



PhET Gravity and Orbits html5

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Click the "5" shield

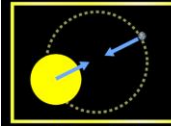


About 3,810 results (0.44 seconds)

Gravity And Orbits - Gravitational Force | Circular Motion ... - PhET  
<https://phet.colorado.edu/en/simulation/gravity-and-orbits>  
 Move the sun, earth, moon and space station to see how it affects their gravitational forces and orbital paths. Visualize the sizes and distances between different ...  
 Gravity and Orbits - Concept questions for Physics ... - Gravity and Orbits Lesson



Gravity And Orbits



Model

Gravity:  on  off

Gravity Force

Velocity

Path

Grid

Part 1 Directions: Choose "Model"

Select all check boxes



- Click and describe what you see.
- Click recheck the boxes and change either the planet's mass, the star's mass or both. Circle what you changed (star's mass greater or smaller - planet's mass greater or smaller). What happened to the orbit?
- Click recheck the boxes and change either the planet's mass, the star's mass or both. Circle what you changed (star's mass greater or smaller - planet's mass greater or smaller). What happened to the orbit?
- Click recheck the boxes and change either the planet's mass, the star's mass or both. Circle what you changed (star's mass greater or smaller - planet's mass greater or smaller). What happened to the orbit?
- Were you able to have the planet leave the orbit of the star? What changed?  
(star's mass greater or smaller - planet's mass greater or smaller)
- Were you able to have the planet crash into the star? Which scenarios?  
(star's mass greater or smaller - planet's mass greater or smaller)
- If you answered "NO" to 5 or 6, play with the sim until you can answer "YES" to both. What changed?  
(star's mass greater or smaller - planet's mass greater or smaller)
- Click recheck the boxes and add a moon. . Click . What happened to the planet's orbit?  
What does the moon's orbit look like?
- Click recheck the boxes and add a moon. . Change the mass of the planet, star of both. Click . What happened to the moon and planet's orbit?

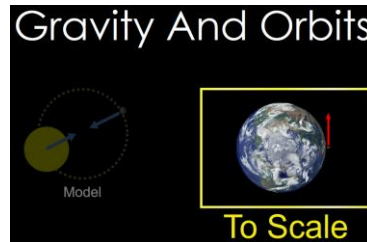
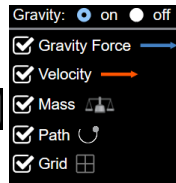
J. Play with these two selected. What happens pretty quickly in each sim?





**Part 2 Directions:** Choose "To Scale"

Select all check boxes

Select

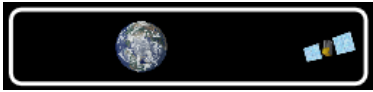


A. Click  and describe what you see.

B. Click  recheck the boxes and change either the earth's mass, the sun's mass or both. Circle what you changed (sun's mass greater or smaller - earth's mass greater or smaller). What happened to the orbit?

C. Click  and select  and  and . Click  and allow an 365 days to pass. Describe what happened to the planet and the moon's orbits?

D. In any of the sims, what happens when you turn gravity off and hit play?

E. With  selected, what happens to the orbit when you change the satellite mass?  
When you change the planet's mass?

F. In all the sims, what happens to the planet as things go around it? (Hint: make sure all boxes are checked!)