Name_____ Date_____

STARBASE Hill Day 4 Review

1. Batman runs an experiment using his Bat Trebuchet. His plan is to fire a projectile into Joker's lair. To do this, the projectile needs to travel 90m. He uses 100N of force for each launch. Based on the data collected and graphed by Batman, answer the following questions.

What is the Independent Variable?

_____

What is the Dependent Variable?

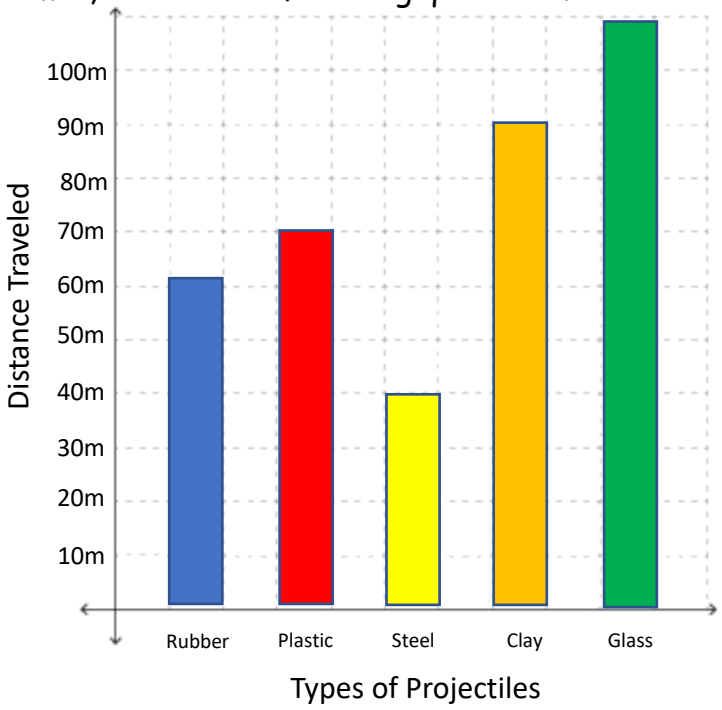
_____

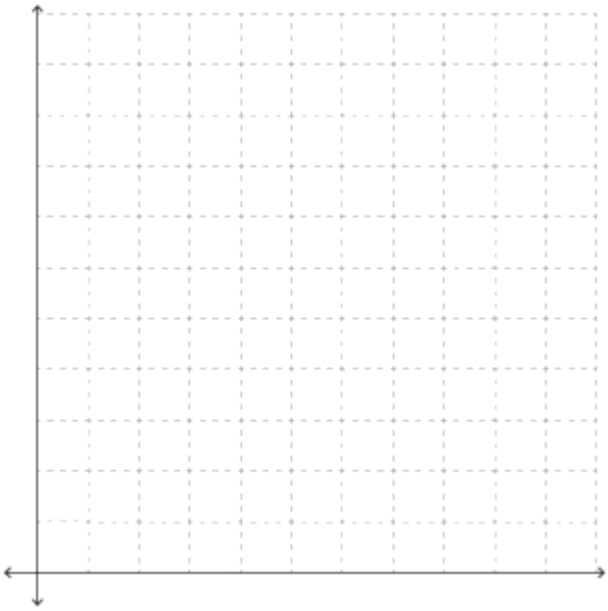
What is the Constant?

_____

Which projectile should Batman use?

_____

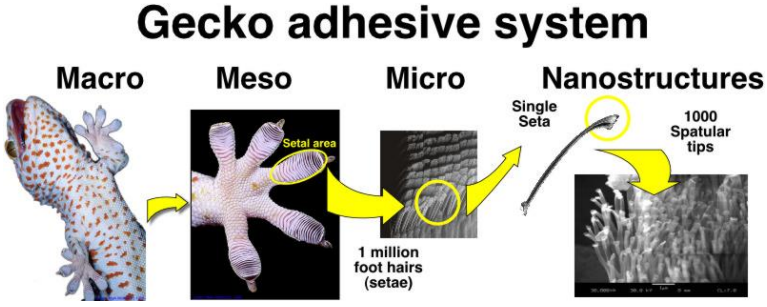




2. At STARBASE Hill, Batman took a poll on Day 5 with Gotham Elementary School. He wanted to know their favorite subject while at STARBASE. Here is the data:

Physics – 7 students
Chemistry – 8 students
Engineering – 5 students
Math – 3 students
Robotics – 6 students

Using the grid on the left, create a bar graph with Batman's data.



3. Scientists are studying geckos because of their abilities to climb certain surfaces and hang upside down. The billions of nano-hairs on the bottom of their feet give them this ability. How would duplicating this for humans help? List two uses where this ability would help humans.

_____

_____

_____

_____

Answer Key – Only problem 3 could have a wide range of answers.

Name_____ **Date**_____

STARBASE Hill Day 4 Review

1. Batman ran an experiment using his Bat Trebuchet. His plan is to fire a projectile into Joker's lair. In order to do this, the projectile needs to travel 90m. He used 100N of force for each launch. Based on the data collected and graphed by Batman, answer the following questions.

What is the Independent Variable?

Types of Projectiles

What is the Dependent Variable?

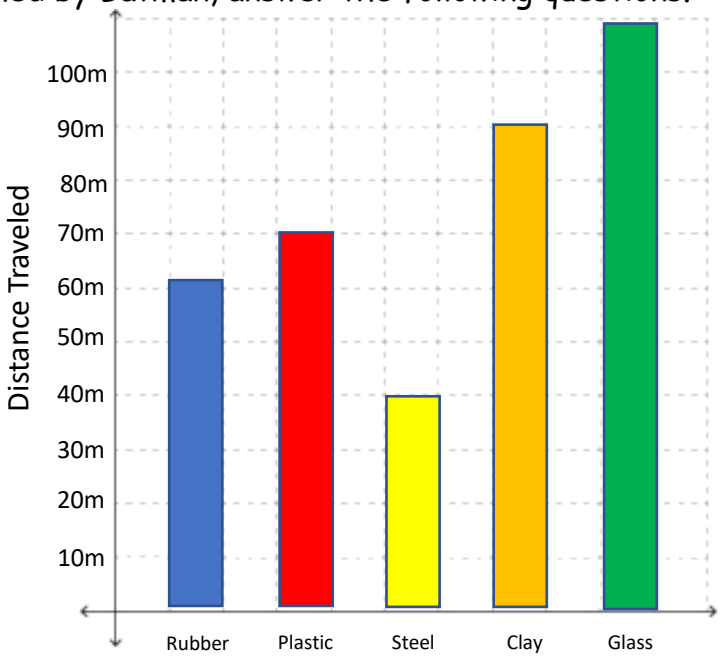
Distance Traveled

What is the Constant?

The 100N force or the Bat Trebuchet (other answers like the temperature of the test site, the wind direction, etc, would also work)

Which projectile should Batman use?

Clay



Types of Projectiles

2. At STARBASE Hill, Batman took a poll on Day 5 with Gotham Elementary School. He wanted to know their favorite subject while at STARBASE. Here is the data:

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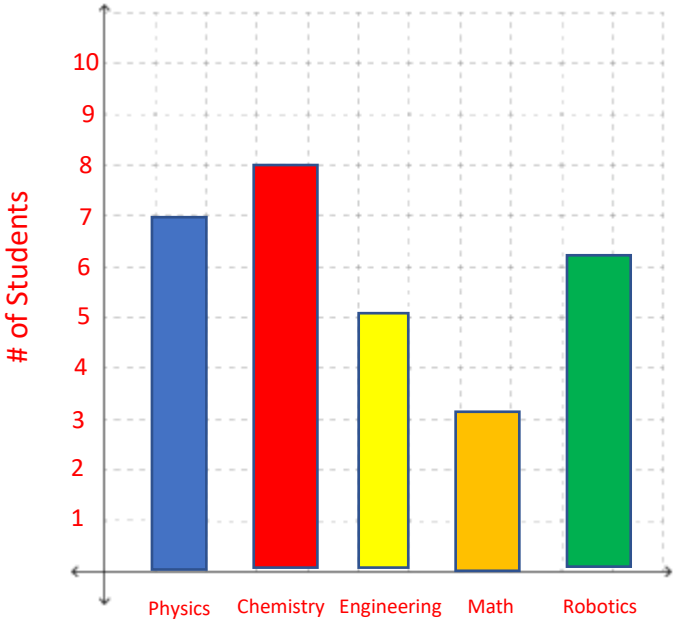
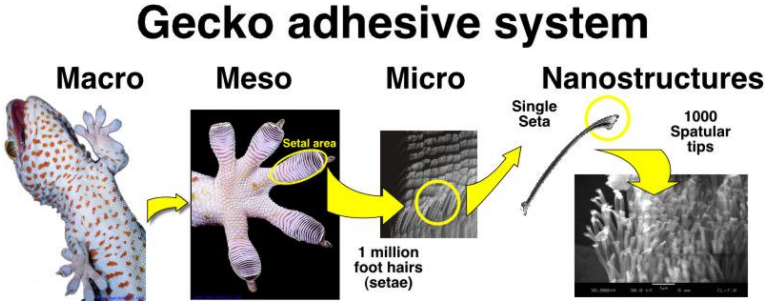


STARBASE Subjects

3. Scientists are studying geckos because of their ability to climb up certain surfaces, even hanging upside down. The billions of nano-hairs on the bottom of their feet give them this ability. How would duplicating this for humans help? List two uses/ideas where this ability would help humans.



This may be a wide range of answers depending on each student's creativity. Really any imaginative answer dealing with the ability of scaling walls or hanging upside down works for this response.