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Class: 8-2

HOW TO SLAY A DRAGON

Purpose:

The purpose of this experiment is to determine the most efficient type of weapon to use to slay a dragon

Equipment:

- 10 dragons
- 20 knights
- battle arena
- stopwatch
- a variety of medieval weaponry (see data)



Hypothesis:

After reading the procedure, I think the use of sharp (choose from sharp, blunt, or airborne) weapons will most efficiently slay a dragon.

Procedure:

1. Release a dragon into the battle arena.
2. Provide the knight with a weapon (none for control).
3. Let the knight into the battle arena to attempt to slay the dragon and start the timer.
4. If the knight is "no longer able to participate" let another knight into the arena.
5. Continue providing knights, one at a time, until the dragon has been slain.
6. Stop the timer.
7. Repeat with the remaining weapons.

Note: There are several safety precautions to consider:

- Knights should wear chainmail armor and metal helmets.
- Dragons breathe fire; long hair should be tied back.
- Many of the weapons have sharp edges; caution should be taken while handling them.

Variables:

Please indicate the variables from the experiment:

Independent Variable: The weapon used to slay the dragon.

Dependent Variable: The length of time taken to slay the dragon.

Constant Conditions: The type of dragon. Terrain on which battle was fought.

Observations:

Category of Weapon	Weapon	Time to Slay Dragon
None	None	Too long to time
Sharp	Sword	18 hours
	Sickle	25 hours
	Katar	21 hours
Blunt	Mace	32 hours
	Warhammer	36 hours
	Maul	49 hours
Airborne	Arrow	9 hours
	Trubechet	*Dragon burned it
	Spear	12 hours

Written observations:

When the dragon was hit with the mace he made a very loud angry roar. The dragon seemed distracted by the smell of burning knights. The scales of the dragon were very hard, making them difficult to pierce.

Discussion:

On a separate piece of paper answer the following questions:

1. Were there any sources of error in this experiment? If so, list some.
2. Did any of the weapons prove difficult to use? If so, explain why.
3. What factors of the experiment could be changed to make the slaying of a dragon more efficient?

Conclusion:

Did you prove your hypothesis? Why do you think this is?

Based on the results, my hypothesis was not proven, the flying weapons were able to slay a dragon more quickly. I think this is because it allowed the knights to continue their assault while the dragon was airborne.

Discussion Questions:

1. Were there any sources of error in this experiment? If so, list some.

- Depending on the time of day, the knights had trouble seeing. All experiments should be run in the same lighting/weather conditions.
- The dragons were not all the same age. This would result in different levels of physical fitness, as well as battle experience. All dragons should be of the same skill set.
- Some of the knights were hesitant to charge the dragon in a one-on-one battle. This affected the time it took to slay the dragon.

2. Did any of the weapons prove difficult to use? If so, explain why.

- The most difficult weapon to use was the trebuchet. Not only did it take a long time to load and wind, but during this time the dragon could easily approach, and as a result it was able to burn the wooden frame.
- All of the blunt objects proved difficult, as they did not inflict much damage, allowing the dragon to retaliate quickly.

3. What factors of the experiment could be changed to make the slaying of a dragon more efficient?

- The action of only using one knight at a time was very inefficient. By increasing that number it would decrease the time and possibly spare a few knights.
- The use of nets would assist the knights in containing the dragons, thus making them easier to get to, and increase the efficiency.
- Modern day weapons would greatly increase the efficiency of slaying the dragon, as they would allow for increased accuracy from a greater/safer distance.