**Lesson Plan**

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| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/27/12 |

**Part I**

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| **Unit:** | Linear Functions and Relations |
| **Benchmark:** | MA.912.A.3.10 |
| **Literacy Benchmark:** | LA.910.1.61 Use new vocabulary that is introduced and taught directly. |
| **Objective(s):**  **In student-friendly language** | Students will be able to:   * Describe the relationship of the slopes of lines that are perpendicular to one another. * Write the equations of perpendicular lines. |
| **Essential Question:** | Why do we need to know different forms of equations of lines? |
| **Materials/Resources:** | Calculators, Smart Board |
| **Assessments:**  **Formative/Summative** | Formative: Observations and Discussions  Summative: Student Homework, Exit Slip |
| **Key Vocabulary** | Perpendicular line, opposite reciprocal |
| **Homework** | 4-4 Practice # 13 – 24 choose 6 |

**Part II**

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| **High-Yield Strategies:**  Check all that apply | **Marzano:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | x | Identifiying Similarities and Differences |  | Summarizing |  | Nonlinguistic Representation | | x | Generating/Testing Hypotheses |  | Advance Organizer |  | Outlining/Webbing/Multi-Column Notemaking |   **Kagan Structures:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | RallyCoach |  | RallyRobin |  | RoundRobin | |  | Stand-Up Hand-Up Pair-Up |  | Quiz-Quiz Trade | x | Other: Numbered Heads Together |   **CRISS:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Think-Pair Share |  | KWL |  | Jigsaw | |  | Frayer Model |  | Anticipation Guide |  | Other: | |
| **Challenge Level (Bloom):**  Check all that apply  **Depth of Knowledge**  **(Webb):**  Check all that apply | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | x | Recall | x | Comprehension | x | Application | | x | Analysis |  | Synthesis |  | Evaluation |      |  |  |  |  | | --- | --- | --- | --- | | x | Level 1 (Recall) | x | Level 2 (Skill/Concept) | | x | Level 3 (Strategic Thinking) |  | Level 4 (Extended Thinking) | |

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| **Differentiation:**  Check all that apply | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | x | Content | x | Process |  | Product | x | Learning Environment | |

**Part III**

**Write Lesson Plan Here (Follow Phases of the Gradual Release Model)**

**Attach copies of advance organizers, handouts, assignments, Powerpoint or Notebook slides.**

* We will discuss pictures of sporting equipment. (Slide 2)
* They will share additional examples of perpendicular lines. (Slide 2)
* We will review what we know about perpendicular lines. (Slide 3)
* I will write equations of perpendicular lines. (Slide 4)
* We will write an equation of a graphed line. (Slide 4)
* They will write the equation of the perpendicular graph line. (Slide 4)
* They will work in groups to find the equation of the perpendicular line. (Slide 5)
* We will make generalizations about perpendicular lines. (Slide 5&6)
* We will write an equation in slope-intercept form of a perpendicular equation. (Slide 7)
* They will work in groups to organize given equations as perpendicular or non-perpendicular. (Slide 8 )
* They will complete an exit slip. (Slide 9)

**Part IV**

**Higher Order Questions I will ask in this lesson (write them out):**

* What are other examples where we find perpendicular lines?
* What generalization can we make about perpendicular lines?
* How can we guarantee we can always write a perpendicular line if we are only given one equation?
* What would be a perpendicular line to y = 4? What can you conclude about the slope of zero and undefined?

**Lesson Plan**

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| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/28/12 |

**Part I**

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| --- | --- |
| **Unit:** | Linear Functions and Relations |
| **Benchmark:** | MA.912.A.3.11 |
| **Literacy Benchmark:** | LA.910.1.61 Use new vocabulary that is introduced and taught directly. |
| **Objective(s):**  **In student-friendly language** | Students will be able to:   * Describe the correlation of the data on a scatter plot. * Explain what the graph is showing/means. |
| **Essential Question:** | Why do we need to know different forms of equations of lines? |
| **Materials/Resources:** | Calculators, Smart Board |
| **Assessments:**  **Formative/Summative** | Formative: Observations and Discussions  Summative: Student Homework, Exit Slip |
| **Key Vocabulary** | Scatter plot, bivariate data, correlation, line of fit, trend line |
| **Homework** | 4-5 Practice WS (all) |

**Part II**

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| **High-Yield Strategies:**  Check all that apply | **Marzano:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | x | Identifiying Similarities and Differences |  | Summarizing |  | Nonlinguistic Representation | | x | Generating/Testing Hypotheses |  | Advance Organizer |  | Outlining/Webbing/Multi-Column Notemaking |   **Kagan Structures:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | RallyCoach |  | RallyRobin |  | RoundRobin | |  | Stand-Up Hand-Up Pair-Up |  | Quiz-Quiz Trade | x | Other: Numbered Heads Together |   **CRISS:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Think-Pair Share |  | KWL |  | Jigsaw | |  | Frayer Model |  | Anticipation Guide |  | Other: | |
| **Challenge Level (Bloom):**  Check all that apply  **Depth of Knowledge**  **(Webb):**  Check all that apply | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | x | Recall | x | Comprehension | x | Application | |  | Analysis |  | Synthesis |  | Evaluation |      |  |  |  |  | | --- | --- | --- | --- | | x | Level 1 (Recall) | x | Level 2 (Skill/Concept) | | x | Level 3 (Strategic Thinking) |  | Level 4 (Extended Thinking) | |

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| **Differentiation:**  Check all that apply | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | x | Content | x | Process | x | Product |  | Learning Environment | |

**Part III**

**Write Lesson Plan Here (Follow Phases of the Gradual Release Model)**

**Attach copies of advance organizers, handouts, assignments, Powerpoint or Notebook slides.**

* We will discuss the basketball picture. (Slide 11)
* I will explain the specific vocabulary terms. (Slide 12)
* We will discuss the meanings of the vocabulary words. (roots) (Slide 12)
* They will match the graphs to the vocabulary words. (Slide 13)
* We will follow 4 steps in making and using a scatter plot. (Slide 14)
* They will practice determining correlations. (Slide 15)
* They will complete an exit slip. (Slide 16s)

**Part IV**

**Higher Order Questions I will ask in this lesson (write them out):**

* What do you think bivariate means? (break it into parts, what does each part mean?)
* What do these correlations remind us of?
* Why do we use a line of fit if it doesn’t go through all of our points?

**Lesson Plan**

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| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/29/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions and Relations |
| **Benchmark:** | MA.912.A.3.11, MA.912.A.10.2 |
| **Literacy Benchmark:** | LA.910.1.61 Use new vocabulary that is introduced and taught directly. |
| **Objective(s):**  **In student-friendly language** | Students will be able to:   * Apply real-world data to a scatter plot. * Interpret information to predict unknown data. |
| **Essential Question:** | Why does it help us to view data on a scatter plot? |
| **Materials/Resources:** | Calculators, Smart Board, Chart Paper, Markers |
| **Assessments:**  **Formative/Summative** | Formative: Observations and Discussions  Summative: Student Homework, Exit Slip |
| **Key Vocabulary** | Scatter plot, bivariate data, correlation, line of fit, trend line |
| **Homework** | Test Review Homework Assignment WS choose 10 |

**Part II**

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| **High-Yield Strategies:**  Check all that apply | **Marzano:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Identifiying Similarities and Differences |  | Summarizing | x | Nonlinguistic Representation | |  | Generating/Testing Hypotheses |  | Advance Organizer |  | Outlining/Webbing/Multi-Column Notemaking |   **Kagan Structures:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | RallyCoach |  | RallyRobin |  | RoundRobin | |  | Stand-Up Hand-Up Pair-Up |  | Quiz-Quiz Trade |  | Other: Numbered Heads Together |   **CRISS:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Think-Pair Share |  | KWL |  | Jigsaw | |  | Frayer Model |  | Anticipation Guide |  | Other: | |
| **Challenge Level (Bloom):**  Check all that apply  **Depth of Knowledge**  **(Webb):**  Check all that apply | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | x | Recall | x | Comprehension | x | Application | | x | Analysis | x | Synthesis | x | Evaluation |      |  |  |  |  | | --- | --- | --- | --- | | x | Level 1 (Recall) | x | Level 2 (Skill/Concept) | | x | Level 3 (Strategic Thinking) | x | Level 4 (Extended Thinking) | |

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| **Differentiation:**  Check all that apply | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | x | Content | x | Process | x | Product | x | Learning Environment | |

**Part III**

**Write Lesson Plan Here (Follow Phases of the Gradual Release Model)**

**Attach copies of advance organizers, handouts, assignments, Powerpoint or Notebook slides.**

* We will discuss the football picture. (Slide 18)
* We will review scatter plots. (Slide 19)
* They will work in groups of 3 on real-world problem using a scatter plot to find information. (Slide 20)
* They will complete an exit slip. (Slide 21)

**Part IV**

**Higher Order Questions I will ask in this lesson (write them out):**

* Be sure your information is making sense.

**Lesson Plan**

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| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 03/01/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions and Relations |
| **Benchmark:** | MA.912.A.3.11, MA.912.A.10.2 |
| **Literacy Benchmark:** | LA.910.1.61 Use new vocabulary that is introduced and taught directly. |
| **Objective(s):**  **In student-friendly language** | Students will be able to:   * Make predictions from given data trends, assess the likelihood of predictions. * Present and explain information to peers. |
| **Essential Question:** | Why does it help us to view data on a scatter plot? |
| **Materials/Resources:** | Calculators, Smart Board, Chart Paper, Markers |
| **Assessments:**  **Formative/Summative** | Formative: Observations and Discussions  Summative: Student Homework, Exit Slip |
| **Key Vocabulary** | Scatter plot, bivariate data, correlation, line of fit, trend line |
| **Homework** | Test Review Homework Assignment WS remaining 9 |

**Part II**

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| **High-Yield Strategies:**  Check all that apply | **Marzano:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Identifiying Similarities and Differences |  | Summarizing | x | Nonlinguistic Representation | |  | Generating/Testing Hypotheses |  | Advance Organizer |  | Outlining/Webbing/Multi-Column Notemaking |   **Kagan Structures:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | RallyCoach |  | RallyRobin |  | RoundRobin | |  | Stand-Up Hand-Up Pair-Up |  | Quiz-Quiz Trade |  | Other: Numbered Heads Together |   **CRISS:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Think-Pair Share |  | KWL |  | Jigsaw | |  | Frayer Model |  | Anticipation Guide |  | Other: | |
| **Challenge Level (Bloom):**  Check all that apply  **Depth of Knowledge**  **(Webb):**  Check all that apply | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | x | Recall | x | Comprehension | x | Application | | x | Analysis | x | Synthesis | x | Evaluation |      |  |  |  |  | | --- | --- | --- | --- | | x | Level 1 (Recall) | x | Level 2 (Skill/Concept) | | x | Level 3 (Strategic Thinking) | x | Level 4 (Extended Thinking) | |

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| **Differentiation:**  Check all that apply | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | x | Content | x | Process | x | Product | x | Learning Environment | |

**Part III**

**Write Lesson Plan Here (Follow Phases of the Gradual Release Model)**

**Attach copies of advance organizers, handouts, assignments, Powerpoint or Notebook slides.**

* I will review homework questions. (Slide 23)
* They will work in groups of 3 on real-world problem using a scatter plot to find information. (Slide 24)
* They will present their posters. (about 3 groups)
* They will complete an exit slip. (Slide 25s)

**Part IV**

**Higher Order Questions I will ask in this lesson (write them out):**

* Do your conclusions make sense?

**Lesson Plan**

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| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 03/02/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions and Relations |
| **Benchmark:** | MA.912.A.3.10, MA.912.A.3.11, MA.912.A.10.2 |
| **Literacy Benchmark:** | LA.910.1.61 Use new vocabulary that is introduced and taught directly. |
| **Objective(s):**  **In student-friendly language** | Students will be able to:   * Test Individually |
| **Essential Question:** | Why do we need to know different forms of equations of lines? |
| **Materials/Resources:** | Calculators, Smart Board |
| **Assessments:**  **Formative/Summative** | Formative: None  Summative: Test |
| **Key Vocabulary** | Parallel, perpendicular, scatter plot, correlation, line of fit, trend line, opposite reciprocal, slope, slope-intercept, point, positive, negative |
| **Homework** | To catch up in Carnegie |

**Part II**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **High-Yield Strategies:**  Check all that apply | **Marzano:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Identifiying Similarities and Differences |  | Summarizing |  | Nonlinguistic Representation | |  | Generating/Testing Hypotheses |  | Advance Organizer |  | Outlining/Webbing/Multi-Column Notemaking |   **Kagan Structures:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | RallyCoach |  | RallyRobin |  | RoundRobin | |  | Stand-Up Hand-Up Pair-Up |  | Quiz-Quiz Trade |  | Other: Numbered Heads Together |   **CRISS:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Think-Pair Share |  | KWL |  | Jigsaw | |  | Frayer Model |  | Anticipation Guide |  | Other: | |
| **Challenge Level (Bloom):**  Check all that apply  **Depth of Knowledge**  **(Webb):**  Check all that apply | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Recall |  | Comprehension |  | Application | |  | Analysis |  | Synthesis |  | Evaluation |      |  |  |  |  | | --- | --- | --- | --- | |  | Level 1 (Recall) |  | Level 2 (Skill/Concept) | |  | Level 3 (Strategic Thinking) |  | Level 4 (Extended Thinking) | |

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| **Differentiation:**  Check all that apply | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | Content |  | Process |  | Product |  | Learning Environment | |

**Part III**

**Write Lesson Plan Here (Follow Phases of the Gradual Release Model)**

**Attach copies of advance organizers, handouts, assignments, Powerpoint or Notebook slides.**

* I will review any homework questions. (Slide 27)
* They will test individually.

**Part IV**

**Higher Order Questions I will ask in this lesson (write them out):**

* None – Testing.