
Astronomy 311

'The Elegant Universe' (Part 1) - 55 min

Questions to accompany a viewing of the movie.

"Science proceeds along a zig-zag path toward what we hope will be ultimate truth, a path that began with humanity's earliest attempts to fathom the cosmos and whose end we cannot predict." - Brian Greene

"The boldness of asking deep questions may require unforeseen flexibility if we are to accept the answers." - Brian Greene

Discussion Questions

1. What is the 'Holy Grail' of modern physics?
2. How does the 'Standard Model' illustrate a trend toward convergence?
3. What does unification entail for physics?
4. Despite describing gravity's pull with incredible accuracy, Newton couldn't ... ?
5. How did Einstein view gravity? What conflict existed between it and Newton's view?
6. How does Quantum Theory differ from Einstein's view of the world? From ours?
7. Why are relativity and quantum so hard to unify? Why do we want to unify them?
8. What promise does String Theory hold? Why, despite this, is it regarded skeptically?