

Mr. Lincoln's Way

Intermediate

Skills Review:

Choose and appropriate Skills Review Activity based on the needs of students in your classroom. Skills Review Activities begin on SR-1

Total Class Lessons

Day Five: Coordinate Graphing

Standard: Patterns/Relationships/Algebra (Standard # 66)

Indicator: Recognize/Name/construct/plot the coordinates of an ordered pair in quadrant I

Day Six: T-tables

Standard: Patterns/Relationships/Algebra (Standard # 66)

Indicator: represent, explain, and extend numbers patterns using T-tables

Day Five- Total Class Lesson: Coordinate Graphing

Standard: Patterns/Relationships/Algebra (Standard # 66)

Indicator: Recognize/Name/construct/plot the coordinates of an ordered pair in quadrant I

Targeted Use: Total Class Lesson

Additional Use: Wheel Time

Vocabulary: coordinates, quadrant I, ordered pair, x-axis, y-axis

Materials Needed

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Blank pieces of typing paper

Pages with small pictures on them

Coordinate grids of transparencies

A map or a globe with a grid on it

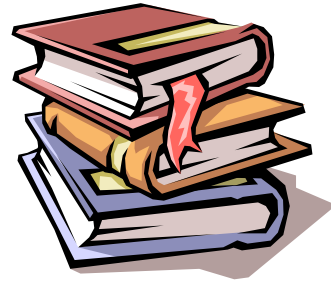
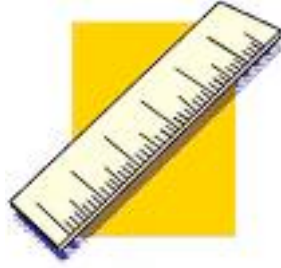
Skills Review:

Choose and appropriate Skills Review Activity based on the needs of students in your classroom. Skills Review Activities begin on SR-1

Total Class Lesson—Directions:

1. Read Mr. Lincoln's Way.
2. Discuss how Eugene had to get the ducklings out of the atrium and into the pond. In some elementary schools hallways twist and turn before they get to a door that leads outside. Tell the students that a map showing how they would get the ducklings out would be helpful to everyone. Discuss how maps and globes have grids on them so that it is easier to locate places.
Show a map or a globe with a grid on it.
3. Let's see how easy it is without a grid.
4. Have the students sit back to back. Give one student a blank sheet of typing paper and the other a paper that has small pictures at various places on the page. (Let students know that the picture is not so important as **where** it is placed on the page.)
5. The student with the pictures on the page is to give directions on where to draw the small pictures to the student with the blank sheet of paper.

6. Discuss the difficulties they had. Talk about the precise language they had to use to get their partner close to the area.
7. Now have the students sit back to back again. This time give the student with the pictures a transparency with a coordinate grid on it the student that was trying to draw the pictures in the correct spot a sheet with the coordinate grid on it. **Stress that they must go across the bottom (x-axis) before they can go up the side (y-axis). (You must go across the floor to go up the stairs.)**
8. Now the student will give directions according to the coordinate grid.
9. Discuss the differences in the experiences between the w=two activities and what made it easier with the grid.
10. Instruct the students on the names of the axis's and how to write coordinate points
11. Have the students give you coordinates of each of the pictures on the page and have different students write the coordinates on the board.



11

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1

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Day Six- Total Class Lesson: T- tables

Standard: Patterns/Relationships/Algebra (Standard # 66)

Indicator: represent, explain, and extend numbers patterns using T-tables

Targeted Use: Total Class Lesson

Additional Uses: Wheel Time

Vocabulary: T-tables
Rule

Materials:

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Pattern blocks

T-table for teacher (transparency, chart, or on chalkboard)

T-table pages (optional)

Skills Review:

Choose and appropriate Skills Review Activity based on the needs of students in your classroom. Skills Review Activities begin on SR-1

Total Class Lesson - Directions:

1. Talk about a constant in the story. Each duck has how many legs? (2) We can show the relationship between the ducks and the number of legs with a T-table.
2. Construct a T-table on the chalkboard, overhead, or chart paper. Show how 1 duck has 2 legs. 2 ducks have 4 legs. Continue until you get to about 5 or 6 ducks.

Ducks	Legs
1	2
2	4
3	6
4	8
5	10

3. Show the students the patterns on the T-table. Point out the pattern for the ducks and the patterns for the legs. (Ducks increase by 1; legs increase by 2)
4. Tell them that we have a rule for this T-table. Let them know that we will use "n" to stand for the number of ducks that we are talking about. "n" stands for any number. "When you look at the relationship between the ducks and the legs you see that whatever the number of ducks is, you just double that to get the number of legs." (Example: 1 doubled is 2, 2 doubled is 4, 3 doubled is 6, etc.)
5. So the rule for the T-table is " $n \times 2$ ".
6. Have the students take out their pattern blocks and put out one triangle. How many sides does this triangle have? (3)
7. Let's make another T-table. One triangle has 3 sides (Put this information in a T-table) Now let's put out another triangle. How many sides are there now that there are 2 triangles? (6)
8. Continue with the triangles until you feel the students understand the pattern.
9. Ask the students for the rule for this T-table. ($n \times 3$)
10. Do the same thing with the trapezoid and then the hexagon.
11. If the students are doing well, you may want to expand to have them T-tables constants in the real world. (Ex: wheels on bikes, crayons in a box, eggs in a carton, pop cans in a

case, etc.) Or have them do this during Independent or Small Group time.

Name _____

T-tables

Rule:		Rule:	

Rule:		Rule:	