Sky Records Change

Trace how people have observed and shared knowledge of the sky.

6-9.WH.1.7 "Identify examples of how writing, art, architecture, mathematics, and science have evolved over time, such as in Ancient, Middle Age, Early-Modern, or Modern societies and civilizations throughout the world."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline one way people recorded sky observations in each of the four periods. Circle one tool or mathematical method used in each period to help you trace what changed.

From Clay Tablets to Digital Images

1. On a clay tablet in ancient Babylon, a scribe pressed wedge-shaped marks into wet clay. Babylonian astronomers recorded the dates when planets appeared in the sky. They used a number system based on sixty to calculate time and angles, a practice that still shapes clocks and circles today. The marks did not show a picture of the sky. Instead, they preserved observations as written records that others could study long after a night of watching ended.

2. Centuries later, scholars in the medieval Islamic world studied older sky records and made new ones. At observatories, they measured star positions with instruments, then used geometry to build tables that predicted where planets would appear. They wrote these tables in books, which could be copied and shared. In 1610, the Italian scholar Galileo pointed a telescope at Jupiter. He drew the small moons he saw changing position night after night. His published drawings added visible evidence that a tool could reveal sights the unaided eye missed.

3. Today, space telescopes collect light above Earth's atmosphere. Digital detectors turn that light into numbers, and computers help scientists compare images taken on different dates. Instead of pressing marks into clay or sketching a moon by hand, researchers can share huge image files across the world in seconds. Still, modern astronomers do something familiar: they record what they see, use mathematics to check patterns, and let others test their ideas. The tools and forms of evidence have changed, but careful observation still matters.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did the form of sky records change from ancient Babylon to the medieval Islamic world?

2. What mathematical method does the passage describe for each of those two periods, and how was each used?

3. How did Galileo's telescope and drawings add to the kinds of sky records described earlier?

4. How have collecting and sharing sky evidence changed from Galileo's time to today?

3 YOUR TURN

Your own words

Plan a month-long class project to test a claim about the sky. In four sentences, describe how you would adapt one practice from the ancient or medieval period and one from the early-modern or modern period, and explain how the two would help classmates test your claim.

ANSWER KEY

Sky Records Change

GRADES 6-9 · 6-9.WH.1.7

PART 1 · READ AND MARK

Underline one way people recorded sky observations in each of the four periods. Circle one tool or mathematical method used in each period to help you trace what changed. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did the form of sky records change from ancient Babylon to the medieval Islamic world?	**Babylonian observers pressed written marks into clay tablets. Medieval scholars put mathematical tables in books that could be copied and shared.**
2	What mathematical method does the passage describe for each of those two periods, and how was each used?	**Babylonians used a number system based on sixty to calculate time and angles. Medieval scholars used geometry to build tables predicting where planets would appear.**
3	How did Galileo's telescope and drawings add to the kinds of sky records described earlier?	**His telescope revealed Jupiter's moons, which the unaided eye could not see. His drawings recorded how their positions changed.**
4	How have collecting and sharing sky evidence changed from Galileo's time to today?	**Galileo drew what he saw through a telescope and published the drawings. Today, space telescopes and digital detectors produce image files that researchers can share quickly worldwide.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Our class will test whether the Moon looks the same throughout a month. We will borrow the Babylonian practice of keeping dated sky records, noting the Moon's shape on nights when it is visible. We will also borrow the modern practice of sharing digital images, placing a photo from each observation in a class folder. Classmates can compare the dated notes and photos to see whether the Moon's appearance changes.

Accept accurate comparisons that identify a change between periods, not just a fact about one period. For Part 3, accept different testable sky claims if the plan adapts practices from both required periods and explains how the records would help test the claim.