



Description: Learners construct a visual timeline of NASA firsts and important events in their own lives.

Background: Throughout its history, NASA has accomplished many great scientific and technological feats in air and space. NASA's Office of History has chronicled these feats and has developed many resources to help learners better understand the development of America's space program. NASA notes that "...our exploration of space has taught us to view the Earth, ourselves, and the universe in a new way. While the tremendous technical and scientific accomplishments of NASA demonstrate vividly that humans can achieve previously inconceivable feats, we also are humbled by the realization that Earth is just a tiny 'blue marble' in the cosmos."

Timelines are an effective way to understand the chronology of historical events. This NASA timeline activity offers a unique opportunity to blend a social studies activity with science inquiry. By constructing a visual timeline of NASA missions, learners can expand their understanding of significant historical developments in space science. Learners can also further explore NASA's history using resources available on the Office of History Web site at <http://history.nasa.gov/> and other resources.



Pilot test educator shares completed *Blast to the Past* timeline.

National History Standards¹

3-5 Historical Understanding

Understands and knows how to analyze chronological relationships and patterns

Knows how to construct timelines -- in significant historical developments that mark at evenly spaced intervals the years, decades, and centuries

¹Kendall, J.S. & Marzano, R.J. (2000). *Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education*. (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Materials (For each individual, pair or group of learners)

- "[Mission Patches](http://genesission.jpl.nasa.gov/product/genesis_kids/socialstudactivities/missionpatches.html)" page printout. Use a color printer. Available at:
- Your "[Own Patches](http://genesission.jpl.nasa.gov/product/genesis_kids/socialstudactivities/ownpatches.html)" printout. Available at:

- Masking tape, craft paper, construction paper or poster board (to create timeline)
- Construction paper (to create labels for decades or time intervals)
- Tape measure
- Scissors
- Markers, colored pencils, or crayons (optional)
- Write-On Sheet, "[Blast to the Past](#)"

Leader Tip

To allow for more individual participation, poster board or construction paper can be cut in half lengthwise to create a timeline for each participant.

Procedure:

1. Show learners an example of a timeline and talk about the events that are listed. World Almanac for Kids has a series of US History timelines that could be used as examples, such as: <http://www.worldalmanacforkids.com/explore/timeline4.html>
Ask learners what they notice about the timeline. Accept all answers. Highlight the fact that timelines show important events in the order they occurred and that time is marked in evenly spaced intervals.
2. Ask students to think about their own history. Explain that they will be creating their own timeline of important first events in their lives or family's history that spans a couple of decades. What "firsts" are celebrated in their lives or family's history? Encourage learners to brainstorm a list of important events on their "Write-On" Sheet. You may want to ask learners to find out about some of their parents' "firsts" that can be put on the timeline.
3. Discuss the table of NASA "firsts" with learners. Ask learners to cut out the "[Mission Patches](#)"
4. Distribute the "[Own Patches](#)" sheet. Ask learners to create colorful "patches" for their own "firsts." Then, have learners carefully cut out their patches.
5. Ask learners to make a six-foot straight line either on the floor or the wall using masking tape. (Learners could also draw a line on a long piece of craft paper or use strips of poster board to make their own individual timelines.) Have them mark six equal parts on the line using tape.
6. Distribute construction paper and ask learners to create a label for each decade beginning with 1950 and ending with 2010. Instruct learners to tape their decade labels in the correct order on the timeline, starting on the left side of the line and moving to the right.



Pilot test educators assemble the timeline.

7. Instruct learners to refer to the NASA "First" chronology on the table of the "Write-On" sheet, as they tape the "Mission Patches" to one side of the timeline in the correct place.
8. Then, on the other side of the timeline, ask learners to tape their "Own Patches" in the correct places. As learners place their patches on the timeline, they should tell the others in the group some information about each event.
9. Review the fact that timelines show important events in the order they occurred and that they mark time at evenly spaced intervals.
10. Share some of the "firsts" celebrated by NASA's *Genesis* mission. For more information about *Genesis* visit:
<http://genesismission.jpl.nasa.gov>

Genesis has other mission firsts!

The *Genesis* mission is the:

- First sample return of the new millennium.
- First to use bulk metallic glass as collector material.
- First mission to return from L1.
- First to use a mid-air recovery for a sample return.
- First NASA mission to develop a class 10 cleanroom (only 10 particles of contaminant per cubic meter).
- First mission to study solar wind in exceptionally accurate analytical mass spectrometer laboratories.
- First mission to partner with education research laboratory (McREL) to provide education and public outreach for a mission.
- See the Mission section of the *Genesis* Web site to learn more about the mission's timeline and its milestones.

Going Further

- Ask learners to write an essay about important first events in their lives using their timeline.
- Assign each group a NASA "First" mission to research and then prepare a report for the class. Information on each of the missions can be found on the NASA History Office's Web site.
- Using the chronologies on the NASA History Office's Web site, ask participants to prepare their own timelines of important events in space exploration. The chronologies are available at: <http://www.hq.nasa.gov/office/pao/History/timeline.html>

Resources for Extension and Enrichment Activities

http://genesission.jpl.nasa.gov/product/genesis_kids/aboutgenesis/aboutgenesis.html

This *Genesis Kids* link provides mission and related science information in a kid-friendly manner.

<http://history.nasa.gov/40thann/videos.htm>

NASA offers video and audio clips of important moments in NASA history. Watch astronauts display the American flag on the Moon's surface; hear the lift-off of Apollo 16 and much more.

http://www.genesission.org/product/genesis_kids/index.html

Genesis Kids offers a variety of fun, hands-on, learning activities from making solar cookies to building a model of the *Genesis* spacecraft.