answer: It has changed. Darwin was looking at the animals and man themselves; today we look at DNA to understand how evolution works.

- How does adding these people (and others) to the timeline help us understand changes in scientific thinking?

Sample answer: No single scientist can explain everything. Even Einstein. Everyone needs to move in relatively small steps, even if those steps are actually big, when added to the work of others, they are enormous.

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Purpose

You've been creating timelines regularly by this point in the course, and you should be getting the hang of them and the ways in which they can be useful. Creating timelines adds another dimension to your understanding by providing yet another way to contextualize and understand historical content. This type of analysis is different from those used when reading, watching videos, or having class discussions.

Process

You're going to add Darwin, Crick, Watson, and Franklin to the class timeline that represents how these scientists understood matter and elements. You'll use the same method you used in earlier lessons when looking at our understanding of the Earth, the Solar System, the Universe, and periodization.

Revisit the following, on your own:

- Voyage of the Beagle: Reading and Gallery
- "Crick, Watson, and Franklin"

Next, do the following:

1. Read the articles.
2. Add the following information about each of the scientists (Darwin, Crick, Watson, and Franklin) to the class timeline:
 - Birth and death dates of the scientists
 - The major discoveries they made
 - Who and what influenced their thinking?
3. Compare these scientists to those that were covered in the two earlier versions of the timeline.

Once you've finished adding to or redrawing your timeline, get into small groups to answer the following questions:

- What did the scientists that came after Darwin add to our understanding of life?
- Does it seem like our acceptance of scientific concepts related to life and evolution has changed over time?
- How does adding these people (and others) to the timeline help us understand changes in scientific thinking?

Respond to these questions in writing and submit them to your teacher.

SCALE – EVOLUTION AND LIFE TIMELINE

Group Name:

Date:

Directions: Once you've finished adding to or redrawing your timeline, get into small groups to answer the following questions.

What did the scientists that came after Darwin add to our understanding of life?

Does it seem like our acceptance of scientific concepts related to life and evolution has changed over time?

How does adding these people (and others) to the timeline help us understand changes in scientific thinking?