Name _____Log Sheet

Number _____Title_____

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ARIZONA GEOGRAPHIC ALLIANCE

Answer Key for Log Sheets

Slide	Caption	Visual
1.	Egypt: Feast or Famine? Answer is the Nile	Map of Africa
2.	Egypt-Gift of the Nile-Water for Life	Nile River
3.	Shadoof and Work	shadoof used in a basin
4.	Basin Irrigation	canal system
5.	Simple Machines	6 simple machines
6.	Lever-How does it work?	man with lever
7.	Class 1 lever	diagram and seesaw
8.	Class 2 lever	diagram and wheelbarrow
9.	Class 3 lever	diagram and broom
10.	Shadoof: Which class of lever is it?	lever class diagrams
11.	Work: Force Times Distance	parts of the shadoof
12.	Pyramid	shadoof in pyramid
13.	Pharaoh-The Scorpion King	Scorpion King
14.	A Heavy Load	Egyptian obelisk
15.	Shadoofs today	Romania and Kom Ombo
16.	The difference they have made!	fantastic machine using levers

Social Studies Assessment - Answer Key

1. C
2. B
3. C
4. C
5. A
6. B
7. D
8. A
9. B
10. B

Social Studies Assessment Name_____

Directions: Circle the letter of the correct answer.

1. **The Nile River Valley was affected each year by what natural disasters?**
    a. earthquakes
    b. tsunamis
    c. floods
    d. forest fires

2. **Ancient Egyptians used which method to irrigate their fields?**
    a. sprinkler systems
    b. basins and canals
    c. hoses
    d. water wheels

3. **What tool was used to make irrigation easier?**
    a. corkscrew
    b. water-pump
    c. shadoof
    d. windmill

4. **How many times its normal size did the Nile grow every year from June through October?**
    a. 2
    b. 5
    c. 15
    d. 20

5. **The shadoof is an example of what kind of lever?**
    a. class 1
    b. class 2
    c. class 3
    d. class 4

6. **Water was transferred from the Nile River to irrigate the dry agricultural land in what way?**
    a. with a water wheel
    b. into basins
    c. from holding tanks
    d. by water trucks

7. **What kind of simple machine was the shadoof?**
    a. wedge
    b. pulley
    c. wheel and axle
    d. lever

continued on back

8. **Shadoofs were also used to move which of the following?**
    a. stones and obelisks
    b. the Egyptian Museum
    c. sphinx
    d. camels

9. **What does the artifact in the Power Point show the Scorpion King doing?**
    a. fanning himself
    b. cutting into an irrigation ditch
    c. sailing on the Nile
    d. playing with a scorpion

10. **Where are shadoofs used today in farming?**
    a. North America and South America
    b. Africa and Asia
    c. Australia and Antarctica
    d. Europe and Australia

Picture of a Shadoof Labeled

Plan Sheet for a Shadoof

Group Members_____
_____
_____
_____

1. How do we make a fulcrum that won't tip over?

2. How do we make a sturdy lever?

3. How do we make the lever pivot?

Drawing

List of Materials

_____ _____ _____ _____ _____
_____ _____ _____ _____

Loads (to be completed after construction)

Counterweight (in pennies)
1._____
2._____
3._____

Load (in pennies)
1. _____
2. _____
3. _____

ARIZONA GEOGRAPHIC ALLIANCE

Science and Engineering Rubric

Group Members:

Requirements	Pts Possible	Pts Earned	Comments
Shadoof was completed and working	30		
Parts were labeled correctly (fulcrum, load, counterweight, lever)	10		
Plan was complete (3 questions, drawing, materials list)	30		
Tested 3 types of loads and 3 types of counterweights	20		
Worked well together	10		
Total	100		

Science and Engineering Rubric

Group Members:

Requirements	Pts Possible	Pts Earned	Comments
Shadoof was completed and working	30		
Parts were labeled correctly (fulcrum, load, counterweight, lever)	10		
Plan was complete (3 questions, drawing, materials list)	30		
Tested 3 types of loads and 3 types of counterweights	20		
Worked well together	10		
Total	100		

Name_____ **Shadoof and Ratio Problems**

The bucket hanging from Abu's shadoof holds 10 gallons of water. He can move a bucket from the basin to a 60 gallon tank in 3 minutes.

2. _____Express the ratio of the amount the bucket holds to the amount of the capacity of the tank.
3. _____Express the ratio of the amount of three bucketfuls to the amount of the capacity of the tank.
4. _____Express the ratio of the amount of four bucketfuls to the amount of the capacity of the tank.
5. _____How long will it take him to fill the 60 gallon tank?

Awad works every day operating a shadoof in Nigeria. His shadoof can raise over 2,500 gallons a day.

6. _____How many gallons can he raise in 5 days?
7. _____What is the ratio of the number of gallons from 1 day to 5 days?

Shadoof and Ratio Problems - Answer Key

The bucket hanging from Abu's shadoof holds 10 gallons of water. He can move a bucket from the basin to a 60 gallon tank in 3 minutes.

1. 1:6 Express the ratio of the amount the bucket holds to the amount of the capacity of the tank.
2. 30 to 60 or 1:2 Express the ratio of the amount of three bucketfuls to the amount of the capacity of the tank.
3. 40 to 60 or 2:3 Express the ratio of the amount of four bucketfuls to the amount of the capacity of the tank.
4. 3 min. x 6 = 18 How long will it take him to fill the 60 gallon tank?

Awad works every day operating a shadoof in Nigeria. His shadoof can raise over 2,500 gallons a day.

5. 2,500 gal. X 5 days – 12,500 How many gallons can he raise in 5 days?
6. 2,500 to 12,500 or 1:5 What is the ratio of the number of gallons from 1 day to 5 days?

Name_____ **Shadoof Math Assessment**

Ahmed has built a shadoof that is 72 feet long. The fulcrum is 1/3 of the way from one end to the other.

1. _____How long is the short end?

2. _____How long is the long end?

3. _____Express the ratio of the short end to the long end.

4. _____Express the ratio of the short end to the entire fulcrum.

It took 20 men to operate each shadoof lifting stones to build a pyramid.

5._____ Express the ratio of the number of men per pyramid.

6._____ How many men operated the 7 shadoofs in the pyramid building?

Amahl and his two brothers worked on the Nile with a shadoof. They can move 1,000 gallons of water per day.

7. _____Express the ratio of workers to shadoofs

8. _____How much water is moved in 4 days?

9. _____ How much water is moved in 10 days?

10._____What is the ratio of the shadoofs on the Upper Nile to the total amount on the Nile? There are one dozen shadoofs operating on the Upper Nile River and two dozen operating on the Lower Nile River.

Shadoof Math Assessment – Answer key

Ahmed has built a shadoof that is 72 feet long. The fulcrum is 1/3 of the way from one end to the other.

1. 24 feet How long is the short end?
2. 48 feet How long is the long end?
3. 24:48 or 1:2 Express the ratio of the short end to the long end.
4. 24:72 or 1:3 Express the ratio of the short end to the entire fulcrum.

It took 20 men to operate each shadoof lifting stones to build a pyramid.

5. 20:1 Express the ratio of the number of men per pyramid.
6. 7 x 20 = 140 men How many men operated the 7 shadoofs in the pyramid-building?

Amahl and his two brothers worked on the Nile with a shadoof. They can move 1,000 gallons of water per day.

7. 3:1 Express the ratio of workers to shadoofs
8. 4 x 1,000 = 4,000 How much water is moved in 4 days?
9. 10 x 1,000 = 10,000 How much water is moved in 10 days?
10. 12 to 24 or 1:2 What is the ratio of the shadoofs on the Upper Nile to the total amount on the Nile? There are one dozen shadoofs operating on the Upper Nile River and 2 dozen operating on the Lower Nile River.