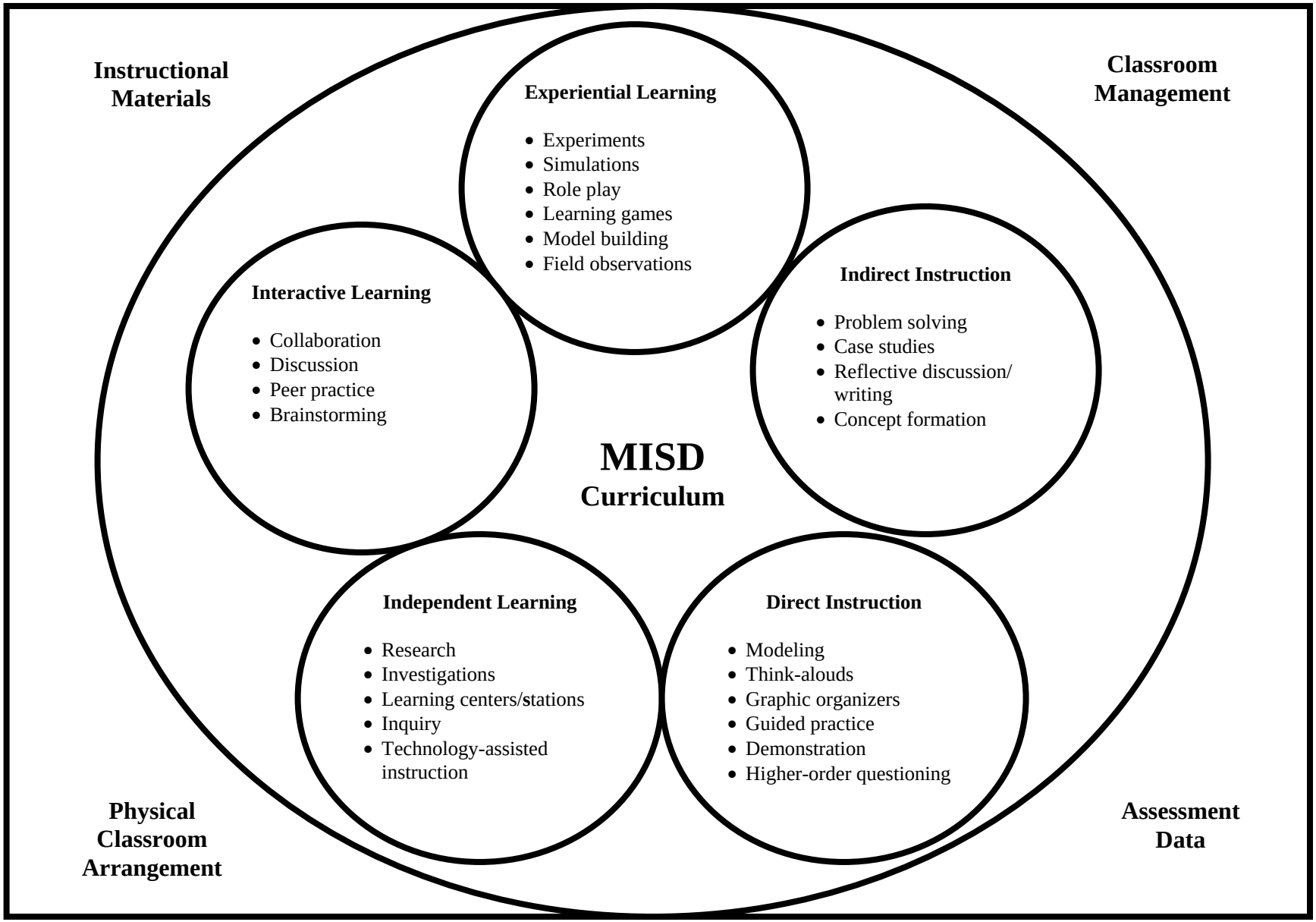
Mansfield ISD Best Practices



Experiential Learning		
Strategy	Definition	Example
Experiments	A method of investigating causal relationships among variables, or to test a hypothesis. An experiment can be used to help solve practical problems and to support or negate theoretical assumptions.	As a simple example, consider that many bakers have noticed that the amount of "fluffiness" in a loaf of bread seems to be related to how much humidity there is in the air when the dough is being made. This can be formalized as the hypothesis: "all other things being considered equal, the greater the humidity, the fluffier the bread."
Simulations	Simulation is the imitation of some real thing, state of affairs, or process. The act of simulating something generally entails representing certain key characteristics or behaviors of a selected physical or abstract system.	A flight simulator is used to train pilots on the ground. The Stock Market Game - The Stock Market Game is an education program for Grades 4-12, college students, and adults.
Role play	Role playing refers to the changing of one's behavior to assume a role, either unconsciously to fill a social role, or consciously to act out an adopted role.	Practice conflict resolution Become characters in a story Role play government topics: http://www.peo.gov.au/teachers/diy.html
Learning games	An educational game, one designed for learning, is a subset of both play and fun. It is a melding of educational content, learning principles, and computer games (Prensky, 2001). Digital game-based learning is organized to provide both education and pleasure. Play relaxes people, putting them in a receptive state for learning. http://gaming.psu.edu/node/315	Online learning games: http://www.learninggamesforkids.com/ Learning game links: http://eduscapes.com/tap/topic86.htm
Model building	Model building involves the creation of models either from kits or from materials and components acquired by the builder. In addition, students create concrete and/or pictorial representations.	Science models: http://www.windows.ucar.edu/tour/link=/teacher_resources/activity.html Model castles: http://www.buildmodelcastles.com/html/castles.html Teaching kids to start a business: http://www.moneyinstructor.com/art/childbusiness.asp
Field observations	Students become active learners by participating in a real activity with real consequences for the purpose of meeting learning objectives.	Project-based learning- http://www.internet4classrooms.com/project.htm Service projects Science walks

Indirect Learning		
Strategy	Definition	Example
Problem solving	Problem solving refers to a process of decision making or a series of steps used by individuals or groups to arrive at answers to questions or the solution to a problem. Steps may include: • *Reflect* on what you know and feel about the issue. • *Research* the issue. Find the facts. • *State* the challenge. *Explore* alternatives and consequences. • *Make* a decision. *Set* a personal goal. • *Design* and *apply* an action plan. • *Evaluate* progress. *Revise* as needed. Assessment and Evaluation: Teachers may insert these steps into a checklist, rating scale, or anecdotal record template in order to record student information. These steps become the criteria.	Finding a solution to real world scenario Dealing with environmental issue Understanding cultural practices
Case studies	Case studies refer to assigned scenarios based on situations in which students observe, analyze record, implement, conclude, summarize, or recommend action.	Develop a business plan
Reflective discussion/ writing	Reflective discussion and writing encourages students, individually or as a group, to think more deeply about a topic through discussing, writing, and evaluating.	Journaling with pre-view topic (connect student experiences to the learning), journaling as a processing activity, teacher-led discussion
Concept formation	In this instructional method, students are provided with data/tools about a particular concept. Students are encouraged to classify or group the information and to give descriptive labels to their groupings. By linking the examples to the labels and by explaining their reasoning, the students form their own understanding of the concept.	Classify living things, sort the powers of the branches of government, vocabulary attribute map Find equivalent fractions http://www.oki.hu/magdoc.php?kod=MAG-background-Instructional-approaches.html

Direct Instruction		
Strategy	Definition	Example
Modeling	To provide students with a clear, multi-sensory model of a skill or concept.	http://fcit.usf.edu/mathvids/strategies/em.html Shared reading and writing
Think-alouds	Think-alouds have been described as "eavesdropping on someone's thinking." With this strategy, teachers verbalize aloud while reading a selection orally. Their verbalizations include describing things they're doing as they read to monitor their comprehension. The purpose of the think aloud strategy is to model for students how skilled readers construct meaning from a text.	1. Model your thinking as you read. Do this at points in the text that may be confusing for students (new vocabulary, unusual sentence construction). o Develop the set of questions to support thinking 2. Give students opportunities to practice the technique, and offer structured feedback to students. 3. Read the selected passage aloud as the students read the same text silently. At certain points stop and "think aloud" the answers to some of the pre-selected questions. 4. Demonstrate how good readers monitor their understanding by rereading a sentence, reading ahead to clarify, and/or looking for context clues. Students then learn to offer answers to the questions as the teacher leads the Think Aloud. http://www.literacymatters.org/content/study/think.htm http://www.readingrockets.org/strategies/think_alouds
Graphic organizers	Pictorial or graphical ways to organize information and thoughts for understanding, remembering, or writing about.	www.graphic.org www.mindmeister.com www.bubbl.us
Guided practice	Posing questions that gradually lead students from easy or familiar examples to new understandings is a teaching strategy known as Guided Practice (Rosenshine, 1979, 1983). The strategy is effective for teaching thinking skills as well as content. Consider a language arts example (Harmon, 1994):	http://www.ncrel.org/sdrs/areas/issues/students/learning/lr1guid.htm The emphasis is on learning by practicing and observing and thinking. While students are working, the teacher glances about, getting a sense of how well students understand. If understanding is low, the teacher inserts extra explanatory comments as appropriate and strives to make subsequent words easy enough so students do come to understand.
Demonstration	An illustration or explanation, as of a process, illustrated by examples, specimens or the like. Students will not necessarily be repeating the activity, may only be viewing for instructional purposes.	www.wiki-teacher.com Experiments involving chemicals a teacher would not want students to handle.
Higher-order questioning	Higher-order questions require answers that go beyond simple information and as such both the language and thinking behind them is more complex. They take learners into more abstract language functions, such as giving and justifying opinions, speculation, and hypothesizing. Asking 'What colors make up a rainbow?' is an observational question, asking 'Why are rainbows important?' is a higher question.	http://www.teachingenglish.org.uk/think/knowledge-wiki/higher-order-questions Bloom's question stems http://www.teachers.ash.org.au/researchskills/dalton.htm Costa's Levels of questions http://www.tc.umn.edu/~oien0017/CostaQs/Costa%20level%20question%20guide.pdf Margaret Kilgo's Levels of Questions

Independent Learning		
Strategy	Definition	Example
Research	Research in its most general sense, research involves investigating a topic to learn more about it. Typically, one conducts research to answer questions. http://uwp.duke.edu/wstudio/documents/research_project.pdf	What were the causes of the Revolutionary War? What are the causes of diabetes and what are some common treatments for it?
Investigations	Throughout the process students should have opportunities to design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results and discuss their findings. http://www.nsta.org/about/positions/laboratory.aspx	How does sunlight effect plant growth? What solutions can you find to this problem?
Learning centers/ stations	Learning centers are independent stations set up throughout the classroom where children can go to actually engage in some learning activity. These centers provide children with opportunities for hands-on learning, cooperative learning, social interaction, real-life problem solving, autonomous learning, and open-ended active activities. http://www.ncrel.org/sdrs/areas/issues/students/earlycld/ea7lk19.htm	Station Activities for Simple Machines: Station 1: levers Station 2: pulleys Station 3: wheel and axle Station 4: inclined plane Station 5: screw
Inquiry	Learning where students are engaged in essentially open ended, student centered, hands on activities.	How can the body be protected from UV rays? Students are given various items to create their own lab.
Technology-assisted instruction	The use of technology by teachers and students as a tool to support curricular goals, enhance instruction, and ultimately to improve student performance. (natoma group base camp infodev t pd handbook Glossary).	IPOD/ ITouch used in Sheltered Classrooms for note taking and researching topics such as moon phases.

Interactive Learning		
Strategy	Definition	Example
Collaboration	An instructional approach in which students of varying abilities and interests work together in small groups to solve a problem, complete projects, or achieve a common goal. (NCREL)	Class wiki or blog Lab experiment Partner problem solving
Discussion	Give and take between teachers and students talking about issues, listening to one another and giving feedback. Our goal is to get as many students involved in talking to one another as possible and for the teacher to fade into the background.	Topical debates Logical reasoning or telling why Reflective talking about a problem/topic
Peer practice	Students consult with one another to discuss and share practices, to promote collaboration and ensure learning for all students. (webserver3ascd.org)	Modeling solutions Peer editing Gallery walks
Brainstorming	A group creativity technique designed to generate a large number of ideas for the solution of a problem.	KWL charts Multiple solutions for a problem Real World examples