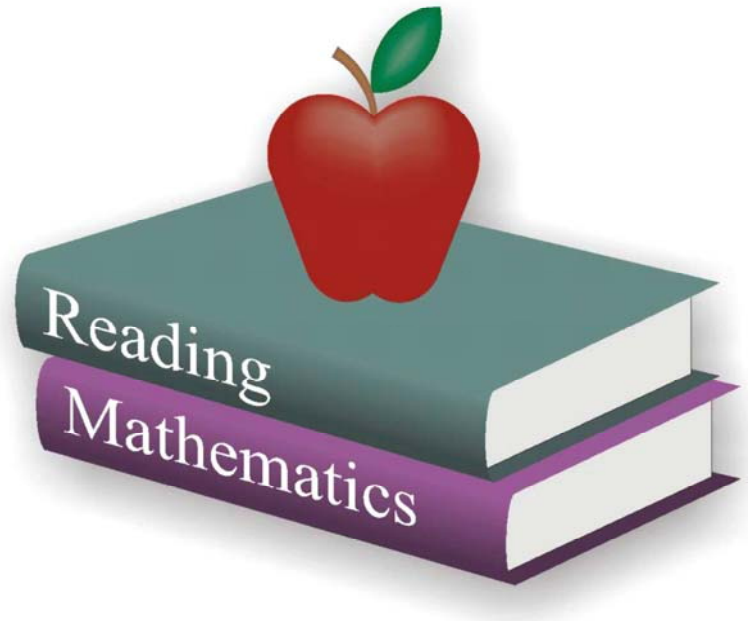
Miami-Dade County Public Schools

Instructional Reference Guide



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giving our students the world

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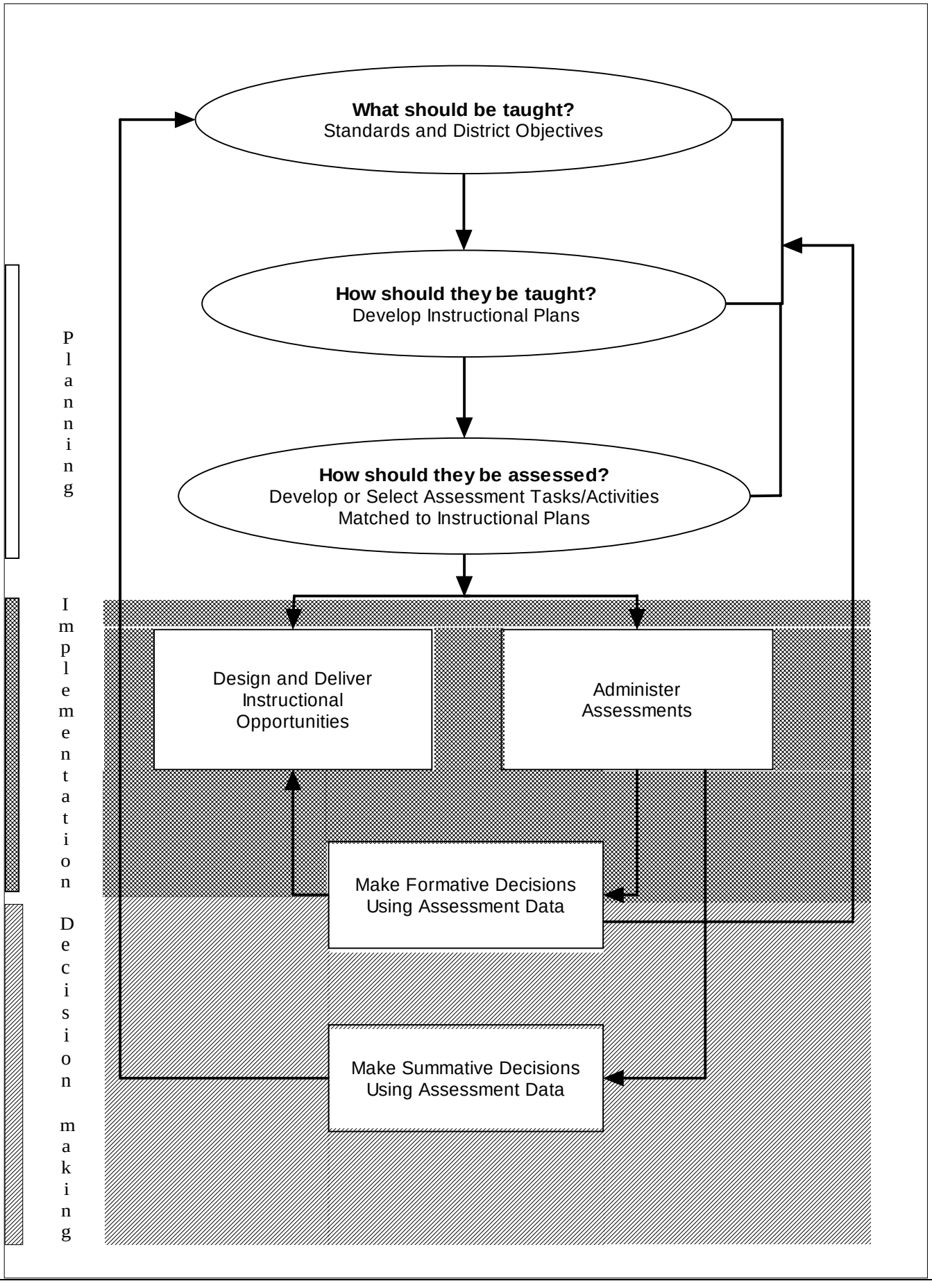
General Instructional Outcomes and Clarifying Verbs

for the *Cognitive Domains of Bloom's Taxonomy*

Illustrative General Instructional Outcomes	Illustrative Verbs for Stating Learning Outcomes
KNOWLEDGE • Knows common terms • Knows specific facts • Knows basic concepts • Knows principles	**KNOWLEDGE** Defines, describes, identifies, labels, lists, matches, names, outlines, reproduces, selects, states **Ex: List the foods in the four food groups.**
COMPREHENSION • Understands facts and principles • Interprets verbal materials • Interprets charts and graphs • Translates verbal material into mathematical formulas • Estimates consequences implied in data • Justifies methods and procedures	**COMPREHENSION** Converts, defends, distinguishes, estimates, explains, extends, generalizes, gives examples, infers, paraphrases, predicts, rewrites **Ex: Explain how Joule's apparatus (an apparatus used to change mechanical energy into heat energy) works.**
APPLICATION • Applies principles to new situations • Applies theories to practical situations • Solves mathematical problems • Constructs charts and graphs • Demonstrates correct usage of a procedure	**APPLICATION** Changes, computes, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses **Ex: Predict the outcome in the short story, "To Build a Fire."**
ANALYSIS • Recognizes unstated assumptions • Recognizes logical fallacies in reasoning • Distinguishes between facts and inferences • Evaluates the relevance of data • Analyzes the organizational structure of work (e.g., art, music, writing)	**ANALYSIS** Breaks down, diagrams, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, points out, relates, selects, separates, subdivides **Ex: Outline the steps used to produce a two dimensional work of art using chalk and construction paper.**
SYNTHESIS • Writes a well-organized theme • Gives a well-organized speech • Proposes a plan for an experiment • Integrates learning from different areas into a plan for solving a problem • Formulates a new scheme for classifying objects, events, or ideas	**SYNTHESIS** Categorizes, combines, compiles, composes, creates, devises, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes **Ex: Summarize the views expressed by the authors of the essay, "The Republic of Cockroaches."**
EVALUATION • Judges the consistency of written material • Judges the adequacy with which conclusions are supported by data • Judges the value of a work (e.g., art, music, and writing) by use of internal criteria • Judges the value of a work (e.g., art, music, and writing) by use of external criteria	**EVALUATION** Appraises, compares, concludes, contrasts, criticizes, describes, discriminates, justifies, interprets, relates, summarizes, supports **Ex: Conclude why auto pollution is a serious threat to the environment.**

The Standards-Driven Model



How Should They Be Taught ?
Effective Instructional Strategies For the 21st Century Classroom

This list provides an overview of instructional strategies that promote increased student achievement. Consideration should be given to the appropriateness of the strategies for many different subject areas. Ongoing professional development opportunities in these strategies assist in promoting successful teaching and learning experiences.

Multiple Intelligences (Eight)
Verbal-Linguistic
Logical-Mathematical
Visual-Spatial
Musical
Interpersonal
Intrapersonal
Bodily-Kinesthetic
Naturalist

Cooperative Learning
Think-Pair-Share
Corners
Jigsawing
Debate

Concrete to Abstract Thinking
Sequence
Models
Use of Manipulatives

Reflection and Clarification
K-W-L
Learning Log
Dialogue Journals
Reflective Thinking
Read and Retell

Integrated Strategies
Thematic Units
Project-Based Learning
Technology Learning Activities (TLAs)

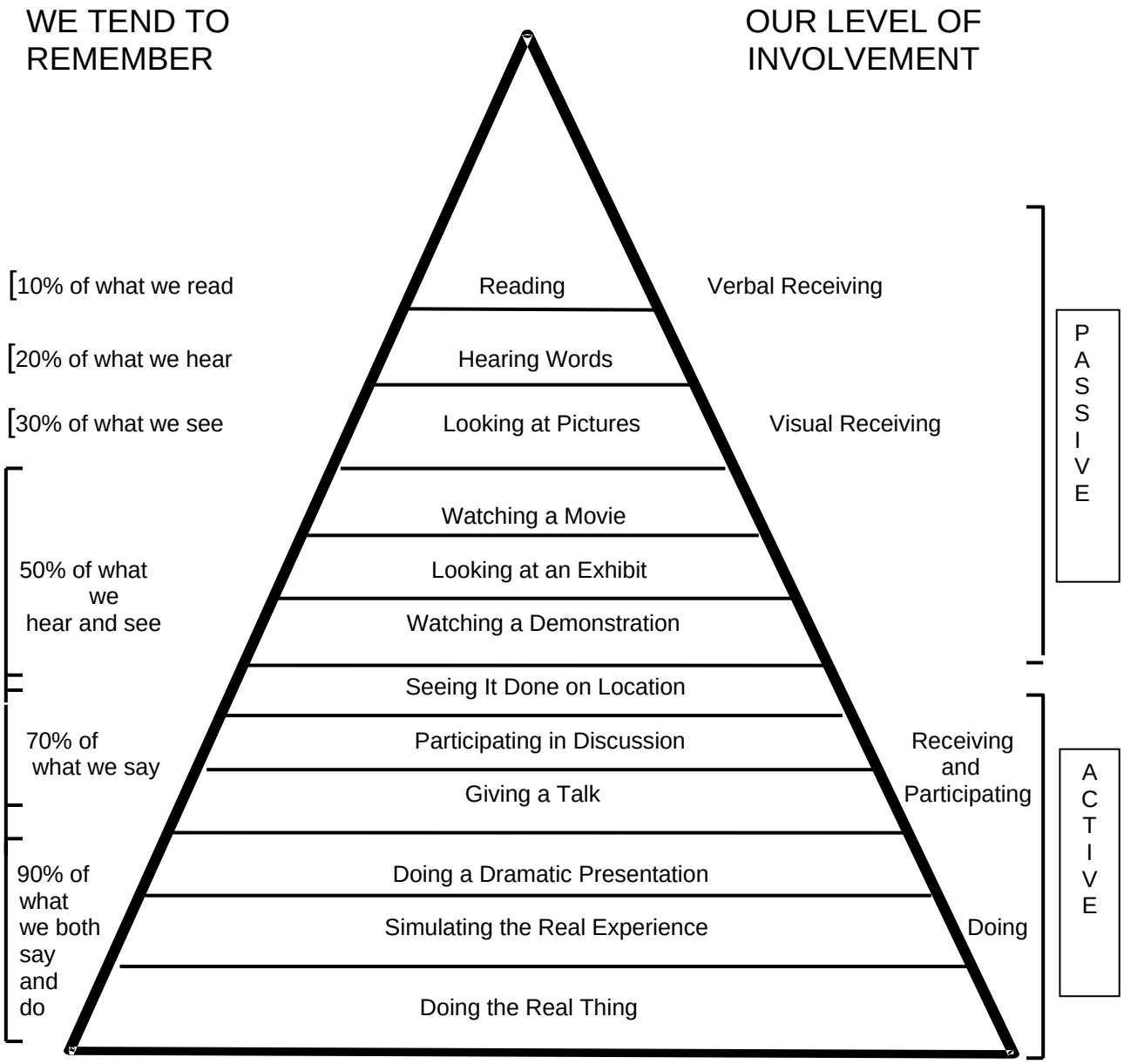
Knowledge Organizers
Webbing
Concept Mapping
Flow Chart
Venn Diagram
Concept Diagram/Decision Trees

Problem Solving
Brainstorming
Predict, Observe, Explain
Problem Solving Models
The Learning Cycle
Laboratory Investigation

Authentic Learning Experiences
Field Experiences
Interviews
Projects
Cultural Presentations
Mini-Museums

Individualized Performance-Based Strategies
Simulations
Demonstrations
Computer Assisted Instruction

EXPERIENCE and LEARNING



A Rubric's Rubric

(Holistic)

Exemplary Rubrics are consistently effective for accurate and thorough evaluations and/or guidance.	**The exemplary rubric is** • based on diverse, exemplary models of a clearly identified product, performance, or process; the intended purpose or impact; and the embedded targeted learning; • accompanied by three or more diverse, aligned examples for each level; • composed of clear, precise, thorough, and accurate criteria that define each quality level; • complete with defining criteria for the exemplary level and is accurately addressed for each level; • totally understood and easily used by all involved; and • promotive of original or creative approaches with clearly defined criteria.
Acceptable Rubrics are mostly effective for accurate and thorough evaluations and/ or guidance.	**The acceptable rubric is** • based on at least one exemplary model of a clearly identified product, performance, or process; the intended purpose of impact; and the embedded targeted learning; • accompanied by at least one aligned example for each level; • composed of clear, thorough, and accurate criteria to define each quality level; • the defining identified criteria for the exemplary level; is addressed for each level; • understood by all involved; and • promotive of original or creative approaches.
Developing Rubrics are marginally and inconsistently effective for evaluations and/or guidance.	**The developing rubric is** • based on an example of a clearly identified product, performance, or process; the intended purpose or impact; and the embedded targeted learning; • accompanied by an example aligned with the highest level; • composed of components for criteria with insufficient quality definition for the presented quality levels; • the defining criteria for the exemplary level; is not addressed for each level; • understood by most involved; and • not stifling or penalizing of original or creative approaches.
Emerging Rubrics are consistently ineffective for evaluations and/or guidance.	**The emerging rubric is** • based on a vaguely identified product, performance, or process; • not accompanied by clarifying examples; • based on hopes and beliefs; • designed with very little continuity of criteria from level to level; • understood by some individuals at best; and • limiting of original or creative approaches.

What every teacher should know about FCAT

Is there a simple way for every teacher to help students be prepared for FCAT?

Yes! Incorporate FCAT-like questions into regular lessons, activities, and assessments.

Five Easy Suggestions

1. Use questions that require students to explain their answers.

2. Have students apply their reading and mathematics skills to challenging content in all subject areas.

3. Use open-ended question formats that are similar to those used on the FCAT.

4. Share the FCAT and FCAT Writing rubrics with students; rate and grade students' work using these rubrics. Students can also be taught to use the rubrics to become familiar with what is expected, to assess their own work, and to become reviewers of their peers' work.

5. Develop and use questions for class discussions or tests that are of the same cognitive rigor as those used on the FCAT.

Strategies for achieving higher FCAT *Reading* scores:

- Apply critical reading strategies to discipline-based textbooks.
- Write explanations of main ideas, details, conclusions, author's purpose, character and plot development, point of view, and tone when using discipline-based materials.
- Apply creative thinking and problem solving strategies to discipline-based situations.

Examples of reading sources for curriculum integration:

Social Studies, History, and Psychology: textbooks, biographies, historical fiction, newspaper reports of historical or current events, and tables that include data

The Arts and Graphics Arts: textbooks, art criticism, concert or program notes, biographies, plays, operas, and musical theater

Health and Physical Education: textbooks, menus, food labels, advertisements, sports articles, and biographies

Science: textbooks, scientific journals and articles, research reports, biographies, and science fiction

Math: textbooks, biographies, and every day situations involving mathematical applications

School-to-Career: textbooks, training or job specific materials, and job descriptions

Strategies for achieving higher FCAT *Mathematics* scores:

- Apply creative thinking and problem solving strategies to discipline-based situations.
- Write explanations of mathematics concepts, processes, and solutions, as applicable, as they relate to discipline-based situations.
- Create and interpret graphs for discipline-based situations.
- Read, comprehend, and discern the information contained in word problems in order to solve them correctly.

Examples of mathematics sources for integrating curriculum:

Social Studies, History, and Psychology: per capita populations, land areas, products, proportions, probability, geometric concepts in historical structures (e.g., pyramids), maps, coordinate grids, and statistics and their interpretations

The Arts and Graphics Arts: number sense and proportions (e.g., using color combinations), designs, scale models, time signatures, note values, ticket sales, staging, and construction

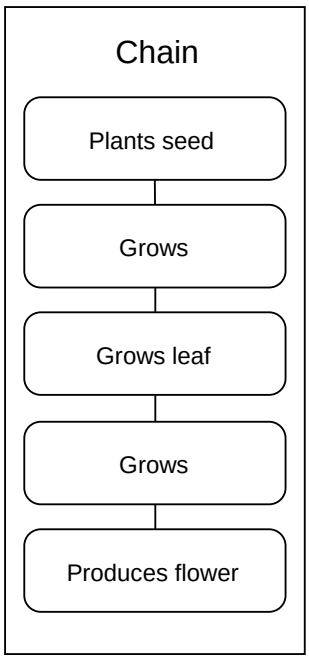
Health and Physical Education: graphs and tables, time, distance, statistics, area, perimeter, and volume

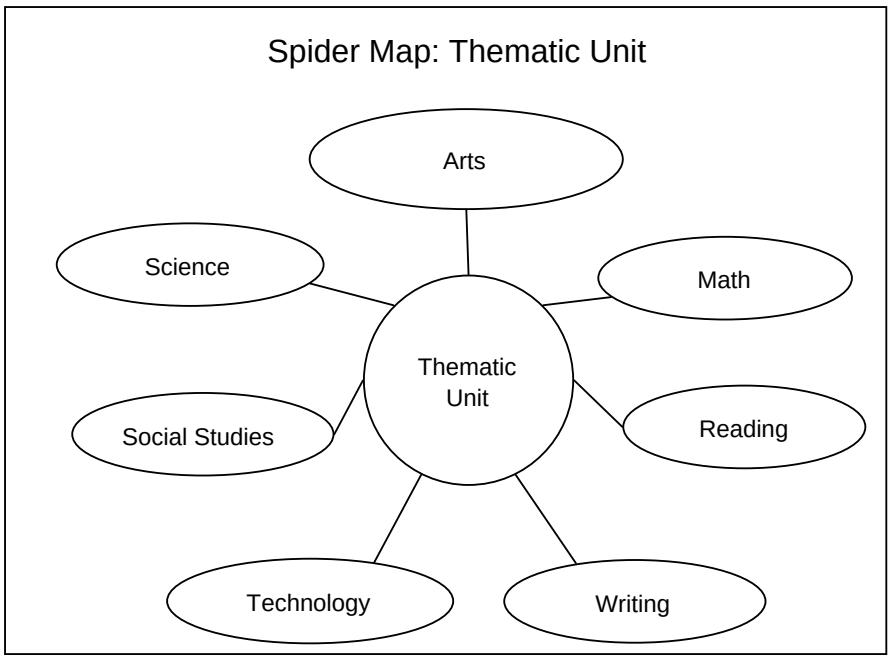
Science: scientific notations, probability, statistics and their interpretation, charts, graphs, coordinate grids, rate measure, length, and distance

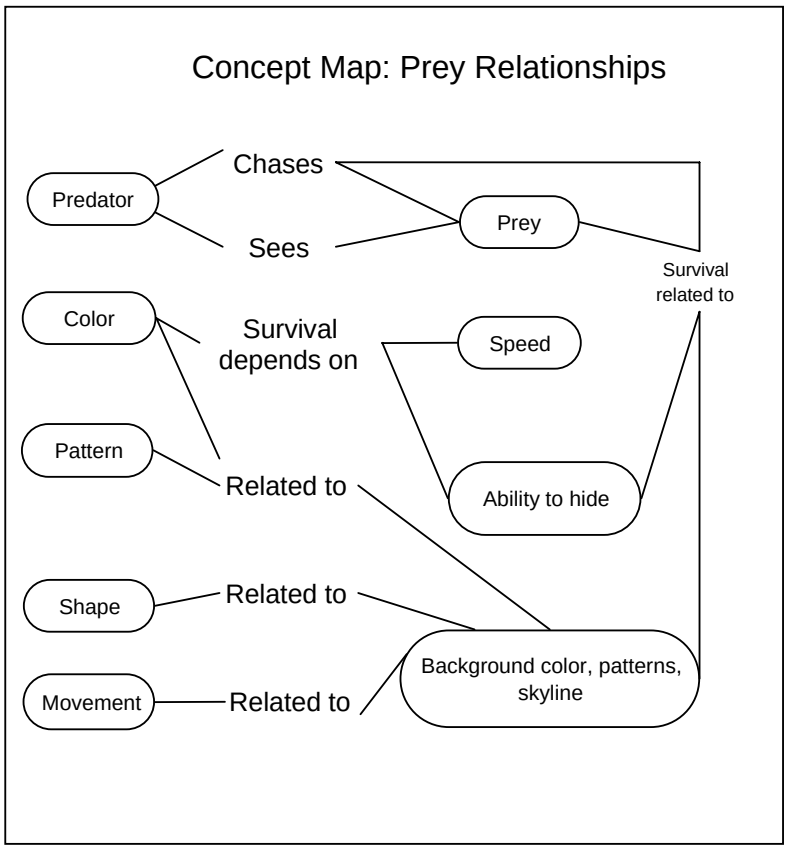
Foreign Languages: mathematics vocabulary, terminology, and notation in the language being studied

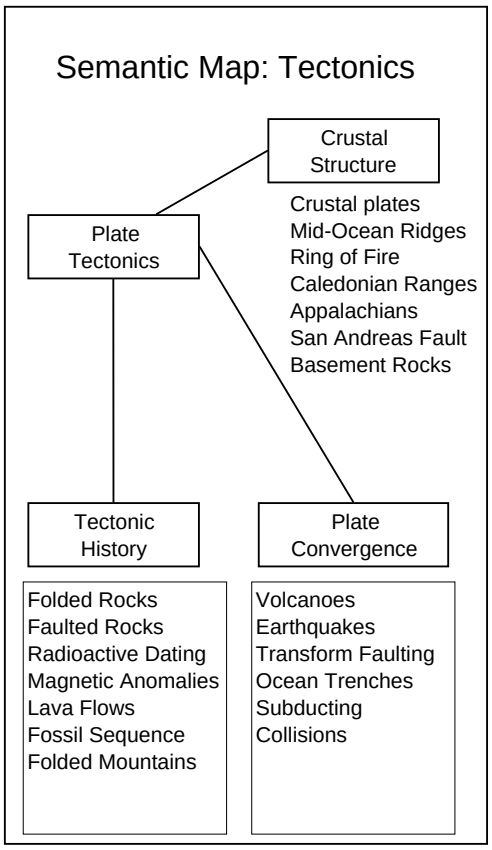
School-to-Career: graphs, salary, commission, profits, time, money, and job specific measurement (e.g., construction, retail sales, and accounting)

Tools for Organizing Concepts

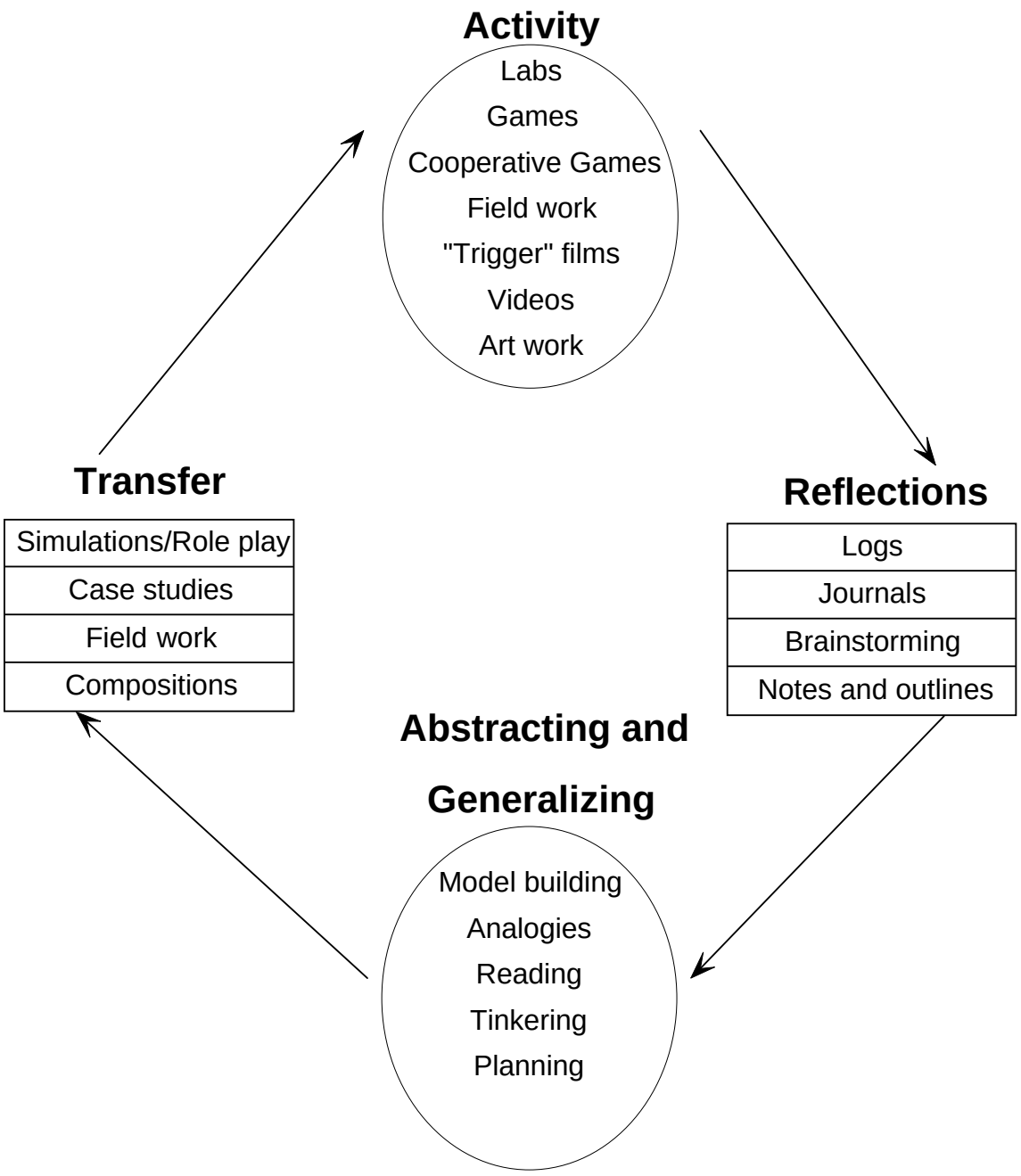








Activities to Support the Experiential Learning Cycle



Cooperative Learning Activity Rubric

Use This Scale

5	Strongly Agree
4	Agree
3	Somewhat Agree
2	Disagree
1	Strongly Disagree

Name:
Team Name:
Date:

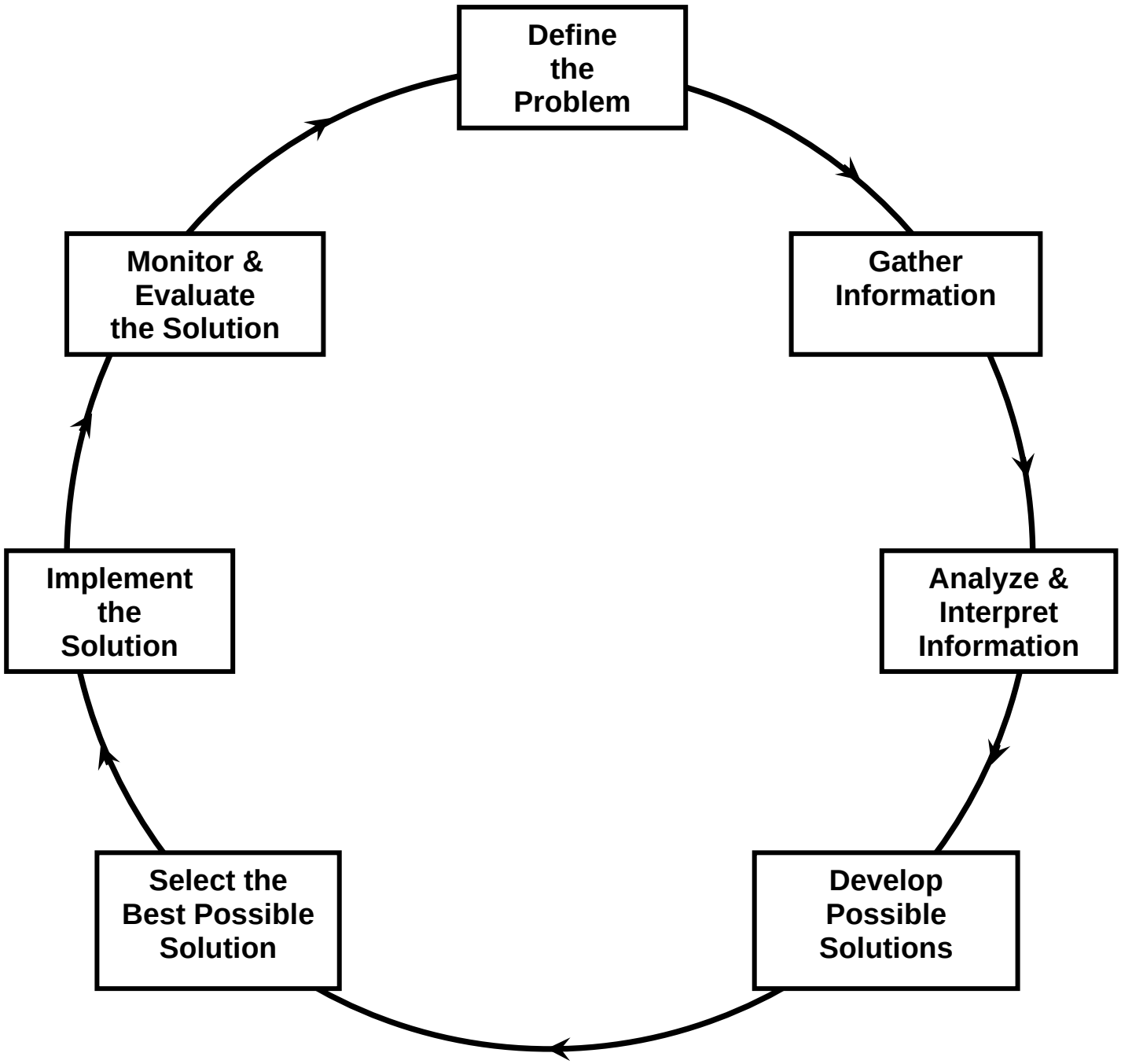
Circle the Number	**My Team**
5 4 3 2 1	1) Had clear goals
5 4 3 2 1	2) Made progress toward the goals
5 4 3 2 1	3) Stayed on task
5 4 3 2 1	4) Made decisions based on views of all

My Teammates

5 4 3 2 1	1) Listened well to each other
5 4 3 2 1	2) Helped each other by giving useful suggestions
5 4 3 2 1	3) Were respectful of all points of view
5 4 3 2 1	4) All participated

My suggestions for improvement:

Seven Step Problem Solving Model



Problem Solving Steps Checklist

1) Define the problem

- [ ] Understand the objective
- [ ] Understand the rules and boundaries
- [ ] Listen to all information

2) Gather Information

- [ ] Check for understanding within the team
- [ ] Ask clarifying questions
- [ ] Listen to all information

3) Analyze and Interpret Information

- [ ] Question the parameters and boundaries
- [ ] Consider all possibilities
- [ ] Clarify interpretations to avoid misunderstandings
- [ ] Re-check for understanding within the group
- [ ] Agree on the problem and any limitations on the team

4) Develop Possible Solutions

- [ ] Brainstorm ideas
- [ ] Listen to ideas without prejudging them
- [ ] Hear all relevant information and suggestions
- [ ] Consider all possible solutions
- [ ] Contain discussion to allow adequate time for implementation

5) Select the Best Possible Solution

- [ ] Evaluate possible ideas
- [ ] Do some testing and practicing
- [ ] Refine and improve suggestions
- [ ] Formulate a plan and process for implementation
- [ ] Check for understanding and agreement within the team

6) Implement the Solution

- [ ] Put the solution into practice
- [ ] Allow for active participation
- [ ] Be aware of the group's process
- [ ] Avoid tunnel vision – be aware of the big picture
- [ ] Work efficiently and safely

7) Monitor & Evaluate the Solution

- [ ] Assess the effectiveness of the solution
- [ ] Assess and evaluate the quality of the results
- [ ] Adjust and refine the solution for optimal results
- [ ] Be aware of the timeframe
- [ ] Be aware of the group's process as well as the task

Florida's Goal 3 Standards

Standard 1 **Information Managers**
Florida students locate, comprehend, interpret, evaluate, maintain, and apply information, concepts, and ideas found in literature, the arts, symbols, recordings, video and other graphic displays, and computer files in order to perform tasks and/or for enjoyment.

Standard 2 **Effective Communicators**
Florida students communicate in English and other languages using information, concepts, prose, symbols, reports, audio and video recordings, speeches, graphic displays, and computer-based programs.

Standard 3 **Numeric Problem Solvers**
Florida students use numeric operations and concepts to describe, analyze, communicate, synthesize numeric data, and to identify and solve problems.

Standard 4 **Creative and Critical Thinkers**
Florida students use creative thinking skills to generate new ideas, make the best decision, recognize and solve problems through reasoning, interpret symbolic data, and develop efficient techniques for lifelong learning.

Standard 5 **Responsible Workers**
Florida students display responsibility, self-esteem, sociability, self-management, integrity, and honesty.

Standard 6 **Resource Managers**
Florida students will appropriately allocate time, money, materials, and other resources.

Standard 7 **Systems Managers**
Florida students integrate their knowledge and understanding of how social, organizational, informational, and technological systems work with their abilities to analyze trends, design and improve systems, and use and maintain appropriate technology.

Standard 8 **Cooperative Workers**
Florida students work cooperatively to successfully complete a project or activity.

Standard 9 **Effective Leaders**
Florida students establish credibility with their colleagues through competence and integrity and help their peers achieve their goals by communicating their feelings and ideas to justify or successfully negotiate a position which advances goal attainment.

Standard 10 **Multicultural Sensitive Citizens**
Florida students appreciate their own culture and the cultures of others, understand the concerns and perspectives of members of other ethnic and gender groups, reject the stereotyping of themselves and others, and seek out and utilize the views of persons from diverse ethnic, social, and educational backgrounds while completing individual and group projects.

Standard 11 **Parental Involvement**
Families will share the responsibility of accomplishing the standards set in Goal 3 through a student's education from preschool through adult.

Taken from FLDOE website

The School Board of Miami-Dade County, Florida adheres to a policy of nondiscrimination in employment and educational programs/activities and strives affirmatively to provide equal opportunity for all as required by:

Title VI of the Civil Rights Act of 1964 - prohibits discrimination on the basis of race, color, religion, or national origin.

Title VII of the Civil Rights Act of 1964, as amended - prohibits discrimination in employment on the basis of race, color, religion, gender, or national origin.

Title IX of the Education Amendments of 1972 - prohibits discrimination on the basis of gender.

Age Discrimination in Employment Act of 1967 (ADEA), as amended - prohibits discrimination on the basis of age with respect to individuals who are at least 40.

The Equal Pay Act of 1963, as amended, prohibits sex discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

Section 504 of the Rehabilitation Act of 1973 - prohibits discrimination against the disabled.

Americans with Disabilities Act of 1990 (ADA) - prohibits discrimination against individuals with disabilities in employment, public service, public accommodations and telecommunications.

The Family and Medical Leave Act of 1993 (FMLA) - requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to "eligible" employees for certain family and medical reasons.

The Pregnancy Discrimination Act of 1978, prohibits discrimination in employment on the basis of pregnancy, childbirth, or related medical conditions.

Florida Educational Equity Act (FEEA) - prohibits discrimination on the basis of race, gender national origin, marital status, or handicap against a student or employee.

Florida Civil Rights Act of 1992 - secures for all individuals within the state freedom from discrimination because of race, color, religion, sex, national origin, age, handicap, or marital status.

School Board rules 6Gx13- 4A-1.01, 6Gx13- 4A-1.32, and 6Gx13- 5D- 1.10 prohibit harassment and/or discrimination against an employee or student on the basis of gender, race, color, religion, ethnic or national origin, political beliefs, marital status, age, sexual orientation, social and family background, linguistic preference or disability.

Veterans are provided re-employment rights in accordance with P.L. 93-508 (Federal Law) and Section 295.07 (Florida Statutes), which stipulate categorical preferences for employment.

REVISED 01/05