## Worksheet: Case Study Logical Reasoning

A group of physicists have been researching matter and motion for some years. After numerous studies, they have come to the following conclusions:

“No physical activity happens by chance. All chance occurrences are random events. No random events are physical activities.”

1. For the statement above debate whether the concluding thought is true or not. Remember open-minded inquiry as you discuss the topic.
2. Now try to see if you can represent this idea in linear order.
3. Can you draw a Venn diagram to determine if it is a valid statement?
4. Can the statement be negated or refuted? Can they be confirmed? What evidence would you use?
5. How would do you think the physicist went about testing this logic problem? How would you design the experiment? Analyze the challenges you may face.