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Edited by

CHINA TACTUAL DIAGRAM KIT

INSTRUCTIONAL GUIDE
Familiarization to dual-face orientation
Representation of table setting
Daily living skills
Representation of writing diagram
Science
Scheduling arrangements for governmental bodies
Representation of population information
Representation of organizational patterns
Social Studies
Selected equivalent fractions
Grouping and complementary numbers of five and ten
Area comparison of bounded space
Angle construction
Mathematics
Optional) Left-right relationships
Game activities
Make a picture
Symbolic representation of objects
Room representation (approach 2)
Room representation (approach 1)
Scan of the workspace
Familiarization

Part I
Organization of the guide
Organization of the lesson plans
Introduction

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  Pedestrian Traffic Flow
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  Familiarization with a "T" intersection
Introduction

The student is required to construct a "intersection".

1. The student to locate the components of the "intersection".

2. The components.

3. For south/She/or north/south street. parallel vertical street.

Evaluation

a. Discuss the other components of the "intersection".

b. Correct answers and review.

e. Direct the student to locate the left end of the "intersection".

f. Repeat the procedure and show the student how the vertical street.

g. Inserted the far east/west side of the "intersection".
The student is asked to make the target streets the dominant streets. The student should be encouraged to make the target streets the dominant streets.

To summarize, the student is asked to make the target streets the dominant streets. The student should be encouraged to make the target streets the dominant streets.

Lesson 19: Familiarization with a target street

General Organization of Lesson Plans

In a variety of curricular areas, the instructional objective will be found integral to the curriculum. It is the specific goal of the instructional plan that is focused on the student's specific needs. In this lesson, the text shows how the student's needs are met through the development of a target street.

Objectives

1. The student will be able to identify the components of a target street.
2. The student will be able to construct a target street.

Materials

- 1 target street
- 2 text passages
- 4 construction
- 3 discrimination of one street
- 1 target street
- 1 previous lesson's concepts

Procedure

c. The student (8 x 11"
   d. Recorded
   a. Session

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PART ONE

Familiarization

The successful and productive use of new educational materials is, in part, dependent on user familiarity. Every user, teacher and student alike, should become familiar with the materials and the strategies which are used to construct tactual representations.

Evaluation

a. Ask the student to construct a grid pattern on the baseboard.
b. Ask the student to identify and locate the horizontal and vertical streets.
c. Ask the student to locate and count the intersections within the grid pattern.
d. Ask the student to locate and count the six blocks composing the grid pattern.
e. Correct errors and review.

f. Show the student the six rectangular pieces which represent each of the six blocks.
g. Direct the student to locate and count the number of blocks represented in the grid pattern.
h. Direct the student to locate the intersection on the left side of the baseboard.
i. Show the student each of the four corners in the left intersection.
j. Direct the student to locate the intersection on the right side of the baseboard.
k. Show the student each of the four corners of the right intersection.

l. Direct the student to locate the eight corners composing the two intersections within the grid pattern.
vertical streets (embracing the grid pattern). Direct the student to locate and identify the horizontal and vertical streets. 

d. Show the student the Gnale area which represents the two垂直 streets.

c. Show the student the Gnale area which represents the horizontal
to examine the grid pattern. Emphasize a systematic scan of the workspace.

b. Construct a grid pattern using six rectangles (8" x 1½") to
2. Examine the short street as the vertical street.

1. Examine the long street as the horizontal street.

Two Strategies and Four Corners.

Four rectangles (8" x 1½") with identifying and locating four blocks.

4. Direct the student to construct a standard interaction using

Procedure

c. Six rectangles (8" x 1½")

b. Four rectangles (8" x 1½")

a. Baseline

Materials

4. Eight contrast

3. Two interactions

2. Three streets

1. Six blocks

Objectives

The student will identify and locate

All previous lessons in Part I

Pre-requisite Skills and Concepts

Lesson 18: Grid Pattern
Procedure

1. Have student locate far, near, left, right, top, and bottom side of board.

2. Have student assume this hand position on the board in the far left corner (Diagram 1).

3. Move right hand to the position next to the left hand (Diagram 2).

4. Move right hand to a position to the right of the left hand, keeping the hands in contact with the board (Diagram 2).

5. Have student move fingertips downward with a sliding movement toward the far right side of the board (Diagram 2).

6. When the student reaches the far right side of the board, instruct him to follow the same cross hand movements described in step 1.

7. Correct and/or reinforce correct movement.

**Note:** The student has usually small hands, the entire area can be covered by 2 downward movements and 1 upward one. Students with big hands coordination should practice the movements attached to the diagram.
2. Begin at the southeast corner. Have north and locate the
standard intersection with your compass. (area.

3. Ask the student to draw a straight line from a
corner to form your compass area. (Standard diagram.

4. Ask the student to place four parts of velvet strips in the proper

Evaluation

1. Ensure correct figure and response.

2. Ask the student to use the prescribed vertical scanning.

3. Ask the student to scan the 12" x 12" area in less than 20

Procedures

1. Open the board into the full 16" x 24" dimensions and fell the same.

2. Close into a partially size.

3. The student can place various pieces on board acting part.

4. Two students are standing in front of the corner, with scanning equipment can "hear" one

Optional Activities

1. Place a small square at any point on the surface and have the

Note: Figure 2 shows the location and the direction of each movement. (see diagram.

Note: All students are standing in front of the corner, (at least) each corner (at least)

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and place both index fingers on the corner.

4. Direct the student to locate the northeast corner of the intersection.

5. Direct the student to walk across the street within the crosswalk area.

6. Explain to the student that the crosswalk lines are painted on the street. The painted lines are pedestrian crosswalks.

7. Place the yellow traffic strips on the northeast corner of the intersection. (See diagram)

3. Identify four corners
2. Identity two streets
1. Identify four blocks

**Procedure**

1. Direct the student to construct a standard intersection.

2. The strips of yellow will be used to represent crosswalks at the intersection.

3. Eight strips of yellow (1/8" x 2"

4. Four rectangles (6" x 11"

5. Pedestrian

**Materials**

- Section
- Traffic light
- Move from corner to corner at a standard interval.
- The student will be able to demonstrate the directional flow of pedestrian traffic as it moves from corner to corner at a standard interval.
- The student will be able to locate the pedestrian crosswalks within a standard intersection.
- The student will be able to identify and locate the pedestrian crosswalks.

All previous lessons in Part I-2
Pre-requisite Skills and Concepts
Lesson 17: Pedestrian Traffic Flow

Diagram
c. Right squares (1" x 1") to represent student’s desks
b. One circle (1" diameter) to represent teacher’s desk
a. One half basboard (1") x 18”

Materials

g. Represent the location of student desks within the room.
d. Represent the location of doors.
c. Represent the location of the teacher’s desk.
b. Represent specific objects within the room by using parts of the room.
a. Use strips of one half the basboard to represent walls of the room.

The student will:

Objectives

c. Knowledge of right angles
d. Familiarity with physical characteristics of a classroom having
    four straight walls

Vocabulary

Pre requisites Skills and Concepts

second the walls are represented by long strips from the kit.
second the walls are represented by long strips of the basboard and in the
walls as such are represented by the four sides of the basboard. In the first
lesson 2: Representation of a room by the student (approach one)
E. Ask the student to demonstrate a left and right turn from a west-bound street.
F. Ask the student to demonstrate a left and right turn from an east-bound street.
G. Ask the student to demonstrate a left and right turn from a south-bound street.
H. Ask the student to demonstrate a left and right turn from a north-bound street.

**Evaluation**

The student successfully represents the diagramstrip, circle, and squares.

The diagramstrip represents the real object of structure with an appropriate piece from theappropriate piece from the classroom arrangement, helping one door.

1. The circle to represent the position of teacher’s desk.
2. The square to represent the position of students’ desks.
3. Place strip on a diagonal at the location of doors.
4. Student office. A strip of low part of the classroom is being referred to, representing fold.
5. Square pieces in different half of board.
6. Place pieces to the used and associate names with shapes.

**Procedure**
Lesson 16: Demonstrating Traffic Movement on One-Way Streets; Making Left and Right Turns

Prerequisite Skills and Concepts

All previous lessons in Part II

Objective

a. The student will be able to demonstrate left and right turns of traffic on a one-way street from:
   1. northerly direction
   2. southerly direction
   3. westward direction
   4. eastward direction

Materials

a. Baseboard
b. Four rectangles (8" x 11")
c. Two model cars

Procedure

a. Direct the student to construct a standard intersection. (See diagram)
   1. Designate the vertical street as one-way north bound.
   2. Designate the horizontal street as one-way west bound.
   b. Direct the student to tactually inspect the model cars.
      1. Identify the front of the car.
      2. Identify the rear of the car.
   c. Demonstrate a left turn on one-way streets. Direct the student to place two cars at the south end of the vertical street. Place one car near the east side/edge/curb and place one car near the west side/edge/curb.
   d. Direct the student to place his left hand on the left car. Guide the student’s hand to the intersection, staying close to the west side/edge/curb. Make a left turn staying close to the near side/edge/curb and continue guiding the student’s hand until the west end of the horizontal street is located.
Lesson 2: Representation of a Room by the Student (Approach Two)

Prerequisite Skills and Concepts

a. Ability to scan a workspace
b. Recognition that pieces represent physical features of the environment.
c. Familiarity with a classroom having four straight walls

d. Knowledge of right angle

Objectives

a. The student will:

1. Represent the walls of the room on one half of the baseboard.
2. Use 1/2" strips to represent the four walls of the classroom.
3. Account for door openings in one or more of the walls by leaving a space between the strips.
4. Baseboard
5. Four rectangular strips (1/2" x 6") to represent walls of room
6. Two circular pieces (1" diameter) to represent teacher's desk
7. One square (1" x 1") to represent student's desk
8. Eight squares (1" x 1") to represent students' desks

Materials

a. Baseboard
b. Four rectangular strips (1/2" x 6")
c. Two circular pieces (1" diameter)
d. One square (1" x 1"

Procedure

a. Review scanning procedure and clear board.
b. Examine pieces to be used and associate names with shapes.
c. Stone pieces to top half of board. (See diagram, figure 1)
d. Student states the number of walls to be represented (4x).

Note: Room dividers or alcoves should be disregarded at this stage of familiarization.
The student successfully represents the classroom.

Evaluation:

4. Ask the student to demonstrate westward traffic movement on the horizontal street.
   a. Ask the student to demonstrate eastward traffic movement on the vertical street.
   b. Ask the student to demonstrate southward traffic movement on the vertical street.
   c. Ask the student to demonstrate northward traffic movement on the vertical street.

4. Ask the student to demonstrate north/south traffic movement on the horizontal street. Express and demonstrate that traffic movement is only in one direction. On one-way streets, express and demonstrate that traffic movement is only in one direction. On two-way streets, express and demonstrate that traffic movement is in both directions. Ask the student to demonstrate northward traffic movement on the vertical street.

4. Ask the student to demonstrate southward traffic movement on the vertical street.

4. Ask the student to demonstrate eastward traffic movement on the horizontal street.

4. Ask the student to demonstrate westward traffic movement on the horizontal street.

4. Ask the student to demonstrate northward traffic movement on the vertical street.

4. Ask the student to demonstrate southward traffic movement on the vertical street.

4. Ask the student to demonstrate eastward traffic movement on the horizontal street.

4. Ask the student to demonstrate westward traffic movement on the horizontal street.

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4. Ask the student to demonstrate southward traffic movement on the vertical street.

4. Ask the student to demonstrate eastward traffic movement on the horizontal street.

4. Ask the student to demonstrate westward traffic movement on the horizontal street.

4. Ask the student to demonstrate north/south traffic movement on the horizontal street.
Lesson 1: Demonstrating Traffic Movement on One-Way Streets

Objectives
All previous lessons in Part II prepare the student to demonstrate traffic movement on a one-way street.

Materials
- Two model cars
- Four rectangular pieces (8" x 11")
- Four and a half streets

Procedure
a. Place two cars at the south end of the street.
b. Direct the student to place two cars at the south end of the street.
c. Divide the student to place two cars at the south end of the street.
d. Identify the rear of the car.
e. Identify the front of the car.

(Case diagram)

Diagram

Diagram
c. Answer the question by making a representation.

Matrixes

1. Respond to a verbalized description by making a representation.
2. Visualize spatial relationships among the symbols represented.
3. Associate specific symbols (triangle, circle, and rectangle) with
   - The student will:
   - Recognize:
     a. Perimeter of circle, triangle, and rectangle
   - Previsualize skills and concepts
   - That the student recognizes and accepts the idea of symbolic representation.

Materials

Practice and supervision. Some instances when abstract representations are more
possible. This, however, is not always the case. Visuals should be used for instructional purposes.

Diagram

Lesson 4: Symbolic Representation of Objects

Family Representation
1. Place the house near the lake. Place a car at the south end of the vertical street.
2. Ask the student to demonstrate a left and right turn from the south end of the vertical street.
3. Ask the student to demonstrate a left and right turn from the west end of the vertical street.
4. Ask the student to demonstrate a left and right turn from the east end of the horizontal street.
5. Ask the student to demonstrate a left and right turn from the west end of the horizontal street.
6. Ask the student to demonstrate a left and right turn from the east end of the horizontal street.

Evaluation Procedures:
- The student makes one map to correspond as closely as possible with the following directions:
  1. Provide feedback to the student.
  2. Student expresses good and verbal describes the new relationship.
  3. No verbal expression given.

存在问题:
- Teacher places house, trees, and lake in new positions. (See student describes the spatial relationships expected.
- The student demonstrates the target positions and provides feedback to the student.
- See figure 2 for target positions and provide feedback to the student.
- Place the lake near the house.
- Place the house near the lake.
- Place the house on the background near the middle right side of the board.
- Teacher places house, trees, and lake in new positions. (See figure 2 for target positions and provide feedback to the student.)

Procedure:
- The student makes one map to correspond as closely as possible with the following directions:
  1. Teacher provides a house, lake, and three of each trees, house, and lake. (See figure 2, figure 1)
  2. Teacher places necessary pieces (triangle, circle, and rectangle) on the upper right of the background. (See diagram, figure 1)
  3. Teacher places necessary pieces (triangle, circle, and rectangle) on the upper left of the background. (See diagram, figure 1)
Lesson 14: Demonstrating Traffic Movement on 2-Way Streets/Parallels

Objectives:
- All previous lessons to Part II preparation and Parallel Skills and Concepts
- Left & Right Turns

Procedures
- Follow similar procedures making orientation activities:
  - See Figure 4.

Check accuracy of student maps and descriptions.

Examination
- The triangle as a church, the circle as a supermarket, and the rectangle the symbol representation. Follow similar procedures naming.

c. Direct the student to construct a standard intersection.

Materials
- Four rectangular pieces (6” x 11”)

Procedure
- c. One model car
- b. For rectangular pieces (6” x 11”)
- a. Baseboard

Create a 2-Way Street.
- The student will be able to demonstrate left and right turns.

Correct errors and review.
- c. Ask the student to demonstrate a right turn by repeating steps.
- c. Direct the student to place one car at the south end of the street.
- c. Instruct the student to move the car toward the intersection.
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(See diagram)
Familiarization
Lesson 5: Make a Picture

Prequisite Skills and Concepts

Knowledge of how objects are represented as outline figures

a. Knowledge of how objects can be used to name wholes or parts of a structure

b. Familiarity with the materials available in the kit

c. Familiarity with the pieces to represent familiar objects or even simple concepts of the body image.

Objectives

The student will:

a. Represent a wagon using strips for the bed and handle and circular composition for the wheels.

b. Represent the outline of a house showing walls and roof line.

c. Represent body parts using circles, rectangles, and rectangular strips.

d. Represent other objects providing names for the pieces used.

Materials

a. Balsa wood

b. Three circles (1" diameter) to represent wheels of wagon and head of stick figure.

c. One rectangular strip (1/2" x 3") to represent bed of wagon and head of stick figure.

d. One rectangular strip (1/2" x 1/2") to represent arms of stick figure.

e. Two rectangular strips (1/2" x 1/2") to represent arms of stick figure.
Lesson 13: Demonstrating Traffic Movement on 2-Way Streets

Prerequisite Skills and Concepts

All previous lessons in Part II

Objectives

1. The student will be able to demonstrate traffic movement on a 2-way street.

2. The student will be able to identify the north, south, east, and west directions.

Materials

- A. Baseboard
- B. Four rectangles (8" x 11"
- C. Two model cars

Procedure

a. Direct the student to construct a standard intersection.

b. Designate the long street as the horizontal street.

1. Designate the short street as the vertical street.

2. Direct the student to actually inspect the model cars.

3. Direct the student to place one car at the south end of the horizontal street.

4. Direct the student to leave the other car at the north end of the horizontal street.

5. Direct the student to move the car to the north side of the horizontal street.

6. Direct the student to return to his chair (south edge of the baseboard).

7. Direct the student to identify the north, south, east, and west edges of the baseboard.

8. Direct the student to place one car at the south end of the vertical street.

9. Direct the student to move the car to the north side of the vertical street.

10. Direct the student to return to his chair (south edge of the baseboard).

11. Direct the student to identify the north, south, east, and west edges of the baseboard.

12. Direct the student to place one car at the north end of the vertical street.

13. Direct the student to move the car to the south side of the vertical street.

14. Direct the student to return to his chair (south edge of the baseboard).

15. Direct the student to identify the north, south, east, and west edges of the baseboard.

16. Direct the student to place one car at the south end of the horizontal street.

17. Direct the student to move the car to the north side of the horizontal street.

18. Direct the student to return to his chair (south edge of the baseboard).

19. Direct the student to identify the north, south, east, and west edges of the baseboard.

20. Direct the student to place one car at the north end of the horizontal street.

21. Direct the student to move the car to the south side of the horizontal street.

22. Direct the student to return to his chair (south edge of the baseboard).

23. Direct the student to identify the north, south, east, and west edges of the baseboard.

24. Direct the student to place one car at the south end of the vertical street.

25. Direct the student to move the car to the north side of the vertical street.

26. Direct the student to return to his chair (south edge of the baseboard).

27. Direct the student to identify the north, south, east, and west edges of the baseboard.

28. Direct the student to place one car at the north end of the vertical street.

29. Direct the student to move the car to the south side of the vertical street.

30. Direct the student to return to his chair (south edge of the baseboard).

31. Direct the student to identify the north, south, east, and west edges of the baseboard.

32. Direct the student to place one car at the south end of the horizontal street.

33. Direct the student to move the car to the north side of the horizontal street.

34. Direct the student to return to his chair (south edge of the baseboard).

35. Direct the student to identify the north, south, east, and west edges of the baseboard.

36. Direct the student to place one car at the north end of the horizontal street.

37. Direct the student to move the car to the south side of the horizontal street.

38. Direct the student to return to his chair (south edge of the baseboard).

39. Direct the student to identify the north, south, east, and west edges of the baseboard.

40. Direct the student to place one car at the south end of the vertical street.

41. Direct the student to move the car to the north side of the vertical street.

42. Direct the student to return to his chair (south edge of the baseboard).

43. Direct the student to identify the north, south, east, and west edges of the baseboard.

44. Direct the student to place one car at the north end of the vertical street.

45. Direct the student to move the car to the south side of the vertical street.

46. Direct the student to return to his chair (south edge of the baseboard).

47. Direct the student to identify the north, south, east, and west edges of the baseboard. 

48. Given free time and access to the materials, does the student use them?
Familiarization

Lesson 6: Game Activity - Tic-Tac-Toe

Students frequently engage in games at the blackboard or with materials. Use of the materials in playing Tic-Tac-Toe enables the student to keep his own pace, observe the moves of others, participate with his own peers, and become familiar with the materials.

Prerequisite Skills and Concepts

- Concept of horizontal, vertical, and diagonal
- Scanning skills
- Understanding of rules of Tic-Tac-Toe game

Objectives

- The student will:
  a. become familiar with the velcro contact.
  b. manipulate materials.
  c. engage in a game of tic-tac-toe.

Materials

- Baseboard
- Eight rectangular strips (2 1/2" x 3 1/2"
  - 4 1/2" x 3 1/2"
  - 2 1/2"
- Five circles (1" diameter) representing one player's pieces
- Five squares (1" x 1") representing one player's pieces

Procedure

1. Place two 6-inch strips of hook velcro vertically on the board, about three inches apart.
2. Place two 2-inch strips of hook velcro horizontally, between the two vertical strips, about three inches apart.
3. Ask the student to locate the four corners of the intersection and associate a cardinal direction with each corner.
4. Correct errors and review.
4. Teacher may correct and assist in initial attempts to form game.

Procedure

a. Passboard (see diagram)

b. Four rectangles (6 x 17"

Materials

- Northwester Southwestern and South Eastern Comers of a Standard Intersection.
- Teacher will be able to locate, identify and direct directions.
- The student will be able to associate a cardinal direction with each corner of a standard intersection.

Objectives

- All previous lessons in Part II
- Preliminary skills and concepts

Lesson 7: Associate Cardinal Directions with the Four Corners of a Standard Intersection.
Materials

Student will locate specific objects.

2. Provide directions by another person from their point of view, the student will identify the objects in space.

3. The student will accurately mirror directions given from another person.

Objectives

1. Room representation (first approach)

2. Map representation (second approach)

3. Frontal view (draw now-see below)

4. Directional-locations concepts (right-left; front-back; near-far; above-below)

Procedure

1. Introduce skills and concepts.

2. Introduce specific lesson: use of stick figure to mirror left-right relationships.

3. Tell figure. Student should tactually examine the face and right hand of the figure. Then ask the student to point the north and south ends of the figure.

4. Discuss all locations and directional relationships presented in the lesson from the student's point of view. Student should accurately mirror directions given for the figure.

5. One rectangle (1/2" x 3") representing door to room.

6. Assorted circles and triangles (1/2") to represent selected objects.

Evaluation

Observe the student to locate the north and south ends of the figure. Observe the student to locate the east and west ends of the figure. Observe the student to locate the north and south ends of the figure.

Correct errors and review.
Lesson 11: Associating Cardinal Directions with Intersection Streets

**Prerequisite Skills and Concepts**

All previous lessons in Part II

**Objectives**

a. The student will be able to locate the north and south end of the vertical street and the east and west end of the horizontal street.
b. The student will be able to locate the long horizontal street and the north and south edge/curb of the horizontal street.
c. The student will be able to locate the east and west edge/curb of the vertical street.
d. The student will be able to construct a standard intersection on the baseball field.
e. Direct the student to construct a standard intersection on the baseball field.
f. The student will be able to locate the north and south end of the horizontal street.
g. The student will be able to locate the east and west end of the vertical street.
h. The student will be able to locate the long horizontal street and the north and south edge/curb of the horizontal street.

**Materials**

a. Baseball field
b. Four rectangles (8" x 11")

**Procedure**

1. Designate the short vertical street as the north/south street.
2. Designate the long horizontal street as the east/west street.
3. Designate the student to examine the intersection and locate two streets, four blocks, and the four corners of the intersection.
4. Correct errors and review.
5. Direct the student to locate and identify the north and south ends of the vertical street.
6. Direct the student to locate and identify the east and west ends of the horizontal street.
7. Place hands of the clock to the 11 o'clock position on the horizontal street.
8. Direct the student to face the right hand of the teacher's desk and figure.
9. Direct the student to touch the right hand of teacher's desk and figure.
10. Place a second stick figure at the teacher's desk location facing the student's desk.
11. Direct the student to face the stick figure and figure.
12. Direct the student to face the stick figure and figure.
13. Correct errors and review.

**Note:**

- Place the student at each location and have the student give the directions necessary for movement to each location.
A. Correct and review.

v. Direct student to give directions the teacher would follow in going from the desk to the door and other points in the room.

8. Student will be able to describe directions needed for other points about the room from any point of reference.

4. Student will be able to describe directions needed to move to other person (teacher) to move about from point to point within the room.
4. Ask the student to identify and locate the northwest corner.

Evaluation
V. Correct errors and review.

Commer.
4. Direct the student to move both index fingers (at the same time) to the near right corner.

Commer.
3. Direct the student to move both index fingers (at the same time) to the near left corner.

Commer.
2. Direct the student to place the right index finger on the edge of the board near the near left corner.

Commer.
1. Direct the student to place the right index finger on the edge of the board near the near right corner.

Commer.
0. Direct the student to move both index fingers (at the same time) to the southeast corner.

Commer.
9. Direct the student to identify and locate the southeast corner.
Lesson 10: Associating Cardinal Directions with Each Corner of the
CRK Baseboard

Prerequisite Skills and Concepts

Objectives

With each corner of the CRK Baseboard, the student will identify and associate a cardinal direction.

Materials

Basic Game Board, markers, and a die.

Procedure

1. Begin with the baseboard. (See diagram)
   a. Have the student identify:
      1. Far edge of the baseboard as North
      2. Near edge of the baseboard as South
      3. Left edge of the baseboard as West
      4. Right edge of the baseboard as East
   b. Correct errors and review.

2. Direct the student to place the left index finger on the far edge of the baseboard by the near left corner.
   c. Direct the student to place the right index finger on the right edge of the baseboard by the near right corner.
   d. Direct the student to move both index fingers (at the same time) to the far right corner.
   e. Explain to the student that the corner located is the northeast corner.

3. Correct errors and review.
   f. Direct the student to place left index finger on the far edge of the baseboard by the near left corner.
   g. Direct the student to move the index fingers (at the same time) to the far right corner.

4. Correct errors and review.
   h. Direct the student to place left index finger on the far edge of the baseboard by the near left corner.
   i. Correct errors and review.

Mathematics is one area of the curriculum that relies heavily on the use of visual presentations, graphing skills, geometric concepts, and the advantages of representing story problems such as the time-rate-distance type with a diagram should be within the capabilities of the student.
Lesson 8: Construction of acute, right, obtuse, and straight angles

Prerequisite Skills and Concepts

a. Ability to name parts of angles and four types of angles
b. Mathematical concepts of 3rd and 4th grade level

Specifically:

a. Baseboard
b. Eight rectangular strips (1/2" x 4")

Objectives

a. Student will construct examples of right, acute, obtuse, and straight angles with appropriate materials.

b. To provide tangible reinforcement for the angle concepts discussed in the text and class through the procedural activities of the lesson.

Materials

- Baseboard
- Eight rectangular strips (1/2" x 4")

Procedure

a. Teacher places all materials in storage portion of board. (See diagram, Figure 1)
b. Teacher demonstrates construction of an acute angle. Teacher returns strips to storage area.
c. Student selects two strips and constructs an acute angle.
d. Review definition of acute angle. Student determines if constructed angle meets requirements of definition.
Evaluation

a. Ask student to locate the North, South, East, and West edges of the blackboard.

b. Student will be able to locate the North, South, East, and West edges of the blackboard.

e. Compare constructed angle with acute angle arc provided. (See diagram, figure 2)

f. Discuss results.

g. Teacher demonstrates construction of a right angle. Teacher returns strips to storage area.

h. Student selects two strips and constructs a right angle.

i. Review definition of right angle. Student determines if constructed angle meets requirements of definition. (See diagram, figure 2)

j. Student selects two strips and constructs an obtuse angle.

k. Discuss results.

l. Teacher demonstrates construction of an obtuse angle. Teacher returns strips to storage area.

m. Review definition of obtuse angle. Student determines if constructed angle meets requirements of definition.

n. Student selects one strip to illustrate construction of a straight angle.

o. Compare constructed angle with obtuse angle arc provided.

p. Discuss results.

q. Teacher discusses construction of a straight angle.

r. Student selects one strip to illustrate construction of a straight angle.

s. Review definition of straight angle.

t. Use a straight edge to test the construction.
Lesson 1: Associating Cardinal Directions with Each Edge of the Baseboard

Materials:
- The student will identify and associate a cardinal direction with each edge of the baseboard.

Objectives:
- All previous lessons in Part II
- Pretest for Skills and Concepts

Procedure:
- The student will identify and associate a cardinal direction with each edge of the baseboard.
a diagonal relationship.

c. Locate the right and near left corners of square emasculating

finger along each side in turn before making judgments. (Hint: Lay index

fingers on necessary places on upper half of board.

Procedure

1. Two right triangles (.5 / 3 x 7 / 2)
2. Two right triangles (.3 / 2 x 4)
3. Rectangle (3 / 2 x 4 / 1)
4. Square (.2 x 3)
5. Diamond (.3 / 2 x 2 / 1)
6. Isosceles

Materials

a. Result of dividing a rectangle with a diagonal line of cut.
b. Compare the size, shape, and area of two triangles formed as a

c. Subtract the size, shape, and area of two triangles formed as a

The student will:

Objectives

1. Use of scissors for optional activity
2. Concept of diagonals
3. Four right angles, parallel sides, opposite sides equal in length.
4. Recognize characteristics of a square and rectangle (i.e.,

Pre-requisite skills and concepts

Elements before concepts are drawn.

Lesson: Comparison of the shape, size, and area of bounded space

Mathematics
1. Ask student to locate the four corners of the intersection and identity the name of each corner.

2. Far right corner

3. Near left corner

4. Near right corner

Optional Activity

4. Note areas of triangles are equal.

How to make equal triangles from the card:

Give student a pair of scissors and a 3" x 5" card.

Evaluate

to make equal triangles from the card.

7/3" x 3/1" x 3/1" x 3/1"

Give student a pair of scissors and a 3" x 5" card. Direct student

to make equal triangles from the card.

Evaluate

Note areas of triangles are equal.

O. Pick up triangles (size 3/1" x 3/1" x 3/1"

P. Place triangles on each other and cover surface with two triangles

Q. Place remaining one triangle on table and cover surface with one triangle

R. Pick up triangle (size 3/1" x 3/1"

S. Place triangle on each other and cover surface with two triangles

T. Pick up triangle (size 3/1" x 3/1"

U. Pick up triangle (size 3/1" x 3/1"

V. Pick up triangle (size 3/1" x 3/1"

W. Pick up triangle (size 3/1" x 3/1"

X. Pick up triangle (size 3/1" x 3/1"

Y. Pick up triangle (size 3/1" x 3/1"

Z. Pick up triangle (size 3/1" x 3/1"

1. Clean board - reduce pieces in storage area.

2. Cover the formed square with the whole one to complete area.

D. Place both triangles on board in such a way that a different
directional

E. Place both triangles on board in such a way that a different
directional

F. Place both triangles on board in such a way that a different
directional

G. Place both triangles on board in such a way that a different
directional

H. Place both triangles on board in such a way that a different
directional

I. Place both triangles on board in such a way that a different
directional

J. Place both triangles on board in such a way that a different
directional

K. Place both triangles on board in such a way that a different
directional

L. Place both triangles on board in such a way that a different
directional

M. Place both triangles on board in such a way that a different
directional

N. Place both triangles on board in such a way that a different
directional

O. Place both triangles on board in such a way that a different
directional

P. Place both triangles on board in such a way that a different
directional

Q. Place both triangles on board in such a way that a different
directional

R. Place both triangles on board in such a way that a different
directional

S. Place both triangles on board in such a way that a different
directional

T. Place both triangles on board in such a way that a different
directional

U. Place both triangles on board in such a way that a different
directional

V. Place both triangles on board in such a way that a different
directional

W. Place both triangles on board in such a way that a different
directional

X. Place both triangles on board in such a way that a different
directional

Y. Place both triangles on board in such a way that a different
directional

Z. Place both triangles on board in such a way that a different
directional
Lesson 8: Familiarization with a Standard Intersection, Identifying the Four Corners of an Intersection

Prerequisite Skills and Concepts

Objectives

a. The student will locate the four corners of a standard intersection.
b. The student will associate the following terms with the four corners of a standard intersection.
1. Far left corner
2. Far right corner
3. Near left corner
4. Near right corner

Materials

a. Baseboard
b. Four rectangles (8" x 11")

Procedure

a. Direct the student to construct a standard intersection on the baseboard. (See diagram)
b. Designate the long street as the horizontal street.
c. Designate the short street as the vertical street.
d. Designate the far left corner as the horizontal street.
e. Designate the far right corner as the vertical street.
f. Place the left index finger against the far edge/side/curb.
g. Place the right index finger against the near edge/side/curb.
h. Direct the student to move both index fingers at the same time.
i. Correct errors and review.

Comparison of Shape, Size and Area.
b. Place all circles on left side of board. (See diagram)

4. Place two strips on board to form a vertical line dividing base.

Procedure

d. Two strips (l/2 x 6) to structure workspace

c. The equilateral triangle (1" x 1") to represent five units

b. Five circles (1" diameter) to represent one unit

Materials

d. Scanning skills

4. 6, 5, 5 (in other order)

b. State complementary numbers of ten (1 e.g., 7 + 3 = 10)

4. Group circles in a set of one, two, three, four, and five. The student will be able to:

Objectives

c. Concept of right and left

b. Counting skills

2. Recognition that symbols stand for number values

Pre-requisite skills and concepts

essential to this efficient use.

use of the balance since the understanding of complementary numbers is

notion of grouping is especially important to the student as a pre-essential

workstations which are may not be accessible to the blind students. This

blocks, etc. Consequently an unfamiliar through the use of manipulatives and

many experiences of grouping and manipulating aids can be made in this

Lesson 10: Grouping and Complementary Numbers of Five and Ten
The Instructor will:

Steps:

1. Draw a large circle on the left side of the board. After each move:
   a. Draw additional circles to the right side of the board.

2. Count and state the number of circles represented on the left side of the board.

3. Move one circle to the right side.

4. Continue to add circles to the left side until five circles are represented.

and one triangle is represented,

5. Add one circle to the set of five on the left side of the board.

The Student will:

- Any student with a magic wand or a magic trick.
- Show student the triangle and inform them it has a value of five.
- Move all five parts to the left side of the board.

Warning: Be cautious of unintended combinations in using 5 objects.

- Correlates and requests procedures as necessary.

The Instructor:

- Sides of the board.
- Counts and states the number of circles on the left and right.
- Moves one more circle to the right side of the board.
- Concludes and states the number of circles that remain on the left.

- Moves another circle to the right side.

To determine if it is clear:

- Counts the circles on the left side, and scans the right side.

The Student:

- Ask the student to identify the far edge/circle of the horizontal street.
- Ask the student to identify the right edge/circle of the vertical street.
- Ask the student to identify the near edge/circle of the horizontal street.
- Ask the student to identify the left edge/circle of the vertical street.

Evolution:

- Correct errors and review.

Instruct the student to move his fingers (at the same time) to the intersection and stop at the intersection. Explain to the student that the area touched is the near and far edge/circle of the horizontal street, moving the index fingers toward the intersection. Explain to the student that the area touched is the near and far edge/circle of the horizontal street. Moving the index fingers toward the intersection.
Lesson 7: Familiarization with a Standard Intersection: Identifying the Left and Right Edge/side/curb of a Vertical Street and the Near and Far Edge/side/curb of a Horizontal Street

Objectives

1. The student will identify the left and right edge/side/curb of the vertical street and the near and far edge/side/curb of the horizontal street.

Materials

a. Baseboard
b. Four large rectangles (8" x 11")

Procedure

a. Ask the student to construct a standard intersection on the baseboard.

1. Designate the long street as the horizontal street.
2. Designate the short street as the vertical street.
3. Have the student locate the near end of the vertical street.
4. Direct the student to place index fingers against the right and left edge/side/curb of the vertical street.
5. Instruct the student to move his fingers (at the same time toward the intersection and stop at the intersection) until the student touches the area touched by the right and left edge/side/curb of the vertical street.
6. Repeat the same procedure beginning at the far end of the vertical street.
7. Have the student locate the left end of the horizontal street.
8. Direct the student to place the index fingers against the near and far edge/side/curb of the horizontal street.
9. Using five circles and one triangle, the student will represent complementary numbers of five on the right and left sides of the board.

Optional Activities

A variety of partner games appear to be possible. A partner can place an (x) number of pieces on the board. The partner can explore and state the value represented on other side. Additional triangles may be used to represent larger numbers.

Evaluation

a. Using five circles the student will represent complementary numbers of five on the right and left sides of the board.
b. Using five circles and one triangle, the student will represent complementary numbers of ten on the right and left sides of the board.

Teacher's Note:

1. The teacher places different combinations of ten on right and left sides of the board.
2. Scan left side of board, count and state the number value represented.
3. Scan right side to determine number represented and state the number complementing ten that should be on the right side, then confirm accuracy of statement.
4. Repeat using different combinations.
5. Repeat using base board.
Lesson 11: Selecting Equivalent Fractions

Mathematics

Objectives
- p. Conect the rectangular square
- q. Skill necessary for manipulating expressions

Pre-requisite Skills and Concepts
- q. A process which can be continued.
- q. A process which can be continued.

Materials
- p. 1/4 and 1/2
- q. 1/2 and 1/4
- r. 1/2 and 1/4
- s. 1/2 and 1/4

Procedure
- e. Two rectangles (1/2 x 1/2) to represent eights
- f. One square (1/2 x 1/2) to represent a whole
- g. Four rectangles (1/2 x 1/2) to represent quarters

Notes:
See diagram, Figure 1.

q. Group rectangles of similar size together on upper half of board.
- a. Store all needed parts on upper half of board.

Evaluation
- 1. Ask the student to demonstrate two methods of showing how two
   - a. Place the right hand at the right end of the horizontal straight.
   - b. Place the left hand at the left end of the horizontal straight.
- 2. Repeat the procedure by placing the right hand at the right end of the
   horizontal straight.
- 3. Repeat the procedure by placing the left hand at the left end of the
   horizontal straight.

Strategies
- c. Grouping Skills
- q. Conect the rectangular square
- r. Skill necessary for manipulating expressions

The student will complete and determine the equivalence of the following:

The student will:

3/4
1/2
1/4
Lesson 6: Familiarization with a Standard Intersection Demonstration

Objectives:

1. The student will demonstrate how two streets intersect in the two squares.
2. Discuss the relationship of the two streets.
3. Contrast the standard intersection on the basketball court.
4. Classify traffic as a meter.
5. Identify traffic that enters the area of interest.
6. Discuss the relationship of the two streets.
7. From a square using the two rectangles identified.
8. Identify four rectangles that equal to area of largest square.
9. From a square using the two rectangles identified.
10. Identify four rectangles that equal to area of largest square.
11. Discuss the relationship of the two streets.
12. The student will classify traffic as a meter.

Materials:

- Four rectangles (8” x 11”)
- Basketball court
- Instructional sheet
- The student demonstrates how two streets intersect with a standard intersection.
Figure 1

Figure 2

Diagram

Evaluation

1. Correct errors and review.

a. Ask the student to construct a standard intersection.

b. Ask the student to locate and identify the horizontal and vertical strata.

c. Ask the student to count the four blocks.
Lesson 5: Preliminaryization with a Standard Intersection Depending Four Blocks and Two Streets

Materials
1. Four blocks
2. Two streets

Procedure
b. Four rectangles (8” x 11”)

Materials
2. Two streets
3. Four blocks

Objectives
All previous lessons in Part II
Pretest: Skills and Concepts

Lesson: Preliminaryization with a Standard Intersection

By providing an organizational framework for the information, the student is prepared to give the required information. In particular, the student must understand the concept of the intersection. Although the data of information and diagrams that are encountered with such frequency are important aspects of the educational process, it is equally important that the student be able to integrate graphic concepts. While these concepts and skills are taught in social studies, they are not specifically taught. Teachers may associate social studies with social studies.
Lesson 12: Representation of an Organizational Pattern

Social Studies

Diagram
3. Draw each of the following shapes.
   a. Triangle
   b. Square
   c. Circle
   d. Rectangle

4. Copy the following word and picture patterns and complete the chart.

5. Draw a set of parallel lines. Identify the parts of the rectangle.

6. Ask the student to identify and locate all the components parts.

7. Parallel lines. Perpendicular lines.

8. Parallel lines.
4. Correct errors and review.
3. Parallel and perpendicular street sides
2. Four street sides
1. Four street corners

Procedure
4. Place the rectangle in the center of the basboards (see diagram). [Diagram: Organization pattern]
3. Ask the student to locate the four corners of the rectangle.
2. Direct the student to scan the basboards and locate the rectangle.
1. Place the rectangle in the center of the basboards (6 x 11"").

Objectives
All previous lessons in Part II
Pre-requisite skills and concepts
Lesson 4: Familiarization with a City block

Note:
Parallel and perpendicular street sides in a City block.
Social Studies

Lesson 13: Representation of Population Information

Prerequisite Skills and Concepts

Basic relationships may be more easily understood when students have the opportunity to develop and use graphing techniques.

Objectives

a. Students will have an opportunity to represent data by the use of a bar graph.

b. Students will have an opportunity to represent data by the use of a bar graph.

c. Students will have an opportunity to represent data by the use of a bar graph.

d. Students will have an opportunity to represent data by the use of a bar graph.

Materials

a. Baseboard

b. Assorted rectangular strips (1/2" width)

c. Two strips of "hook velcro" (10" length) to be used as vertical and horizontal axes.

d. Eleven strips of "loop velcro" (1/4" x 3") to be used as horizontal lines on vertical axes.

e. Three strips of "hook velcro" (1/8" x 2") to be used as vertical lines on horizontal axes.

Procedure

The teacher constructs a bar graph as given in text or from given census data. (See diagram).
Lesson 3: Familiarization with Perpendicular Lines

Prerequisite Skills and Concepts

All previous lessons in Part II

Objectives

a. The student will be able to identify a perpendicular relationship.
b. The student will be able to construct perpendicular relationships.

Materials

a. Baseboard
b. Two rectangles (4 1/2" x 8")
c. One rectangle (4 1/2" x 17 3/4")

Procedure

a. Using two rectangles (4 1/2" x 8" and 4 1/2" x 17 3/4") construct a perpendicular relationship near the center of the baseboard. (See diagram)
b. Direct the student to examine the perpendicular relationship. Explain to the student that the two strips are perpendicular to each other.
c. Direct the student to locate the area where the two strips meet.
d. Show the student the two right angles which are formed. Explain to the student that a perpendicular relationship is formed when one straight line meets another at right angles.
e. Direct the student to place another rectangle (4 1/2" x 8") at the right end of the horizontal strip. Compare the two constructions. Explain that regardless of placement the strips of each construction are still perpendicular.
f. Repeat step E moving the second vertical strip to the left end of the horizontal strip. Discuss the perpendicular relationship of the two strips.
g. Correct errors and review.

Evaluation

a. Construct a perpendicular relationship and ask the student to identify the two rectangular strips and the right angles.
b. Ask the student to construct two examples of perpendicular relationships. Use 4 1/2" x 8" rectangles.

b. Teacher labels the horizontal axis years; in this instance provide for 10 year increments.
c. Teacher labels the vertical axis population; in this instance provide for increments of 20 million.
d. Student identifies each bar representing a specific year.
e. Student measures length of each bar and states value represented.
f. Student compares data represented and interprets findings.

*Note:

Question concerning pattern or unusual deviations.
g. Student constructs a bar graph to represent specific information. Example: Keep track of the time spent out of doors each day for a week. Use a bar graph to display this information.

Evaluation

a. Student will be able to interpret information given in a bar graph.
b. Student will note and explain the population growth for years represented.
   a. Provide opportunity for student to represent the Senate chamber.
   b. Clear board.
   c. Explain functional activities of each component.
   d. Reposition in Senate chamber (i.e., presiding officer, vice president, clerk, recorders, etc.).

   Representation
   a. Provide opportunity for student to become familiar with the Senate chamber (reelection).
   b. Teacher represents seating arrangement and general layout of the Senate chamber.

   Procedure and procedures: SENATE
   a. Representative squares and triangles (1") to represent various officials.
   b. Two rectangles (2" x 4") to represent party area.
   c. Baseline.

   Materials
   a. Student will make a diagrammatic plan of the United States Senate.

   Evaluation
   a. Ability to represent chamber (representation).
   b. Right - left concept.
   c. Knowledge of cardinal directions.

   Body: 4. Class discussion (i.e., seating arrangement of specific government positions).

   Transition: 2. The government in the Senate.

   Lesson 1: Seating arrangement for government bodies.
   a. Student must be able to represent the positions of a particular group.

   Meets:
   1. Ask the student to describe the characteristics of a particular group.
   2. Ask the student to locate the area between the two parallel lines.
   3. Ask the student to identify the two inside edges which are tangent (7/4" x 8/10").
   4. Have the student construct a parallel relationship using 2 - rectangles (3/4" x 8/10").
   5. Construct a parallel relationship using rectangles (4 1/2" x 8/10").
   6. Have the student construct several examples of parallel relation.

   Evaluation:
   1. Use other check pieces and direct the student to construct parallel relationships.
   2. Examine the students' work to make sure the student is able to construct a set of parallel edges. Discuss the parallel relationship.

   V.D. 5. Two ends and middle.

   Error: Can be used to discuss the characteristics of a particular group.

   V.D. 6. Two parallel edges are coincident.

   V.D. 7. Two parallel edges are infinite.

   V.D. 8. Two parallel edges are congruent.

   V.D. 9. Two parallel edges are congruent.

   V.D. 10. Two parallel edges are congruent.

   V.D. 11. Two parallel edges are coincident.

   V.D. 12. Two parallel edges are infinite.

   V.D. 13. Two parallel edges are congruent.

   V.D. 14. Two parallel edges are congruent.

   V.D. 15. Two parallel edges are congruent.

   V.D. 16. Two parallel edges are coincident.

   V.D. 17. Two parallel edges are infinite.

   V.D. 18. Two parallel edges are congruent.

   V.D. 19. Two parallel edges are congruent.

   V.D. 20. Two parallel edges are congruent.
Lesson 2: Familiarization with Parallel Lines

Prerequisites: Skills and Concepts

Objectives:
- The student will be able to identify a parallel relationship.
- The student will be able to construct a parallel relationship

Materials:
- Baseboard
- Two rectangles (4 1/2" x 17 3/4")
- Two rectangles (3 1/4" x 8")
- Two rectangles (4 1/2" x 8")
- One strip (1/2" x 2")

Procedure:
- Place two rectangles (17 3/4" x 4 1/2") parallel to each other near the center of the board. Leave approximately 2" of the board exposed between the parallel edges. (See diagram)
- Direct the student to examine the parallel area between the two inside edges which are equidistant apart and never meet as being parallel.
- Ask the student to slide his left index finger along the edge of the left rectangle.
- Ask the student to slide his right index finger along the edge of the right rectangle.
- Repeat procedure for right hand.
- Ask the student to reverse the scan by sliding both fingers along the parallel edges from the near side of the board, the far side of the board, left side to the right side of the board simultaneously.
4. Have the student to locate the corners of the playground.

3. From the left corner of the playground.

2. Move right corner of the playground.

1. Right corner of the playground.

b. Ask the student to locate and identify:

4. Left edge of the playground.

3. Right edge of the playground.

2. Rear edge of the playground.

1. Near edge of the playground.

evaluation

1. Correct errors and review.
Lesson 1: Orientation to the Baseboard

Prerequisite Skills and Concepts

Objectives

a. Scanning a workspace

Materials

Procedure

a. Open the baseboard to its full length and place it in front of the student. (See diagram)

b. Direct the student to examine the baseboard and identify its shape and size. Explain to the student that the baseboard is shaped like a rectangle and that it is used to support the objects and materials in the demonstration.

c. Show the student the edge of the baseboard. Direct the student to scan the entire length of the left edge. Explain that the edge scanned is called the "left edge" of the baseboard. (See diagram)

d. Repeat the procedure to locate and identify the right edge of the baseboard. Direct the student to scan the entire length of the right edge. Explain that the edge scanned is called the "right edge" of the baseboard.

e. Show the student the top edge of the baseboard. Explain to the student that the top edge is the continuation of the left edge. Direct the student to scan the entire length of the top edge. Explain that the edge scanned is called the "top edge" of the baseboard. (See diagram)

f. Repeat the procedure to locate and identify the near edge of the baseboard. Direct the student to scan the entire length of the near edge. Explain that the edge scanned is called the "near edge" of the baseboard. (See diagram)

Materials

- Baseboard
- Double stick tape
- Various objects and materials

Procedure

a. Open the baseboard to its full length and place it in front of the student. (See diagram)

b. Direct the student to examine the baseboard and identify its shape and size. Explain to the student that the baseboard is shaped like a rectangle and that it is used to support the objects and materials in the demonstration.

c. Show the student the edge of the baseboard. Direct the student to scan the entire length of the left edge. Explain that the edge scanned is called the "left edge" of the baseboard. (See diagram)

d. Repeat the procedure to locate and identify the right edge of the baseboard. Direct the student to scan the entire length of the right edge. Explain that the edge scanned is called the "right edge" of the baseboard.

e. Show the student the top edge of the baseboard. Explain to the student that the top edge is the continuation of the left edge. Direct the student to scan the entire length of the top edge. Explain that the edge scanned is called the "top edge" of the baseboard. (See diagram)

f. Repeat the procedure to locate and identify the near edge of the baseboard. Direct the student to scan the entire length of the near edge. Explain that the edge scanned is called the "near edge" of the baseboard. (See diagram)
Lessons in Part II.

Please note that the whole procedure is used for all
normal of the diagram representing the procedure.
the diagram and worksheets prior to a detailed exami-
the student to always conduct a systematic search of
space found on page 6. The teacher should encourage
throughout understanding of the lesson scanning a

Each student attempting Part II should possess a

when developing the students' skills and concepts.
see that the teacher follows the sequence of lessons
situation and ability instruction. It is impossible.
the following lessons have specific application to

Orientation and Mobility

PART TWO

...
Evaluation

1. Student identifies 3 o'clock position.

2. Student identifies 3, 6, 9, and 12 o'clock positions.

3. Student identifies even numbers on clock.

4. Student identifies odd numbers on clock.

5. Student identifies time shown on clock.

6. Student identifies time not shown on clock.

7. Student identifies time in quarter or half hour.

8. Student identifies time in minutes.

9. Student identifies time in hours.

10. Student identifies time in seconds.

11. Student identifies time in minutes.

12. Student identifies time in seconds.

13. Student identifies time in hours.

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116. Student identifies time in minutes.

117. Student identifies time in seconds.

118. Student identifies time in hours.

119. Student identifies time in minutes.

120. Student identifies time in seconds.
c. Student places large circle near center of lower half of baskeboard.

a. Store all materials in upper half of baskeboard.

b. Store empty rectangular strips (1" x 1") representing each number position.

c. Teacher lines up (1" x 1") representing circle on the table.

b. Place circle on the table, representing circle on the table.

a. Place rectangular strips (1" x 1") representing number positions.

b. The student will place number representations in terms of spatial relationships on the table.

a. The student will demonstrate placement of 12 circles representing 12 concepts.

b. Concept of opposite, triangle, and circle

4. Knowledge of coordinates and coordinate-coordinate movement

b. Pre-requisite Skills and Concepts

a. Daily Living Skills

Lesson 1: Representation of a Table Setting

b. Daily Living Skills

Procedure

Materials

Directions: (For 10 to 14 will be six equal slices.)

1. To 8 and from 10 to 14 will be six equal slices.

2. Divide the class into groups of 4 students.

3. Draw a circle on the desk, dividing line inside the circle, and a smaller circle inside the desk. Draw a line horizontally making the desk, putting sticks into the desk, putting sticks into a circle. Draw a small circle inside the desk.

A common sketch of a hammering is setting a block properly.

Lesson 2: Representation of a Table Setting

b. Daily Living Skills

Procedure

Materials

Directions: (For 10 to 14 will be six equal slices.)

1. To 8 and from 10 to 14 will be six equal slices.

2. Divide the class into groups of 4 students.

3. Draw a circle on the desk, dividing line inside the circle, and a smaller circle inside the desk. Draw a line horizontally making the desk, putting sticks into the desk, putting sticks into a circle. Draw a small circle inside the desk.

A common sketch of a hammering is setting a block properly.
![Diagram of table setting]

**Table Setting**

- Student accurately represents table setting for six (6) diners.
- Place (optional) use drinking glass, tea (cup and saucer), and three (3) knives.
- Place setting represents cups/saucer.
- Place glass at tip of knife.

**Optional Activities**

1. Student repeats setting without error.
2. Remove all pieces and place them in the storage area.
3. Provide correction and reinforcement.
4. Student places fork as represented by strips to left of each place setting (front of view). (See Diagram, Figure 2)
5. Student places knife and spoon as represented by strips to right of each place setting (opposite view).