Out of this World!

(PART 2)

The entire solar system is buzzing with the news that an Interplanetary Basketball League is being formed! This is bigger than the NBA, Olympics, and World Cup combined! You have been chosen to represent _____'s team for the season.

The first thing you have to do is show off your star player! Come up with a name, picture, biography, and autograph for him or her. You will be graded solely on creativity here – let your imagination go wild. And yes, these are ALIENS.

Next, you will have to describe mathematically how well your star player can shoot a basketball. Write a quadratic equation in the form:

$$h = \frac{1}{2}gt^2 + v_0 t + h_0$$

The only difference is that gravity (g) is different for every planet. Record your planet's gravity here: _____ feet per second squared.

Assume the speed or velocity that your star player throws the ball is 24 feet per second.

You need to decide how tall your star player is. That will be h_o.

You will want to plug in these numbers into the equation and simplify, just like we did on the example from Earth.

This project counts as an **MINOR grade**. Take it seriously. Start to work on it right away You will be graded as follows:

Math	65 points
3 Forms of Equation	30 points
Time it hits the ground	5 points
Maximum Height & Time	10 points
Time Required to Reach Height 10 feet	10 points
Graph with accurately labeled (points, axis)	10 points
Star player Information	10 points
Creative Name Autograph & Biography	5 points
Picture	5 points
Organization (Neatness, Organized, Creativeness, Clear) in Google Slides	15 points
Comprehension questions (included in slide show)	10 points
Total	**100 points**

*DUE BEGINNING OF CLASS OCTOBER 18th/19th
No ifs, ands, or buts.

To Submit the link to your project complete the Google Form below & make sure the link is viewable to all
https://bit.ly/2x9QSQa

Partner Evaluation- Daily Grade
Part 1 due October 11th/12th – Double Daily Grade

Comprehension Questions <u>(include in power point)</u>

1. Describe gravity in words. What is it?

2. Base your answers to this question on the following chart.

Planet	Gravity (feet/second^2)
Mercury	-11.84
Venus	-28.16
Earth	-32
Mars	-12.16
Jupiter	-84.48
Saturn	-36.80
Uranus	-36.80
Neptune	-35.84
Pluto	-1.28

On which planet would the basketball achieve the highest maximum   height? Why?

On which planet would the basketball achieve the lowest maximum height?

3. The Interplanetary Basketball League must decide on which planet its championship tournament this year will be held. Obviously - because gravity is different on every planet -they will have to adjust the rules depending on the planet.
    For instance, a lower gravity (let's say Mercury) might mean that players could jump longer and higher and that the ball could go farther when thrown upward. Would that require bigger basketball courts and a higher basket? Explain your reasoning.

4. On which planet would you recommend the tournament be held? Why?