

It's Gravity

Lesson Title: *It's Gravity*

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Name: _____

I) History of Gravity—Outline

Directions: Complete each era below with information on key events or developments.

A) Early Ideas: _____

B) Ancient Greeks: Aristotle: _____

C) Middle Ages: _____

D) Renaissance: Galileo: _____

E) Enlightenment: Newton: _____

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F) Post Enlightenment — 1700s, 1800s: _____

G) Twentieth Century: Einstein: _____

Cosmology: _____

H) Future Directions: _____

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II) Modern Concepts—Outline

Directions: Complete each topic below with information on key developments.

A) Mass versus weight: _____

B) Newtonian Gravity is still correct: _____

C) Gravity pulls things together: _____

D) All objects have gravity: _____

E) The more massive an object, the stronger its pull on other objects and the more strongly other objects pull on it: _____

F) The closer two objects are to each other, the stronger their gravitational pull on each other:

G) Gravity is proportional to mass, not any other property: _____

H) Orbits, center-of-mass, and escape velocity: _____

I) Weightlessness is experienced in free fall—not just in space: _____

J) Very massive objects (stars, planets, etc.) are round because of gravity's inward pull:

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K) All objects at earth's surface fall towards earth with the same acceleration: _____

L) Acceleration is equivalent to gravity: _____

M) Tides and Roche's limit: _____

N) Gravity is the weakest of the four fundamental forces: _____

O) Gravity is nevertheless the main mover and shaper in the universe: _____

P) Gravity determines the fate of the universe: _____

Q) Gravity permits the detection of invisible stuff (stars, planets, galaxies, structure in the universe, black holes, etc.): _____

R) What is a black hole?: _____

S) Gravitational waves: _____
