**Lesson Plan**

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| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/06/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions – Slopes of Lines |
| **Benchmark:** | MA.912.A.3.9 |
| **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:* Calculate the slope of lines that are negative, horizontal and vertical.
* Describe a line as having a slope that is either positive, negative, zero or undefined.
 |
| **Essential Question:** | What does the slope of a line tell us? |
| **Materials/Resources:** | Calculators, Smart Board |
| **Assessments:****Formative/Summative** | Formative: Observations and DiscussionsSummative: Student Homework |
| **Key Vocabulary** | Negative, Horizontal, Vertical, Slope, Rate of Change, Undefined |
| **Homework** | Quiz review 3-1 & 3-3 |

**Part II**

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| **High-Yield Strategies:**Check all that apply | **Marzano:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | 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 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | Recall | x | Comprehension | x | Application |
| x | Analysis |  | Synthesis |  | Evaluation |

|  |  |  |  |
| --- | --- | --- | --- |
| x | Level 1 (Recall) | x | Level 2 (Skill/Concept) |
|  | Level 3 (Strategic Thinking) |  | Level 4 (Extended Thinking) |

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| **Differentiation:**Check all that apply |

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Content | x | Process |  | Product | x | Learning Environment |

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**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 review what we learned last week about rate of change/slope. (Slide 2)
* I will lead them through an example of how to find the slope of a line that is negative using rise/run and the slope formula. (Slide 3)
* We will discuss examples of negative slopes in the real-world. (Slide 3)
* We will find the slope of a vertical line through our two methods. (Slide 4)
* They will then give an example of where vertical lines appear in the real-world. (Slide 4)
* They will then find the slope of a horizontal line through the two methods. (Slide 5)
* They will then given an example of where horizontal lines appear in the real-world. (Slide 5)
* We will summarize the 4 types of lines. (Slide 6)
* I will tell the story of Simon the Superhero who teaches them about slopes of lines. (Slide 7-8)
* They will point out different types of slopes that appear in the picture of the rollercoaster. (Slide 9)
* We will then play a Jeopardy game to review for our quiz. (Slides 10 – 41)

**Part IV**

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

* What is the slope of this vertical line if we got a number over 0?
* Do all horizontal lines have a slope of zero? Why? How could we check this?
* Do all vertical lines have an undefined slope? What does that mean?

**Lesson Plan**

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| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/07/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions – Slope-Intercept Form |
| **Benchmark:** |  MA.912.A.3.7, MA.912.A.3.10, MA.912.A.3.12 |
| **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:* Write equations of lines in slope-intercept form given the slope and y-intercept.
* Write equations of lines in slope-intercept form given two points on the line.
* Graph linear equations when given an equation in slope-intercept form.
 |
| **Essential Question:** | Why do we have different ways of representing linear equations? |
| **Materials/Resources:** | Calculators, Smart Board |
| **Assessments:****Formative/Summative** | Formative: Observations, Discussions, Turned in classworkSummative: Exit Slip, Student Homework |
| **Key Vocabulary** | Slope-intercept form |
| **Homework** | 4-1 Practice # 1 – 10 |

**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 | x | Other: Four Corners **&** Numbered Heads Together |

**CRISS:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | 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 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Content | x | Process | x | Product | x | Learning Environment |

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**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 review homework in four corners then together as a class.
* They will take a quiz.
* I will begin instruction on slope-intercept form. (Slide 46)
* We will make assumptions about what is required for slope-intercept form. (Slide 46)
* They will create an equation in slope-intercept form. (Slide 46)
* They will work in their groups to dissect the equations. (Slide 47)
* I will select a student from each group to present their information on the board. (Slide 47)
* We will graph an equation in slope intercept form. (Slide 48)
* They will write equations in slope-intercept form from looking at a graph. (Slide 49)
* They will complete an exit slip. (Slide 50)

**Part IV**

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

* Is slope-intercept useful? When might it be easier than Standard form?
* What does it mean when an equation in slope-intercept form does not have a ‘b’ part?

**Lesson Plan**

|  |  |  |
| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/08/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions & Relations – Point-Slope Form |
| **Benchmark:** |  MA.912.A.3.8, 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:* Write an equation in point-slope form when given a point and the slope of the line.
* Write am equation in point-slope form from looking at a graph.
 |
| **Essential Question:** | Why do we have different ways of representing linear equations? |
| **Materials/Resources:** | Calculators, Smart Board |
| **Assessments:****Formative/Summative** | Formative: Observations, DiscussionsSummative: Exit Slip, Student Homework |
| **Key Vocabulary** | Point-slope form  |
| **Homework** | 4-3 in textbook, pp.233 – 235 #1-3, 10, 18, 40-42 |

**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 | 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 | x | 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 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Content | x | Process | x | Product | x | Learning Environment |

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**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 begin notes on point-slope form. (Slide 52)
* They will give me an example of a point and a slope and will write an equation in point-slope form. (Slide 52)
* We will find the point and the slope of the given equation. (Slide 53)
* They will work with manipulating equations to find the point and the slope in groups. (Slide 54)
* I will ask a student from each group to present their solution on the board.
* We will then graph equations in point-slope form. (Slide 55)
* They will attempt a challenge question. (Slide 56)
* We will go over the challenge question. (Slide 56)
* They will complete an exit slip. (Slide 57)

**Part IV**

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

* When would point-slope form be more useful than slope-intercept or standard form?
* How do you write the equation in point-slope form if you are only given two points on the line?

**Lesson Plan**

|  |  |  |
| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/09/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions & Relations – Parallel Lines |
| **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:* Write equations in slope-intercept form for parallel lines to the ones given.
* Explain the rules required for two lines to be parallel.
 |
| **Essential Question:** | Why do we have different ways of representing linear equations? |
| **Materials/Resources:** | Smart Board, Calculators |
| **Assessments:****Formative/Summative** | Formative: Observations, DiscussionsSummative: Exit Slip, Student Homework |
| **Key Vocabulary** | Parallel lines |
| **Homework** | 4-4 Practice #1-12 choose 5 |

**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 | x | Other: Numbered Heads Together |

**CRISS:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | 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 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Content |  | 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 what we see in a picture of a living room. (Slide 59)
* I will begin a discussion on parallel lines. (Slide 60)
* They will explore the equations of parallel lines and come up with a rule about parallel lines. (Slide 60)
* They will think, pair and share their ideas. (Slide 60)
* We will discuss the rule(s) they develop.
* They will determine the equation of a line parallel to a given line. (Slide 61)
* We will review their equation. (Slide 61)
* They will work with their groups to determine which equations are parallel and which are not. (Slide 62)
* We will go through each pair of equations together. (Slide 62)
* They will individually complete an exit slip. (Slide 63)

**Part IV**

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

* What makes two lines parallel?
* What does parallel mean?
* Give an example of parallel lines in the real-world.

**Lesson Plan**

|  |  |  |
| --- | --- | --- |
| **Teacher Name:** Heather McNeill | **Course:** Algebra 1 Standard | **Date:** 02/10/12 |

**Part I**

|  |  |
| --- | --- |
| **Unit:** | Linear Functions & Relations – Review Forms of Lines |
| **Benchmark:** |  MA.912.A.3.7, MA.912.A.3.10, MA.912.A.3.12, MA.912.A.3.8 |
| **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:* Bring together all the different forms of lines.
* Make connections between the different forms.
 |
| **Essential Question:** | Why do we have different ways of representing linear equations? |
| **Materials/Resources:** | Smart Board, Markers, Poster Paper |
| **Assessments:****Formative/Summative** | Formative: Observations, DiscussionsSummative: Student posters |
| **Key Vocabulary** | None |
| **Homework** | Catch up in Carnegie.  |

**Part II**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **High-Yield Strategies:**Check all that apply | **Marzano:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Identifiying Similarities and Differences | x | Summarizing |  | Nonlinguistic Representation |
| x | Generating/Testing Hypotheses |  | Advance Organizer |  | Outlining/Webbing/Multi-Column Notemaking |

**Kagan Structures:**

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|  | Stand-Up Hand-Up Pair-Up |  | Quiz-Quiz Trade |  | Other: Numbered Heads Together |

**CRISS:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Think-Pair Share |  | KWL | x | 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.**

* They will be divided into five groups and will write information they know about their specific topic. (Standard form, Slope-Intercept form, Point-Slope form, Parallel lines, Perpendicular lines)
* I will give the groups 4 minutes at their poster and then they will all rotate to another poster.
* They will then read what the previous group listed. They will correct, and/or add to the poster.
* They will continue in this fashion until each group has been to each poster.
* We will then go over each poster at the front of the class.

**Part IV**

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

**Why did you put \_\_\_\_\_\_ ?**