

#### Global View - Big Bang Theory (C0094)

- What's up? You don't look too good. A:
- Yeah, my head hurts, that's all. I've been in B: physics class all day. It's killer!
- I liked physics. It's all math, really; arcs, curves, velocity, cool stuff.
- Yeah, yeah, but today's lesson was all about the В: creation of the universe.
- A physics class about the creation of the universe? That's some pretty unscientific language there. Sounds more religous to me.
- It's all religion. Take the theory of the Big Bang. B: How is it possible that all of the stuff in the universe comes from an explosion? That's no better than Atlas carrying the globe on his back or African myths about turtles and stuff.

- A: Turtles? Whatever... Look, all that's required for the creation of matter an imbalance of particles and anti-particles. At least, that's what the math says.
- B: Math, shmath. What's the evidence?
- A: There is evidence! You know Edwin Hubble? He's the guy who in the early twentieth century was the first scientist to measure the drift of matter in the universe, thus advancing notions of an expanding universe. What would it be expanding from? Well, the Big Bang... DUH!
- B: Anyway, it's just a theory. Why do people go around touting theories? Where's the scientific rigor in that?
- A: Dude, don't equivocate. A theory only becomes a theory after withstanding rigorous testing. You slept through class, didn't you?



# Agh! You're making my head hurt again! Quit with the questions!

### **Key Vocabulary**

what's up	phrase	what is happening
killer	common $noun, sin gular$	Something that is extremely difficult to deal with or withstand
theory	common $noun, sin gular$	a set of statements or principles devised to ex- plain a group of facts or phenomena
Big Bang		the theory that a cos- mic explosion caused the origin of the uni- verse
matter	common $noun, non-variable$	the substance of which something, is made; material



**imbalance** common the situation

noun, sin- there is an unequal

gular amount of different

things

particle common any one tiny part of

noun, plu- matter

ral

anti-particle common a particle that has the

noun, plu- same mass as another

ral particle but has oppo-

site values for its other

where

properties

**notion** common ideas or concepts

noun, plu-

ral

rigor common the state of something

noun, non- being very exact

variable

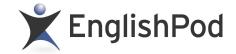
equivocate verb use vague language so

as to deceive someone

withstand surviving a difficult ex-

perience or trouble

#### **Supplementary Vocabulary**



astronomy

common noun, sin-

gular

The scientific study

of matter in outer space, especially the

positions, dimensions,

distribution, motion, composition, energy,

and evolution of ce-

lestial bodies and

phenomena

black hole

common

noun, sin-

gular

a region of space result-

ing from the collapse of

a star with extremely

high gravitational field

white dwarf

common

noun, sin-

gular

a small, faint, very

dense star

entropy

common

noun, sin-

gular

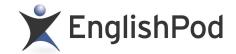
The tendency for all

matter and energy in

the universe to evolve

toward a state of inert

uniformity



singularity

common

sin-

noun, gular

A point of infinite den-

sity and infinitesimal volume, at which space

and time become in-

finitely distorted ac-

cording to the theory of General Relativity

paradox

common

noun, sin-

gular

A seemingly contra-

dictory statement that may nonetheless be

true