Course Syllabus
Science, ACT

Morgan County Curriculum 4.1 High School, Final
Morgan County School District

The American College Test (ACT) is typically given to students in the later years of high school prior to applying to colleges.

Research and Inquiry

The Research and Inquiry unit focuses on the knowledge, processes, and real world issues associated with science and technology. Topics include experimentation, data analysis, science related careers, and technological advances.

- Objective 1
  The learner will be able to determine whether new evidence supports or discredits a hypothesis.
- Objective 2
  The learner will be able to give evidence to defend an argument.
- Objective 3
  The learner will be able to give evidence to refute an argument.
- Objective 4
  The learner will be able to identify the research objective in an experiment.
- Objective 5
  The learner will be able to understand the research objective in an experiment.
- Objective 6
  The learner will be able to comprehend a scientific experiment.
- Objective 7
  The learner will be able to understand how the information obtained from one experiment might be used in a new situation.
- Objective 8
  The learner will be able to integrate the objective and procedure of a scientific experiment.
- Objective 9
  The learner will be able to integrate the objective and variables of a scientific experiment.
- Objective 10
  The learner will be able to integrate the variables and procedure of a scientific experiment.
- Objective 11
  The learner will be able to integrate the variables and results of a scientific experiment.
- Objective 12
  The learner will be able to integrate the procedure and results of a scientific experiment.
- Objective 13
  The learner will be able to integrate the objective and results of a scientific experiment.
- Objective 14
  The learner will be able to recognize how results of scientific experiments are similar or different.
- Objective 15
  The learner will be able to identify trends in the results of similar scientific experiments.
- Objective 16
  The learner will be able to understand the effect manipulated factors have on the results of a scientific investigation.
- Objective 17
  The learner will be able to determine what kind of influence the results of an experiment have on one's comprehension of the world.
- Objective 18
  The learner will be able to interpret the results of an experiment.
- Objective 19
  The learner will be able to make generalizations regarding the results of investigations.
- Objective 20
  The learner will be able to identify the conflict between alternative scientific arguments.
- Objective 21
  The learner will be able to identify the assumptions made to support a scientific argument.

- Objective 22
  The learner will be able to recognize the strong points in a scientific argument.
- Objective 23
  The learner will be able to identify the central point of a scientific argument.
- Objective 24
  The learner will be able to recognize the weak points in a scientific argument.
- Objective 25
  The learner will be able to identify trends in a scientific argument.
- Objective 26
  The learner will be able to understand the conflict between alternative arguments.
- Objective 27
  The learner will be able to describe alternative scientific arguments.
- Objective 28
  The learner will be able to understand the concepts involved in a scientific argument.
- Objective 29
  The learner will be able to understand the evidence supporting alternative arguments.
- Objective 30
  The learner will be able to describe the concepts involved in a scientific argument.
- Objective 31
  The learner will be able to understand alternative scientific arguments.
- Objective 32
  The learner will be able to determine what type of evidence might solve the conflict between alternative arguments.
- Objective 33
  The learner will be able to compare alternative scientific arguments.
- Objective 34
  The learner will be able to interpret alternative scientific arguments.
- Objective 35
  The learner will be able to integrate facts from alternative scientific arguments.
- Objective 36
  The learner will be able to evaluate alternative scientific arguments.
- Objective 37
  The learner will be able to identify the variables in a graph.
- Objective 38
  The learner will be able to identify the variables in a table.
- Objective 39
  The learner will be able to identify the variables in a chart.
- Objective 40
  The learner will be able to recognize a scatter diagram.
- Objective 41
  The learner will be able to recognize how the information in a chart or passage would be best displayed in graph form.
- Objective 42
  The learner will be able to read graphs.
- Objective 43
  The learner will be able to comprehend charts.
- Objective 44
  The learner will be able to comprehend tables.
- Objective 45
  The learner will be able to comprehend illustrations.
- Objective 46
  The learner will be able to understand how the variables in a graph are measured.

- Objective 47
  The learner will be able to understand how the variables in a table are measured.
- Objective 48
  The learner will be able to understand how the variables in a chart are measured.
- Objective 49
  The learner will be able to understand the relationship between variables in a graph.
- Objective 50
  The learner will be able to understand the relationship between variables in a table.
- Objective 51
  The learner will be able to understand the relationship between variables in a chart.
- Objective 52
  The learner will be able to read a scatter diagram.
- Objective 53
  The learner will be able to understand what the variables are on a scatter diagram.
- Objective 54
  The learner will be able to understand how the variables are measured on a scatter diagram.
- Objective 55
  The learner will be able to understand how the variables are related on a scatter diagram.
- Objective 56
  The learner will be able to understand the meaning of "best-fit" line in reference to a scatter diagram.
- Objective 57
  The learner will be able to understand a flow chart.
- Objective 58
  The learner will be able to find relationships in graphs.
- Objective 59
  The learner will be able to find relationships in tables.
- Objective 60
  The learner will be able to find relationships in charts.
- Objective 61
  The learner will be able to find relationships in illustrations.
- Objective 62
  The learner will be able to extrapolate data from a chart.
- Objective 63
  The learner will be able to extrapolate data from a table.
- Objective 64
  The learner will be able to apply material given in graphs to new situations.
- Objective 65
  The learner will be able to apply material given in tables to new situations.
- Objective 66
  The learner will be able to apply material given in charts to new situations.
- Objective 67
  The learner will be able to apply material given in illustrations to new situations.
- Objective 68
  The learner will be able to interpolate data on a graph.
- Objective 69
  The learner will be able to interpolate data on a table.
- Objective 70
  The learner will be able to interpolate data on a chart.
- Objective 71
  The learner will be able to interpolate data on a scatter diagram.
- Objective 72
  The learner will be able to extrapolate data from a graph.
- Objective 73
  The learner will be able to analyze graphs.

- Objective 74
  The learner will be able to analyze charts.
- Objective 75
  The learner will be able to analyze tables.
- Objective 76
  The learner will be able to analyze illustrations.
- Objective 77
  The learner will be able to analyze a diagram.
- Objective 78
  The learner will be able to convert data presented in a chart or table to a graph.
- Objective 79
  The learner will be able to incorporate material from a graph with material from a scientific passage in order to answer a question.
- Objective 80
  The learner will be able to incorporate material from a table with material from a scientific passage in order to answer a question.
- Objective 81
  The learner will be able to incorporate material from a chart with material from a scientific passage in order to answer a question.
- Objective 82
  The learner will be able to incorporate material from an illustration with material from a scientific passage in order to answer a question.
- Objective 83
  The learner will be able to draw conclusions from the results of a scientific experiment.
- Objective 84
  The learner will be able to come to conclusions based upon alternative scientific arguments.
- Objective 85
  The learner will be able to adhere to the procedures of an experiment.
- Objective 86
  The learner will be able to understand the steps of the scientific method.
- Objective 87
  The learner will be able to identify the variables in an investigation.
- Objective 88
  The learner will be able to understand the variables in a scientific experiment.
- Objective 89
  The learner will be able to understand whether the beginning hypothesis is supported by the data in an experiment.
- Objective 90
  The learner will be able to recognize the control group within an experiment.
- Objective 91
  The learner will be able to understand the definition of a control.
- Objective 92
  The learner will be able to differentiate between a control group and an experimental group.
- Objective 93
  The learner will be able to determine which test group is the experimental group and which is the control.
- Objective 94
  The learner will be able to predict what will happen in future experiments given the results of one investigation.
- Objective 95
  The learner will be able to understand the definition of exponential.
- Objective 96
  The learner will be able to recognize the assumptions in a scientific experiment.
- Objective 97
  The learner will be able to recognize the necessary information in a scientific passage.

- Objective 98
  The learner will be able to recognize the scientific concepts that the information is based on within a scientific passage.
- Objective 99
  The learner will be able to identify relationships between various segments of information from a scientific passage.
- Objective 100
  The learner will be able to recognize the scientific assumptions that the information is based on within a scientific passage.
- Objective 101
  The learner will be able to describe the scientific concepts that the information is based on within a scientific passage.
- Objective 102
  The learner will be able to describe the scientific assumptions that the information is based on within a scientific passage.
- Objective 103
  The learner will be able to explain a scientific passage in the form of a summary.
- Objective 104
  The learner will be able to apply material given in scientific passages to new situations.
- Objective 105
  The learner will be able to restate distinct parts of a scientific passage.
- Objective 106
  The learner will be able to find relationships in a scientific passage.
- Objective 107
  The learner will be able to relate events described in a scientific passage to new situations.
- Objective 108
  The learner will be able to analyze scientific passages.
- Objective 109
  The learner will be able to identify a linear graph.
- Objective 110
  The learner will be able to understand what the independent and dependent variables are on a linear graph.
- Objective 111
  The learner will be able to understand how the variables are measured on a linear graph.
- Objective 112
  The learner will be able to understand how the variables are related on a linear graph.
- Objective 113
  The learner will be able to read a linear graph.
- Objective 114
  The learner will be able to differentiate between positive and negative linear relationships on a graph.
- Objective 115
  The learner will be able to extrapolate data from a straight line graph.
- Objective 116
  The learner will be able to understand how to read a bar graph.
- Objective 117
  The learner will be able to recognize an exponential graph.
- Objective 118
  The learner will be able to understand what the independent and dependent variables are on an exponential graph.
- Objective 119
  The learner will be able to understand how the variables are measured on an exponential graph.
- Objective 120
  The learner will be able to understand how the variables are related on an exponential graph.

- Objective 121
  The learner will be able to read an exponential graph.
- Objective 122
  The learner will be able to interpolate data on an exponential graph.
- Objective 123
  The learner will be able to extrapolate data from an exponential graph.
- Objective 124
  The learner will be able to identify a coordinate graph.
- Objective 125
  The learner will be able to understand how to read a coordinate graph.
- Objective 126
  The learner will be able to understand what the independent and dependent variables are on a coordinate graph.
- Objective 127
  The learner will be able to understand how the variables on a coordinate graph are measured.
- Objective 128
  The learner will be able to understand the relationship between variables on a coordinate graph.
- Objective 129
  The learner will be able to interpolate data on a coordinate diagram.
- Objective 130
  The learner will be able to extrapolate data from a coordinate diagram.
- Objective 131
  The learner will be able to interpret scientific data.