Name: _____ Date: _____

Dripping Time: Ancient Water Clocks

Circle group

A sundial can tell the hour. But it works only when the sun is out. People in ancient Egypt wanted to tell time on cloudy days and at night. So they made a clock that ran on water.

The idea was simple. A bowl had a small hole near the bottom. Lines were marked on the inside. The bowl was filled with water, and drops slowly leaked out. The water sank past each line. This showed how much time had passed. Later, the Greeks used these clocks too. They called them clepsydras. That means water thief.

There was one problem. Water leaks faster from a full bowl than from a bowl that is almost empty. So the hours could drift. Some makers made bowls with slanted sides. This helped keep the time steadier.

Water clocks did real jobs. In Athens, they timed how long a person could speak in court. The first water clocks were just a bowl, a hole, and some patience.

Questions

1. Why could a sundial not tell time at night?

_____

_____

2. How did a water clock show how much time had passed?

_____

_____

3. What does clepsydra mean?

_____

_____

4. What job did water clocks do in Athens?

_____

_____

5. Why could the hours drift on a simple water clock?

_____

_____

6. Why did some makers make bowls with slanted sides?

_____

_____

Words to know

sundial: a clock that uses the shadow of the sun
ancient: from a very long time ago
clepsydras: the Greek name for water clocks
drift: to slowly move away from what is right
steadier: more regular and even

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Dripping Time: Ancient Water Clocks

Triangle group

A sundial can tell the hour, but only when the sun is shining. People in ancient Egypt wanted a way to keep time on cloudy days and at night. Their answer was a clock that ran on water.

The idea was simple. A bowl had a small hole near the bottom, and lines were marked on the inside wall. When the bowl was filled with water, drops slowly leaked out. As the water level sank past each line, people could tell how much time had gone by. The ancient Greeks later used such clocks too, and they called them clepsydras, which means water thief.

There was one problem. Water leaks faster out of a full bowl than out of a nearly empty one, so the hours could drift. Some makers shaped their bowls with slanted sides to help keep the time steadier.

Water clocks did real jobs. In the city of Athens, they timed how long a person was allowed to speak in court. Later builders made far fancier clocks, but the first ones were just a bowl, a hole, and some patience.

Questions

1. Why could a sundial not tell time at night?

_____

_____

2. How did a water clock show how much time had passed?

_____

_____

3. What does the word clepsydra mean?

_____

_____

4. What job did water clocks do in Athens?

_____

_____

5. Why could the hours drift on a simple water clock?

_____

_____

6. Why did some makers give their bowls slanted sides?

_____

_____

Words to know

sundial: a clock that uses the shadow of the sun
ancient: from a very long time ago
clepsydras: the Greek name for water clocks
drift: to slowly move away from what is right
steadier: more regular and even

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Dripping Time: Ancient Water Clocks

Square group

A sundial can indicate the hour, but only while the sun is shining. People in ancient Egypt wanted a way to keep time on cloudy days and throughout the night, and their solution was a clock powered by water.

The principle was simple. A bowl had a small hole near the bottom and lines marked along its inner wall. When the bowl was filled with water, droplets slowly leaked out, and as the water level sank past each line, people could tell how much time had gone by. The ancient Greeks later adopted such clocks as well, and they called them clepsydras, which means water thief.

One difficulty remained. Water escapes more quickly from a full bowl than from one that is nearly empty, so the hours could drift. Some makers shaped their bowls with slanted sides in order to help keep the time steadier.

Water clocks performed genuinely useful tasks. In the city of Athens, they measured how long a person was permitted to speak in court. Much fancier clocks were built in later times, but the earliest ones were nothing more than a bowl, a hole, and a great deal of patience.

Questions

1. Why could a sundial not tell the time at night?

_____

_____

2. How did a water clock show how much time had gone by?

_____

_____

3. What does the word clepsydra mean?

_____

_____

4. What useful task did water clocks perform in Athens?

_____

_____

5. Why could the hours drift on a simple water clock?

_____

_____

6. Why did some makers shape their bowls with slanted sides?

_____

_____

Words to know

sundial: a clock that uses the shadow of the sun
ancient: from a very long time ago
clepsydras: the Greek name for water clocks
drift: to slowly move away from what is right
steadier: more regular and even

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Dripping Time: Ancient Water Clocks

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Dripping Time: Ancient Water Clocks

Easier · 163 words · Flesch-Kincaid grade 1.8

1. It works only when the sun is out.
2. The water sank past lines marked inside the bowl.
3. Water thief.
4. They timed how long a person could speak in court.
5. Water leaks faster from a full bowl than from an almost empty one.
6. To help the clock keep time more steadily.

Triangle: Dripping Time: Ancient Water Clocks

This passage · 183 words · Flesch-Kincaid grade 4.3

1. It needs sunlight to work.
2. The water level sank past lines marked inside the bowl.
3. Water thief.
4. They timed how long a person could speak in court.
5. Water leaks faster out of a full bowl than a nearly empty one.
6. To help the clock keep time more steadily.

Square: Dripping Time: Ancient Water Clocks

Harder · 194 words · Flesch-Kincaid grade 6.8

1. It works only while the sun is shining.
2. The water level sank past lines marked along the inner wall of the bowl.
3. Water thief.
4. They measured how long a person was permitted to speak in court.
5. Water escapes more quickly from a full bowl than from a nearly empty one.
6. To help the clock keep time more steadily.