The ACT Instructional Mastery Science course provides candidates with the information necessary to facilitate effective ACT Science test preparation, identify and recommend test-taking strategies, and understand test structure and content. This course is highly interactive and practical and provides an opportunity to share ideas and teaching techniques with colleagues.

Includes:
- Teaching students how to:
  - Interpret
  - Analyze
  - Reason
  - Solve Problems
- Interpretation of Data
- Scientific Investigation
- Evaluation of Models (Inferences and Experimental Results)

Why Take It?
- Learn how to tackle the hardest aspects for students:
  - Reading speed
  - Time limits
- Help students learn key skills:
  - Draw a conclusion based on data or identify data that support a conclusion
  - Compare competing interpretations of a data set and determine which is best supported by evidence and reason
  - Perform interpolations and extrapolations using data from a table or graph
  - Identify whether or not a cause-and-effect relationship exists between two variables
  - Interpret data presented in graphs and tables (including identifying trends, independent and dependent variables, and units and scales)
  - Recognize the origin of data presented in a graph or table
- Proven strategies to maximize scoring at all levels
## ACT Science Professional Learning Example Schedule | 2-Day Course

### Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM–9:00 AM</td>
<td>Introduction, About the Science section</td>
</tr>
<tr>
<td>9:00 AM–9:30 AM</td>
<td>ACT Science Test Data Analysis</td>
</tr>
<tr>
<td>9:30 AM–10:45 AM</td>
<td>Science Reporting Categories and Item Analysis</td>
</tr>
<tr>
<td>10:45 AM–11:30 AM</td>
<td>Passage Type: Data Presentation</td>
</tr>
<tr>
<td>11:30AM–12:00PM</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>12:00PM–1:00PM</td>
<td>Passage Type: Research Summary</td>
</tr>
<tr>
<td>1:00PM–1:45PM</td>
<td>ACT Science Section Practice Test</td>
</tr>
<tr>
<td>1:45PM–2:30PM</td>
<td>Passage Type Conflicting Viewpoints</td>
</tr>
</tbody>
</table>

### Day 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM–10:00 AM</td>
<td>Graphs, Tables, and Figures</td>
</tr>
<tr>
<td>10:00 AM–11:00 AM</td>
<td>Scientific Method</td>
</tr>
<tr>
<td>11:00–11:30 AM</td>
<td>ACT Science Required Background Knowledge</td>
</tr>
<tr>
<td>11:30AM–12:00PM</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>12:00PM–1:00PM</td>
<td>Test–Taking Strategies and Time Management</td>
</tr>
<tr>
<td>1:00PM–1:45PM</td>
<td>Student Support and Preparation</td>
</tr>
<tr>
<td>1:45PM–2:00PM</td>
<td>Reflection and Review</td>
</tr>
<tr>
<td>2:00PM–2:30PM</td>
<td>Science Knowledge Check</td>
</tr>
</tbody>
</table>

### Topics Covered

#### Science Section Overview
- Reporting Categories
- Types of Passage
- Science College and Career Readiness Standards
- Reporting Categories
- Item Analysis

#### Student Guidance
- Testing Anxiety, Motivation, and Your Role as an educator
- Evaluation of Students' Strengths and Weaknesses in Science
- Creating a Tailored Learning Program

#### Passage Formats and Strategies
- Data Presentation
- Research Summaries
- Conflicting Viewpoints

#### Generalities of Science
- Scientific Method
- Hypotheses
- Control Groups
- Measurement

#### Background Knowledge Overview
- Biology
- Chemistry
- Physics
- Earth and Space Science

#### Test–Taking Strategies
- Time Management
- Working with Graphs and Tables
- Additional Tips for Taking the Science test

#### General Preparation
- Curriculum Review Worksheets
- Data Literacy
- Vocabulary
- English Language Learners
- Ideas for Progress