CRE102 Teaching Principles Syllabus
Designed for the professor/ facilitator
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Course Description
Teaching Biblical principles and stories and their application to daily living is a vital ingredient of leading children to Christ. This course will explore the teaching principles of Jesus coupled with a look at the teaching/learning process and application of teaching methods. Teaching models for various age groups are studied.

Textbook(s)
Habenicht, Donna & Burton, Larry. (2004). *Teaching the Faith: An Essential Guide to Raising Faith-shaped Kids*, Hagarstown, MD: Review & Herald Publishing Association.

How to Teach the Bible with Power, by Charles H. Betz

White, Ellen G. (1952). *Education*. Pacific Press Publishing Association.

Internet Resources
Teaching the Faith Companion Website – http://www.andrews.edu/~burton/ttf/. (An excellent source for presentations and additional readings.)

CIRCLE – The Adventist clearing house for teaching and learning resources.
http://circle.adventist.org.

Objectives
This syllabus is organized around three areas of content: foundations for teaching, classroom learning environments, and basic teaching approaches. Learning objectives for each of these areas are as follows:
1. Foundations for Teaching
    1.1. Write a personal philosophy for education
    1.2. Demonstrate awareness of different learning modes and styles
    1.3. Identify your personal learning style(s)
    1.4. Describe a child in your Sabbath school in terms of learning style
    1.5. Explain the meaning of the Learner-Centered Principles developed by the American Psychological Association (APA) for Sabbath school teaching
    1.6. Categorize questions and/or classroom tasks according to Bloom's taxonomy
2. Learning Environments
    2.1. Give five suggestions for creating a Christ-like classroom atmosphere
    2.2. Develop a plan for building positive relationships with the children in your Sabbath school and their parents
3. Teaching Approaches
    3.1. Demonstrate how to teach facts and concepts

3.2. Demonstrate how to teach using stories
3.3. Demonstrate how to teach using questions and discussion
3.4. Give examples of cooperation from the Bible and everyday life
3.5. Demonstrate how to teach using simple cooperative learning structures

Outline of Syllabus Contents

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3. Teaching Approaches
    3.1. Teaching Facts and Concepts
        3.1.1. Building Understanding
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    3.2. Using Stories
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Section 1: Foundations for Teaching

1.1 Philosophy

A teacher's personal philosophy of education, whether they can express it or not, controls what the teacher says and does in the teaching process. The purpose of this section of the course is to help teachers understand and express their deeply held beliefs about truth, the sources of knowledge, human nature, and what is of value. In the end, it is the teacher's beliefs about these core issues that help her determine what and how to teach the children in her classes.

The goal for this section of the course is to have each teacher write a short personal philosophy of education. Discussions of philosophy often focus on issues surrounding truth, reality, and value. These issues are of great importance for Christian educators and help us determine the purpose of our educational work. Statements of educational philosophy typically include statements of belief about reality/human nature (ontology), truth/sources of knowledge (epistemology), and what is of value (axiology). Each of these is described briefly below.

1.1.1   *Ontology.* Ontology is concerned with the nature of reality on this earth. Ontological statements express an individual's beliefs about human nature, the 'real' world, and how humans interact with their world or each other. Ontological statements in a personal educational philosophy statement tend to focus on the nature of the child and how that affects the teaching and learning process.

1.1.2   *Epistemology.* Epistemology is the study of truth, including how we know what is true. Epistemology is also concerned with identifying sources of knowledge. In personal statements of philosophy, epistemological statements are concerned with addressing the nature of knowledge – where does true knowledge come from and how do we know what is true.

1.1.3   *Axiology.* Axiology is concerned with aesthetics and ethics. Axiological statement express an individual's beliefs about what is beautiful, what is of value, what is fair, and what is 'moral' behavior. Axiology in a personal educational philosophy statement tends to focus on what is worth knowing, teaching, and learning.

1.1.4   *Sample Jigsaw Activity from Chapter 1 of Education, by Ellen G. White*

You may use the following excerpts from *Education* in a Jigsaw or Expert Jigsaw lesson while teaching this class. Ask you students to identify important guiding principles for teaching children that Mrs. White expresses in their assigned reading. Ask them to try to identify five to seven important principles from what they have read. Suggest they create some type of memory device to teach these principles to their classmates in a "memorable" way.

1.1.5   *Sample Assignment Task and Evaluation Rubric*

On the following pages you will find a sample assignment that asks students to prepare a personal philosophy of education. Adapt this performance task and assessment rubric for your teaching situation. Encourage students to read from *The Bible* and *Education* and use ideas from those two books in their personal philosophy statement.

Excerpt 1

Taken from: White, E.G. (1952). *Education*, pages 13-19

Our ideas of education take too narrow and too low a range. There is need of a broader scope, a higher aim. True education means more than the pursual of a certain course of study. It means more than a preparation for the life that now is. It has to do with the whole being, and with the whole period of existence possible to man. It is the harmonious development of the physical, the mental, and the spiritual powers. It prepares the student for the joy of service in this world and for the higher joy of wider service in the world to come.

The source of such an education is brought to view in these words of Holy Writ, pointing to the Infinite One: In Him "are hid all the treasures of wisdom." Colossians 2:3. "He hath counsel and understanding." Job 12:13.

The world has had its great teachers, men of giant intellect and extensive research, men whose utterances have stimulated thought and opened to view vast fields of knowledge; and these men have been honored as guides and benefactors of their race; but there is One who stands higher than they. We can trace the line of the world's teachers as far back as human records extend; but the Light was before them. As the moon and the stars of our solar system shine by the reflected light of the sun, so, as far as their teaching is true, do the world's great thinkers reflect the rays of the Sun of Righteousness. Every gleam of thought, every flash of the intellect, is from the Light of the world.

In these days much is said concerning the nature and importance of "higher education." The true "higher education" is that imparted by Him with whom "is wisdom and strength" (Job 12:13), out of whose mouth "cometh knowledge and understanding." Proverbs 2:6.

In a knowledge of God all true knowledge and real development have their source. Wherever we turn, in the physical, the mental, or the spiritual realm; in whatever we behold, apart from the blight of sin, this knowledge is revealed. Whatever line of investigation we pursue, with a sincere purpose to arrive at truth, we are brought in touch with the unseen, mighty Intelligence that is working in and through all. The mind of man is brought into communion with the mind of God, the finite with the Infinite. The effect of such communion on body and mind and soul is beyond estimate.

In this communion is found the highest education. It is God's own method of development. "Acquaint now thyself with Him" (Job 22:21), is His message to mankind. The method outlined in these words was the method followed in the education of the father of our race. When in the glory of sinless manhood Adam stood in holy Eden, it was thus that God instructed him.

Excerpt 2
Taken from: White, E.G. (1952). *Education*, pages 13-19

In order to understand what is comprehended in the work of education, we need to consider both the nature of man and the purpose of God in creating him. We need to consider also the change in man's condition through the coming in of a knowledge of evil, and God's plan for still fulfilling His glorious purpose in the education of the human race.

When Adam came from the Creator's hand, he bore, in his physical, mental, and spiritual nature, a likeness to his Maker. "God created man in His own image" (Genesis 1:27), and it was His purpose that the longer man lived the more fully he should reveal this image--the more fully reflect the glory of the Creator. All his faculties were capable of development; their capacity and vigor were continually to increase. Vast was the scope offered for their exercise, glorious the field opened to their research. The mysteries of the visible universe--the "wondrous works of Him which is perfect in knowledge" (Job 37:16) – invited man's study. Face-to-face, heart-to-heart communion with his Maker was his high privilege. Had he remained loyal to God, all this would have been his forever. Throughout eternal ages he would have continued to gain new treasures of knowledge, to discover fresh springs of happiness, and to obtain clearer and yet clearer conceptions of the wisdom, the power, and the love of God. More and more fully would he have fulfilled the object of his creation, more and more fully have reflected the Creator's glory.

But by disobedience this was forfeited. Through sin the divine likeness was marred, and well-nigh obliterated. Man's physical powers were weakened, his mental capacity was lessened, his spiritual vision dimmed. He had become subject to death. Yet the race was not left without hope. By infinite love and mercy the plan of salvation had been devised, and a life of probation was granted. To restore in man the image of his Maker, to bring him back to the perfection in which he was created, to promote the development of body, mind, and soul, that the divine purpose in his creation might be realized--this was to be the work of redemption. This is the object of education, the great object of life.

Love, the basis of creation and of redemption, is the basis of true education. This is made plain in the law that God has given as the guide of life. The first and great commandment is, "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind." Luke 10:27. To love Him, the infinite, the omniscient One, with the whole strength, and mind, and heart, means the highest development of every power. It means that in the whole being-- the body, the mind, as well as the soul--the image of God is to be restored.

Excerpt 3
Taken from: White, E.G. (1952). *Education*, pages 13-19

Like the first is the second commandment--"Thou shalt love thy neighbor as thyself." Matthew 22:39. The law of love calls for the devotion of body, mind, and soul to the service of God and our fellow men. And this service, while making us a blessing to others, brings the greatest blessing to ourselves. Unselfishness underlies all true development. Through unselfish service we receive the highest culture of every faculty. More and more fully do we become partakers of the divine nature. We are fitted for heaven, for we receive heaven into our hearts. Since God is the source of all true knowledge, it is, as we have seen, the first object of education to direct our minds to His own revelation of Himself. Adam and Eve received knowledge through direct communion with God; and they learned of Him through His works. All created things, in their original perfection, were an expression of the thought of God. To Adam and Eve nature was teeming with divine wisdom. But by transgression man was cut off from learning of God through direct communion and, to a great degree, through His works. The earth, marred and defiled by sin, reflects but dimly the Creator's glory. It is true that His object lessons are not obliterated. Upon every page of the great volume of His created works may still be traced His handwriting. Nature still speaks of her Creator. Yet these revelations are partial and imperfect. And in our fallen state, with weakened powers and restricted vision, we are incapable of interpreting aright. We need the fuller revelation of Himself that God has given in His written word.

The Holy Scriptures are the perfect standard of truth, and as such should be given the highest place in education. To obtain an education worthy of the name, we must receive a knowledge of God, the Creator, and of Christ, the Redeemer, as they are revealed in the sacred word.

Every human being, created in the image of God, is endowed with a power akin to that of the Creator-- individuality, power to think and to do. The men in whom this power is developed are the men who bear responsibilities, who are leaders in enterprise, and who influence character. It is the work of true education to develop this power, to train the youth to be thinkers, and not mere reflectors of other men's thought. Instead of confining their study to that which men have said or written, let students be directed to the sources of truth, to the vast fields opened for research in nature and revelation. Let them contemplate the great facts of duty and destiny, and the mind will expand and strengthen. Instead of educated weaklings, institutions of learning may send forth men strong to think and to act, men who are masters and not slaves of circumstances, men who possess breadth of mind, clearness of thought, and the courage of their convictions.

Excerpt 4
Taken from: White, E.G. (1952). *Education*, pages 13-19

Such an education provides more than mental discipline; it provides more than physical training. It strengthens the character, so that truth and uprightness are not sacrificed to selfish desire or worldly ambition. It fortifies the mind against evil. Instead of some master passion becoming a power to destroy, every motive and desire are brought into conformity to the great principles of right. As the perfection of His character is dwelt upon, the mind is renewed, and the soul is re-created in the image of God.

What education can be higher than this? What can equal it in value?

> "It cannot be gotten for gold,
> Neither shall silver be weighed for the price thereof.
> It cannot be valued with the gold of Ophir,
> With the precious onyx, or the sapphire.
> The gold and the crystal cannot equal it
> And the exchange of it shall not be for jewels of fine gold.
> No mention shall be made of coral, or of pearls:
> For the price of wisdom is above rubies."
>
> Job 28:15-18.

Higher than the highest human thought can reach is God's ideal for His children. Godliness--godlikeness--is the goal to be reached. Before the student there is opened a path of continual progress. He has an object to achieve, a standard to attain, that includes everything good, and pure, and noble. He will advance as fast and as far as possible in every branch of true knowledge. But his efforts will be directed to objects as much higher than mere selfish and temporal interests as the heavens are higher than the earth.

He who co-operates with the divine purpose in imparting to the youth a knowledge of God, and molding the character into harmony with His, does a high and noble work. As he awakens a desire to reach God's ideal, he presents an education that is as high as heaven and as broad as the universe; an education that cannot be completed in this life, but that will be continued in the life to come; an education that secures to the successful student his passport from the preparatory school of earth to the higher grade, the school above.

Personal Educational Philosophy

In no more than two, double-spaced pages summarize your personal philosophy of education. Include an introduction, ontological statements, epistemological statements, axiological statements, and a conclusion.

What is real? (Ontology)
  Focus your comments on the nature of the learner. What are your students like? What is human nature like and how does that effect teaching and learning?

What is true? (Epistemology)
  Focus your comments on the nature of knowledge and learning. How do humans come to "know" something and how does learning occur? What are "true" sources of knowledge?

What is valuable? (Axiology)
  Focus your comments on what knowledge is of most worth. How do we decide what to teach?

The evaluation rubric that will be used to evaluate your statement is found on the next two pages. Use it as a guide as you draft and polish your statement.

Rubric for Evaluating
Personal Educational Philosophy

Teacher name: _____

Student Name _____

CATEGORY	4 Target	3 Acceptable	2 Needs Improvement	1 Unacceptable
Length	Same as Acceptable	Statement is limited to two pages, double-spaced, with 1-inch margins, and an 11- or 12-point simple font.	One or two guidelines are not followed	Guidelines for statement length are not followed.
Introduction	Introductory paragraph sets the stage for the rest of the statement and summarizes the major concepts to be presented. Uses a theme or metaphor to organize the essay.	Introductory paragraph sets the stage for the rest of the statement and summarizes the major concepts to be presented.	Focuses on one aspect of the task.	Not focused on topic or task. Does not demonstrate rudimentary understanding
Ontology	Ontological beliefs integrated into a coherent whole. Synthesizes the major concepts involved (the gaps are gone).	Able to identify several ontological beliefs, but not integrate them all. Understands most of the major concepts involved	Focuses on one aspect of ontology.	The paragraph is not focused on ontology. Does not demonstrate rudimentary understanding
Epistemology	Epistemological beliefs integrated into a coherent whole. Synthesizes the major concepts involved (the gaps are gone).	Able to identify several epistemological beliefs, but not integrate them all. Understands most of the major concepts involved	Focuses on one aspect of epistemology.	The paragraph is not focused on epistemology. Does not demonstrate rudimentary understanding
Axiology	Axiological beliefs integrated into a coherent whole. Synthesizes the major concepts involved (the gaps are gone).	Able to identify several axiological beliefs, but not integrate them all. Understands most of the major concepts involved	Focuses on one aspect of axiology.	The paragraph is not focused on axiology. Does not demonstrate rudimentary understanding
Conclusion	Conclusion paragraph wraps up the statement and synthesizes the major ideas that were presented.	Conclusion paragraph wraps up the statement. The paragraph synthesizes two of the three areas that were presented.	Conclusion focuses on one area of the philosophy statement	The conclusion does not conclude the statement. Does not demonstrate rudimentary understanding

CATEGORY	4 Target	3 Acceptable	2 Needs Improvement	1 Unacceptable
Logic/Flow	The piece is very well organized. One idea or argument follows another in a logical sequence with clear transitions.	The piece is pretty well organized. One idea or argument may seem out of place. Clear transitions are used.	The piece is a little hard to follow. The transitions are sometimes not clear.	Ideas and arguments seem to be randomly arranged.
Personal Voice	The statement sounds like a personal expression of the individual. The author's voice is evident. Fresh insights are presented.	The statement sounds like a personal expression of the individual. The author's voice is evident.	The statement sounds like a personal expression of the individual, but the author does not maintain a clear or consistent voice.	There are no fresh insights in the statement. No consistent voice emerges from the author.
References	Philosophy statement is rooted in scripture and the spirit of prophecy and references are clearly communicated.	Philosophy statement is rooted in scripture or the spirit of prophecy and references are clearly communicated	Philosophy statement alludes to scripture and/or the spirit of prophecy but references are absent.	No allusions or references made to scripture or spirit of prophecy.
Clearly Written	The statement is written in a reader-friendly manner that models clarity of expression. Uses short declarative sentences.	The statement is written in a reader-friendly manner. One or two sentences lack clarity of expression. Uses short declarative sentences.	Several sentences in the statement lack clarity of expression. Expression of some ideas is confusing to the reader. Uses long, rambling sentences.	The statement does not promote reader understanding and/or is unclear in language use and expression. Uses long, rambling or run-on sentences.
Language Conventions	There are no spelling, grammar, or punctuation errors in the final draft.	There is one spelling, grammar, or punctuation error in the final draft.	There are 2-3 spelling, grammar, or punctuation errors in the final draft.	The final draft has more than 3 spelling, grammar, or punctuation errors.

1.2   Thinking About Learning

For a more complete discussion of learning theories and styles, consult the textbooks for this course. For presentation resources visit the Companion Website for *Teaching the Faith* (http://www.andrews.edu/~burton/ttf).

1.2.1   Multiple Intelligence Theory

According to Howard Gardner (1993), human intelligence consists of three components:

?   a set of skills that enables an individual to resolve genuine problems encountered in one's life

?   the ability to create an effective product or offer a service that is of value in one's culture

?   the potential for finding or creating problems which enables an individual to acquire new knowledge

Gardner has identified the following eight intelligences:

Linguistic Intelligence, "word smart," is the ability to think in words and to use language to express and appreciate complex meanings. Used by poets, journalists, effective public speakers

Logical-mathematical Intelligence, "number smart," is the ability to calculate, quantify, consider propositions and hypotheses, and use logic. Used by mathematicians, scientists, and detectives

Bodily-Kinesthetic Intelligence, "body smart," is the capacity to manipulate objects and use a variety of physical skills. Used by athletes, dancers, surgeons, and craftspeople.

Spatial Intelligence, "picture smart," is the ability to think in both two and three dimensions. Used by sailors, pilots, sculptors, painters, and architects.

Musical Intelligence, "music smart," is the capacity to discern pitch, rhythm, and tone. Used by composers, conductors, musicians, vocalists, and sensitive listeners.

Natural Intelligence, "nature smart," is the ability to create meaning and order of the natural world. Used by biologists, naturalists, outdoor educators, bird watchers, and nature photographers/artists.

Interpersonal Intelligence, "people smart," is the ability to understand and interact effectively. Used by teachers, social workers, actors, and politicians.

Intrapersonal Intelligence, "self smart," is the capacity to understand oneself — including one's thoughts and feelings. Used by psychologists, spiritual leaders, and philosophers.

1.2.2 Learning Modes

Learning modes refer to children's preferences for using different senses as they approach learning. While babies and toddlers need to touch, taste, and move in order to learn, as they mature, the senses become more refined. By the early school years children begin to focus on a preferred sense or senses.

Visual learners include children (and adults) who need to see things as they learn. Auditory learners need to hear things and use their listening skills while learning. Kinesthetic learners need whole body involvement. They need to move in order to learn. Tactile learners prefer the use of fine motor skills and touching during the learning process. Modes of learning are not as basic as multiple intelligences, but they are more basic than learning style. Children are not limited to one sensory mode, although they usually prefer one over the others. They should have opportunities to use all four modes to develop abilities, balance, and fle xibility. The table which follows describes the four sensory modes of learning and how you can use them for teaching in church (from *Teaching the Faith: An Essential Guide for Raising Faith-shaped Kids*, pp. 56-57, by Donna J. Habenicht and Larry Burton. Hagarstown, MD: Review & Herald Publishing Association).

1.2.3 Learning Styles

While many different interpretations of learning styles may be found in educational circles, the GraceLink curriculum developed by the Seventh-day Adventist church is based on Lawrence Kolb's learning cycle.

The Kolb learning cycle is based on four different types of learners. The first type, the **Innovative Learner**, prefers creative learning approaches. These learners want to find meaning in their le arning. These learners need reasons why they should learn new material. The Innovative learner thrives on relationships, enjoys working with others, and needs to be personally involved. Discussions, listening & sharing ideas are important for them.

The **Analytical Learner** is the second learning style in the Kolb approach. Type 2 learners are logical, abstract thinkers who like working with facts, ideas, and details. These learners want to know what the experts say. They like to study and investigate a topic. This group wants to organize what they learn and be able to prove their beliefs on the basis of Bible study.

The third type of Kolb learner is the **Common Sense Learner**. As common sense learners, these children want to get to the point. They want to know what difference this is going to make in their lives, how it will work for them, and how they can use it. These children need hands-on experience when learning something new and really want to use what they learn.

Learning Modes in Religious Education

Children who are strongly:	Characteristics	What They Say	Teaching Suggestions
Visual	Remember what they see. Good observation skills. Can describe the setting for almost every major event in their life. Remember what the class saw last week. See more than other students--body language, subtle movements, items which are out of place. Easily distracted by what they see.	"I see what you mean." "Look at this." "Did you see what happened?" "Picture this."	Videotapes, pictures, activity instructions posted at front of the room, draw, create visual memory devices, illustrated songs or stories, watching plays or skits, maps, time lines, graphs & charts.
Auditory	Remember what they hear. Good verbal skills. Can replay the words used in almost every major event in their life. Remember what you promised last week. Hear intonations & inflections in speaking, small sounds others ignore.	"I hear you." "Are you saying . . .?" "Listen to this." "Did you hear about . . .?"	Cassette tapes, sound effects for presentations, storytelling, verbal parts for the audience during story telling, small group discussion, simulated newscasts or radio shows, brainstorm, reader's theater/choral readings, set Scripture to music.
Kinesthetic	Remember what they get involved with physically. Describe the physical movements associated with almost every major event in their life. Remember how you grouped and moved the class last week. Good large motor skills. Move better than other kids. Good at sports or any activities requiring large muscle coordination. Difficulty sitting still.	"I can get into that." "Let's jump in and get started." "I ache for you." "I can feel it in my bones."	Play a role in a play or skit, create large murals, nature scavenger hunts, field trips, service projects, visits to nursing homes and hospitals, charades, activities that require movement.
Tactile	Remember what they touch or manipulate. Describe their feelings for almost every major event in their life. Remember what you gave the class last week. Good small motor skills. More dexterous with their hands than other students. Excel at handwriting, drawing, or painting. Like to have something in their hands; may be distracting.	"That is touching." "I feel the same way." "That rubs me the wrong way." "Could I hold that?"	Art projects, crafts, word puzzles, make maps or diagrams, make a computer slide show, research on the Internet or use Bible software, take notes, posters, small puzzles (jigsaw and others).

The **Dynamic Learner**, the fourth Kolb learning style, learns through self-discovery. These children are the risk-takers who love change and variation in their learning environments. Dynamic learners often use a trial and error approach in learning. They want action. Nothing suits them better than to bring plans to reality.

The Kolb learning cycle is based on a learning cycle that begins with activities suited for type 1 learners and then moves through activities designed for each of the types in order. Multiple Intelligence-based instruction and learning modes can be used within the Kolb learning cycle approach. Providing a variety of activities that address each child's intelligences, sensory modes, and learning styles make a big difference in your teaching.

1.3 APA Learner-Centered Principles

Note: An electronic (PowerPoint) presentation on the APA Learner-Centered Principles is included with this syllabus. Techniques for teaching declarative knowledge are demonstrated during the presentation. These include the Three-minute Pause and Note-Taking Pairs. For more information on how to use these techniques, see the section of the syllabus on teaching facts and concepts. This information could be printed out and distributed to workshop participants to use in a Jigsaw or Expert Jigsaw approach.

The fourteen learner-centered principles are an important tool for planning and delivering instruction. Information about the principles is listed below. This information is taken from or adapted from the APA website http://www.apa.org/ed/lcp.html.

"Throughout its history, psychology has provided vital information for the design of education based on theory and research on human learning, development, and motivation. Research in psychology relevant to education has been particularly informative during the 15 years. Advances in our understanding of thinking, memory, and cognitive and motivational processes can contribute directly to improvements in teaching, learning, and the whole enterprise of education. At the same time, educators concerned with the growing problems of low levels of academic achievement and other indicators of school failure are arguing for more learner-centered models of education. Such models attend to the diversity among students, and use this diversity to enrich learning and to produce results within the context of current educational reform.

The following principles, which are consistent with more than a century of research on teaching and learning, are widely shared and implicitly recognized in many excellent programs found in today's K-20 schools. They also integrate research and practice in various areas of psychology, including developmental, educational, experimental, social, clinical, organizational, community, and school psychology. In addition, these principles reflect conventional and scientific wisdom. They comprise not only systematically researched and evolving learner-centered principles that can lead to effective education but also principles that can lead to positive mental health and productivity.

The following 14 psychological principles pertain to the learner and the learning process. They focus on psychological factors that are primarily internal to and under the control of the learner rather than conditioned habits or physiological factors. However, the principles also attempt to acknowledge external environment or contextual factors that interact with these internal factors.

The principles are intended to deal holistically with learners in the context of real-world learning situations. Thus, they are best understood as an organized set of principles; no principle should be viewed in isolation. The 14 principle are divided into those referring to cognitive and metacognitive, motivational and affective, developmental and social, and individual difference factors influencing learners and learning. Finally, the principles are intended to apply to all learners -- from learners, to teachers, to administrators, to parents, and to community members involved in our educational system.

1.3.1 Nature of the learning process. The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.

There are different types of learning processes, for example, habit formation in motor learning; and learning that involves the generation of knowledge, or cognitive skills and learning strategies. Learning in schools emphasizes the use of intentional processes that students can use to construct meaning from information, experiences, and their own thoughts and beliefs. Successful learners are active, goal-directed, self-regulating, and assume personal responsibility for contributing to their own learning. The principles set forth in this document focus on this type of learning.

1.3.2 Goals of the learning process. The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.

The strategic nature of learning requires students to be goal directed. To construct useful representations of knowledge and to acquire the thinking and learning strategies necessary for continued learning success across the life span, students must generate and pursue personally relevant goals. Initially, students' short-term goals and learning may be sketchy in an area, but over time their understanding can be refined by filling gaps, resolving inconsistencies, and deepening their understanding of the subject matter so that they can reach longer-term goals. Educators can assist learners in creating meaningful learning goals that are consistent with both personal and educational aspirations and interests.

1.3.3 Construction of knowledge. The successful learner can link new information with existing knowledge in meaningful ways.

Knowledge widens and deepens as students continue to build links between new information and experiences and their existing knowledge base. The nature of these links can take a variety of forms, such as adding to, modifying, or reorganizing existing knowledge or skills. How these links are made or develop may vary in different subject areas, and among students with varying talents, interests, and abilities. However, unless new knowledge becomes integrated with the learner's prior knowledge and understanding, this new knowledge remains isolated, cannot be used most effectively in new tasks, and does not transfer readily to new situations. Educators can assist learners in

acquiring and integrating knowledge by a number of strategies that have been shown to be effective with learners of varying abilities, such as concept mapping and thematic organization or categorizing.

1.3.4 Strategic thinking. The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.

Successful learners use strategic thinking in their approach to learning, reasoning, problem solving, and concept learning. They understand and can use a variety of strategies to help them reach learning and performance goals, and to apply their knowledge in novel situations. They also continue to expand their repertoire of strategies by reflecting on the methods they use to see which work well for them, by receiving guided instruction and feedback, and by observing or interacting with appropriate models. Learning outcomes can be enhanced if educators assist learners in developing, applying, and assessing their strategic learning skills.

1.3.5 Thinking about thinking (Metacognition). Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.

Successful learners can reflect on how they think and learn, set reasonable learning or performance goals, select potentially appropriate learning strategies or methods, and monitor their progress toward these goals. In addition, successful learners know what to do if a problem occurs or if they are not making sufficient or timely progress toward a goal. They can generate alternative methods to reach their goal (or reassess the appropriateness and utility of the goal). Instructional methods that focus on helping learners develop these higher order (metacognitive) strategies can enhance student learning and personal responsibility for learning.

1.3.6 Context of learning. Learning is influenced by environmental factors, including culture, technology, and instructional practices.

Learning does not occur in a vacuum. Teachers play a major interactive role with both the learner and the learning environment. Cultural or group influences on students can impact many educationally relevant variables, such as motivation, orientation toward learning, and ways of thinking. Technologies and instructional practices must be appropriate for learners' level of prior knowledge, cognitive abilities, and their learning and thinking strategies. The classroom environment, particularly the degree to which it is nurturing or not, can also have significant impacts on student learning.

1.3.7 Motivational and emotional influences on learning. What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests and goals, and habits of thinking.

The rich internal world of thoughts, beliefs, goals, and expectations for success or failure can enhance or interfere with the learner's quality of thinking and information processing.

Students' beliefs about themselves as learners and the nature of learning have a marked influence on motivation. Motivational and emotional factors also influence both the quality of thinking and information processing as well as an individual's motivation to learn. Positive emotions, such as curiosity, generally enhance motivation and facilitate learning and performance. Mild anxiety can also enhance learning and performance by focusing the learner's attention on a particular task. However, intense negative emotions (e.g., anxiety, panic, rage, insecurity) and related thoughts (e.g., worrying about competence, ruminating about failure, fearing punishment, ridicule, or stigmatizing labels) generally detract from motivation, interfere with learning, and contribute to low performance.

1.3.8 Intrinsic motivation to learn. The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.

Curiosity, flexible and insightful thinking, and creativity are major indicators of the learners' intrinsic motivation to learn, which is in large part a function of meeting basic needs to be competent and to exercise personal control. Intrinsic motivation is facilitated on tasks that learners perceive as interesting and personally relevant and meaningful, appropriate in complexity and difficulty to the learners' abilities, and on which they

1.3.9 Effects of motivation on effort. Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners' motivation to learn, the willingness to exert this effort is unlikely without coercion.

Effort is another major indicator of motivation to learn. The acquisition of complex knowledge and skills demands the investment of considerable learner energy and strategic effort, along with persistence over time. Educators need to be concerned with facilitating motivation by strategies that enhance learner effort and commitment to learning and to achieving high standards of comprehension and understanding. Effective strategies include purposeful learning activities, guided by practices that enhance positive emotions and intrinsic motivation to learn, and methods that increase learners' perceptions that a task is interesting and personally relevant.

1.3.10 Developmental influences on learning. As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.

Individuals learn best when material is appropriate to their developmental level and is presented in an enjoyable and interesting way. Because individual development varies across intellectual, social, emotional, and physical domains, achievement in different instructional domains may also vary. Overemphasis on one type of developmental readiness--such as reading readiness, for example--may preclude learners from demonstrating that they are more capable in other areas of performance. The cognitive,

emotional, and social development of individual learners and how they interpret life experiences are affected by prior schooling, home, culture, and community factors. Early and continuing parental involvement in schooling, and the quality of language interactions and two-way communications between adults and children can influence these developmental areas. Awareness and understanding of developmental differences among children with and without emotional, physical, or intellectual disabilities, can facilitate the creation of optimal learning contexts.

1.3.11 Social influences on learning. Learning is influenced by social interactions, interpersonal relations, and communication with others.

Learning can be enhanced when the learner has an opportunity to interact and to collaborate with others on instructional tasks. Learning settings that allow for social interactions, and that respect diversity, encourage flexible thinking and social competence. In interactive and collaborative instructional contexts, individuals have an opportunity for perspective taking and reflective thinking that may lead to higher levels of cognitive, social, and moral development, as well as self-esteem. Quality personal relationships that provide stability, trust, and caring can increase learners' sense of belonging, self-respect and self-acceptance, and provide a positive climate for learning. Family influences, positive interpersonal support and instruction in self-motivation strategies can offset factors that interfere with optimal learning such as negative beliefs about competence in a particular subject, high levels of test anxiety, negative sex role expectations, and undue pressure to perform well. Positive learning climates can also help to establish the context for healthier levels of thinking, feeling, and behaving. Such contexts help learners feel safe to share ideas, actively participate in the learning process, and create a learning community.

1.3.12 Individual differences in learning. Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.

Individuals are born with and develop their own capabilities and talents. In addition, through learning and social acculturation, they have acquired their own preferences for how they like to learn and the pace at which they learn. However, these preferences are not always useful in helping learners reach their learning goals. Educators need to help students examine their learning preferences and expand or modify them, if necessary. The interaction between learner differences and curricular and environmental conditions is another key factor affecting learning outcomes. Educators need to be sensitive to individual differences, in general. They also need to attend to learner perceptions of the degree to which these differences are accepted and adapted to by varying instructional methods and materials.

1.3.13 Learning and diversity. Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.

The same basic principles of learning, motivation, and effective instruction apply to all learners. However, language, ethnicity, race, beliefs, and socioeconomic status all can influence learning. Careful attention to these factors in the instructional setting enhances the possibilities for designing and implementing appropriate learning environments. When learners perceive that their individual differences in abilities, backgrounds, cultures, and experiences are valued, respected, and accommodated in learning tasks and contexts, levels of motivation and achievement are enhanced.

1.3.14 Standards and assessment. Setting appropriately high and challenging standards and assessing the learner as well as learning progress -- including diagnostic, process, and outcome assessment -- are integral parts of the learning process.

Assessment provides important information to both the learner and teacher at all stages of the learning process. Effective learning takes place when learners feel challenged to work towards appropriately high goals; therefore, appraisal of the learner's cognitive strengths and weaknesses, as well as current knowledge and skills, is important for the selection of instructional materials of an optimal degree of difficulty. Ongoing assessment of the learner's understanding of the curricular material can provide valuable feedback to both learners and teachers about progress toward the learning goals. Standardized assessment of learner progress and outcomes assessment provides one type of information about achievement levels both within and across individuals that can inform various types of programmatic decisions. Performance assessments can provide other sources of information about the attainment of learning outcomes. Self-assessments of learning progress can also improve students self appraisal skills and enhance motivation and self-directed learning." From http://www.apa.org/ed/lcp.html/

1.4 Bloom's Taxonomy

Bloom's Taxonomy of the Cognitive Domain was original developed in the 1950s. It has recently be revised and expanded to increase its value to educators. The taxonomy is organized around six levels of thinking and tasks. For persons who studied the original Taxonomy in the second half of the 20th century will have a bit of relearning to do when they learn the revised Taxonomy. The six levels of the revised Taxonomy have been renamed using parallel language structure. They have also been reorganized to represent contemporary thinking about higher-level thinking. The six levels in the revised Bloom's Taxonomy are as follows, from lowest to highest levels of cognitive thinking: Remember, Understand, Apply, Analyze, Evaluate, and Create.

Another update to the Revised Bloom's Taxonomy is the inclusion of four types of knowledge: Factual Knowledge, Conceptual Knowledge, Procedural Knowledge, and Meta-cognitive Knowledge. Factual knowledge refers to facts and bits of knowledge, such as knowing the details surrounding the crucifixion of Christ. Conceptual knowledge is more complex and requires students to work with concepts or generalizations, such as Jesus' death on the cross as a substitution for my deserved punishment. Procedural knowledge is concerned with "how to do" something, such as how to pray to God. Meta-cognitive knowledge refers to "thinking about thinking." In meta-cognition, our students

are asked to reflect on their learning process and identify personal strengths and weaknesses.

1.4.1   Bloom's Levels and Types of Knowledge Matrix. By arranging the six levels of thinking and the four types of knowledge in a matrix, educators create an assessment tool for evaluating the lessons and curricula they create. One such matrix is found on the next page.

1.4.2   Bloom's Verbs and Products. On the pages following the matrix you will find handouts for your students with examples of verbs and products for each level of the Taxonomy. These handouts will help teachers better understand the types of thinking required at each level of Bloom's Taxonomy. These verbs are useful for creating assignments, questions, and tasks for students.

Bloom's Levels and Types of Knowledge Matrix*

Use for Assessing Your Lessons, Units, and Curricula

The Cognitive Process Dimension	The Knowledge Dimension			
	Factual Knowledge	Conceptual Knowledge	Procedural Knowledge	Metacognitive Knowledge
Remember				
Understand				
Apply				
Analyze				
Evaluate				
Create				

*adapted from Lorin W. Anderson and David R. Krathwohl, (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.

Bloom's Verbs & Products
Level 1

REMEMBER
(I KNOW)

VERBS

recognize	state	memorize
observe	label	show
list	record	describe
acquire	write	repeat
remember	recognize	identify
tell	relate	name
underline	match	know

PRODUCTS

chart	worksheet	picture
model	draw a map	demonstrate

Bloom's Verbs & Products
Level 2

UNDERSTAND
(I COMPREHEND)

VERBS

report	relate	translate
communicate	change	infer
discuss	prepare	restate
review	express	transform
debate	describe	locate
generalize	explain	report
interpret	paraphrase	summarize
draw	give main idea	

PRODUCTS

diagram	diorama	game
time line	make a filmstrip	report
teach a lesson	make a recording	

Bloom's Verbs & Products
Level 3

APPLY
(I CAN USE IT)

VERBS

apply	illustrate	dramatize
show	employ	transfer
role play	investigate	report
practice	operate	conduct
solve	sketch	schedule
experiment	use	classify
manipulate	interpret	solve
restructure	demonstrate	
construct models		

PRODUCTS

survey	cartoon	stitchery
diary	learning center	sculpture
scrapbook	construction	model
photographs	illustration	mobile

Bloom's Verbs & Products
Level 4

ANALYZE
(I CAN BE LOGICAL)

VERBS

analyze	contrast	calculate
inventory	categorize	survey
experiment	question	detect
investigate	criticize	relate
diagram	separate	distinguish
deduce	examine	compare
inspect	discriminate	develop
differentiate	dissect	debate

PRODUCTS

graph	questionnaire	chart
survey	commercial	report
family tree	diagram	fact file
time line		

Bloom's Verbs & Products
Level 5

EVALUATE
(I CAN JUDGE)

VERBS

judge	justify	appraise
measure	select	debate
rate	validate	choose
verify	revise	consider
decide	argue	score
standardize	evaluate	recommend
estimate	critique	assess

PRODUCTS

survey	panel evaluation	essay
self evaluation	recommendation	letter
editorial	conclusion	
experiment	court trial	

Bloom's Verbs & Products
Level 6

CREATE
(I CAN PLAN)

VERBS

create	construct	imagine
assemble	invent	design
improve	manage	compose
modify	produce	prepare
predict	suppose	propose
derive	organize	arrange
plan	set up	formulate
what if . . .		

PRODUCTS

story	news article	comic strip
poem	invention	recipe
play	dance	pantomime
radio show	mural	travelogue
puppet show		

Section 2: Teaching Principles from Christ

2.1 Establishing a learning environment

The atmosphere of any classroom or learning environment is shaped by subtle and direct influences. There are two primary areas in which a Christ-like atmosphere is created and communicated – the *physical* environment of the classroom and the *emotional* environment of the classroom. Each of the following points has been derived from a scriptural analysis of Jesus' teaching in the Gospels. [This research by Larry Burton of Andrews University and Constance Nwosu of Canadian University College was still in process when this syllabus was created.]

Presentation tip – The following information is included on a Power Point presentation on the CD. When using that presentation, I present one or two of the principles listed below and then ask my students to work in small groups to identify examples from the ministry of Christ that demonstrate the principle.

2.1.1 Physical Environment

First, Christ created an orderly learning environment for his students. Principles he used to create order for learning included the following:

Create order according to the activity. In His teaching Christ varied the "classroom" arrangement and organization according to what He wanted the learners to accomplish. Sometimes he taught to large crowds, sometimes he organized large groups into smaller groups for an activity, while at other times he taught a single individual.

Form small groups. Jesus had thousands of followers. However, He organized these disciples into small groups to improve the learning and application of learning. He sent 72 disciples out to minister in pairs. From a larger group of disciples He selected 12 apostles. From this group of 12 He selected a leadership core of three persons.

Give learners responsibilities. At different times Jesus assigned specific jobs to His students to develop their leadership and service potential. He told Peter to pay the temple tax with money from a fish's mouth he caught, He healed Peter's mother-in-law so that she could attend to her guests, and He sent his followers to prepare for the last supper.

Allow for movement. Jesus did not keep His learners sitting or standing in one position for long periods of time. He delivered His instruction in such a way as to allow for movement of the individual to meet the normal needs of the human body. He often taught while walking with a group. When He taught and fed large groups He typically signaled the transition between his sermon and other learning activities by asking the crowd to reorganize themselves into smaller groups. Physical movement combined with social interaction surrounding the miraculous meal, coming immediately after the teaching delivered in the sermon, provided an ideal environment for small group discussion of the Master's teaching and its implications for the learners' lives.

Ensure Physical Safety in the Classroom. Jesus paid attention to the "classroom" behavior of his students and ensured that students whose behavior was compromising the learning or physical well-being of the other learners. For example, He stood between his disciples and the demoniac on the shores of Galilee. His disciples fled, but He remained to "correct" the demoniac's behavior and make it safe for him to join the companionship of Jesus' followers. Again, in Gethsemane Jesus intervened when Peter tried to use violence to change the course of events. Peter didn't understand that Jesus was teaching through submitting to the will of God in the arrest, trial and crucifixion. Jesus stopped Peter's violent behavior and did what was within His power to correct the injury inflicted.

2.1.2 Emotional Environment

Love Your Students. Jesus knew that if His disciples didn't feel accepted by Him, they would not want to learn from or of Him. He used several specific techniques to let his students know He loved and accepted them. First, He prayed for His students and He told them so. In His interaction with the disciples, He used their names. They were individuals to Him, not just members of a group, and He reminded them of that every time He called them by name. A third way that Jesus helped His followers understand His acceptance of them was through spending time with them outside of "class." He did not teach them and then leave them so he could be alone. He spent many hours with them in the absence of formal instruction. It is not surprising that the first recorded miracle of Jesus was performed at a social function where He was spending time with friends and family. Jesus was also a visitor in the homes of His students. He knew where they lived and He knew their families.

Help Learners Love Each Other. Jesus understood that one of the purposes of His earthly ministry was to prepare disciples to continue and extend his work. For His disciples to be able to apply what they had learned during their time with Him, acceptance and support from their fellow disciples was critical. It is no surprise the Jesus often organized His students into small groups or teams for important assignments. He also took steps to promote interdependence among His disciples by assigning roles and responsibilities.

Develop Academic Trust. One thing students always want to know is does the teacher like me (see "Help Learners Feel Accepted by Their Teacher" above). Closely behind this question come several others. These include "Can I do the work in this class?" and "Is this worth learning or doing?"

These are questions teachers in Sabbath schools need to remember. When we ask children to do something in our classes, we need to make sure the assigned task is within the ability of the children in our class. We also need to make the task or activity relevant to the child's life. Jesus followed these principles in His ministry. When He assigned tasks to His disciples, He often provided "scaffolding" or support to help them complete the task. For example when He taught them to pray, He gave them a model prayer to follow in their future prayers.

Ensure Emotional Safety in the Classroom. As humans, we are often more emotionally sensitive that we like to admit. We often fear insult, alienation, or harsh treatment. Children,

while resilient, are even more susceptible to emotional injury. It is our job as teachers to ensure that we follow Jesus' example and in our teaching show respect for all children of God. Jesus included the members of society who were already included. He did not ignore the leaders, such as the Pharisees and Sadducees. However, He went beyond these groups to include the marginalized – such as uneducated fishermen, tax collectors, and Israeli women. But what perhaps shocked people the most during His ministry was that He included the excluded. He ministered to sinners, Gentiles, prostitutes, and lepers. Society as a whole felt these persons were not worthy of notice, but Jesus saw traces of the image of God in all fallen humanity and worked for its restoration.

Section 3: Teaching Approaches

2.1 Teaching Facts and Concepts

Facts and concepts form a foundation of learning. Our ability to extend our learning and function at higher levels of thinking depends on the foundation of factual and conceptual knowledge we have internalized. Facts, events, and concepts are known collectively as declarative knowledge. Declarative knowledge is one of the most common types of knowledge we want children to learn. Declarative knowledge includes things we want children to *know* and *understand*. Teaching declarative knowledge involves three stages of instruction: (1) helping children build their understanding, (2) helping children fit their new learning with their prior knowledge, and (3) helping children internalize (memorize) their learning. Teachers can use several different teaching techniques for each of these three stages.

2.1.1   Building Understanding

There are several techniques teachers can use to help children build their own understanding of declarative knowledge. Three examples of these teaching techniques include the KQL graphic organizer, using the senses, and the three-minute pause.

KQL. In using the KQL graphic organizer, the teacher first prepares a worksheet with three columns. One column is labeled "K", the second is labeled "Q", and the third is labeled "L" (see example below). The teacher starts using the KQL by asking the children to list the things they already "Know" about a topic in the column labeled "K". This can be done as a whole group with young children or in groups of two or three with older children. Next the children list "Questions" they can think of for a topic. After the "K" and "Q" columns are completed, the teacher proceeds with the rest of the lesson while keeping the children's comments in mind. The teacher should adjust her instruction based on what children already know (just provide a brief review of those ideas) and what they want to learn about something. After the lesson is completed, the children return to the KQL to complete the "L" column. In this column the children list what they "Learned" during the lesson. A lesson may last one class period or continue over several weeks.

Using the Senses. Too often in teaching we rely on teachers talking and showing while the children listen and look. Involving more of the senses will help children understand better. Rather than tell about biblical culture and show artists' renderings of biblical scenes, why not bring authentic garments, foods, and fragrances into the Sabbath school class. Create lessons that allow children to see, hear, touch, smell, and taste what you want them to learn. The more senses children use during learning experiences, the larger the number of connections within the brain for the experience.

Three-minute Pause. The Three-minute Pause is used in combination with teacher talk or lecture (for older children only). While lecture is an efficient way of transmitting factual knowledge, sometimes the lecturer's ability to share knowledge is greater than the learners' abilities to receive the knowledge. The Three-minute Pause is a technique that takes into consideration the attention span of the learner and the need of individuals to work with new learning in order to understand it. The steps for using the Three-minute Pause may be found after the KQL graphic organizer.

2.1.2 Fitting New Learning with Previous Knowledge

Techniques that help children organize their new learning so that it fits with their prior learning include using graphic organizers and outlines. This syllabus includes resources for using KQL, T-Chart, and Venn diagrams. The instructions for KQL were given in the previous section. This graphic organizer is useful for both building understanding and organizing new learning. Many teachers are also familiar with the standard use of outlines for organizing information. Outlines are another technique for helping children organize the new information they are learning.

T-Chart. The T-Chart helps children organize their new learning by looking at it in depth through two perspectives. The purpose of the T-Chart is to help children understand complex, fuzzy concepts such as "putting God first." The T-Chart consists of a "T" shape that divides a sheet of paper into two columns and two rows (see the example below). On the top row, the teacher labels the two columns "Looks Like" and "Sounds Like." Then under each heading the children come up with examples of things they would *see* if they saw the concept in action and write those in the column labeled "Looks Like". In the column labeled "Sounds Like," the children write examples of phrases people would say or sounds they would hear when observing the concept. See the example of a completed T-Chart in this syllabus.

Venn Diagram. While engaged in the learning process, students often need ways of organizing new knowledge to make it meaningful. A Venn Diagram is one example of a graphic for organizing observations or comparing two concepts, events, or persons. Venn Diagrams represent the similarities (comparing) and differences (contrasting) between objects by representing each with a circle. Where the circles overlap, students record the similarities between the objects or concepts. Where the circles do not overlap students record the unique attributes of each object/concept.

But recording and organizing observations is not the only function of Venn Diagrams. These diagrams are excellent sources to help organize a child's oral or written responses. For example, after recording observations and organizing them according to similarities and differences, children can use the Venn Diagram as an organizer for writing a comparison essay. The essay begins with an introduction to the two objects or concepts, continues by describing the differences of each, moves on to the similarities of each, and concludes with a summary statement. For most children ages 6-12, the entire essay could be five or six sentences. With older children, each part of the essay could require one written paragraph.

2.1.3 Storing Knowledge

The need to store what we learn is a constant battle for some children. However, there are techniques beyond rote repetition that help children internalize or memorize new learning so they can recall it when needed. Here are three principles for helping children memorize. The companion book presents several specific strategies in some detail. Three principals of memorization are attention, chunking, and association.

Attention. The first principle of memorization is that the child must pay attention to what is being learned. Some products advertise they help you learn long lists of information without

event trying, but that is impossible. You must give focused attention to anything you want to memorize.

Chunking. The second principle of memorization concerns how much we can effective store at one time. We cannot efficiently remember long lists of separate items. Our minds work better at memorizing five to seven items at a time. Once we have memorized a cluster of five to seven items, we can then start thinking of that cluster as one chunk or one item in our memory. This allows us to recall large amounts of information because each item we recall, in turn contains five to seven smaller bits of information.

Association. The third principle of memorization is that we can remember anything that we associate with something else. I have a colleague who is very visual. His preferred memory technique is one where he visualizes all of the rooms in his house. He then makes a mental association between a specific location in the house, like a cookie jar, with a fact or concept he needs to remember. He puts similar types of knowledge in the same "room" and stores other ideas that belong together in another of his mental "rooms." Here are three additional techniques for association:

> **Rhyming link (peg) words.** Children love to rhyme. This innate love can serve as a memory aid as well. If children have trouble with new words or memorizing new ideas, have them find words that rhyme with the new material to be learned. Then the child can use the familiar words sounds to help them recall the new information.

> **Key words.** Another technique for remembering larger chunks of information is to focus on remembering the key words. Once you remember the key words associated with the concept, it is easier then to remember the details that define the concept.

> **Ridiculous.** The more ridiculous we make the association, the better it will help us remember. Some persons learn to use all of these principles and techniques together and create ridiculous stories or drawings that use the key words for the content they need to memorize. Then they use the story or picture to help themselves recall what they learned.

Topic: _____   Name: _____ Date: _____

K	Q	L

Three-Minute Pause
Step-by-Step

1.   Lecture or present teacher talk for 7-10 minutes

2.   Pause and ask the children to complete the following tasks:

    1. Turn to your neighbor and have each person share what you felt were the most important items shared in the talk
    2. Next identify any ideas that were not clear to you
    3. Finally list any questions the presentation made you think of.

3.   Present the next segment of lecture or teacher talk for another 7-10 minutes
4.   Repeat the three steps of the Three-minute Pause
5.   Allow children to ask for clarification of unclear ideas and the questions they generated.

T-Chart
Topic: Disagreeing in a Nice Way

Looks Like	Sounds Like
Making eye contact with a small shake of the head	"That's and interesting idea, but . . ."
Smiling while making your statement	"I understand what you're saying . . ."
Listening to the other person's ideas before commenting	"We might also want to consider . . ."
Shrugging your shoulders slightly	"No, thank you."
	"I don't agree, because . . ."

T-Chart

Topic:

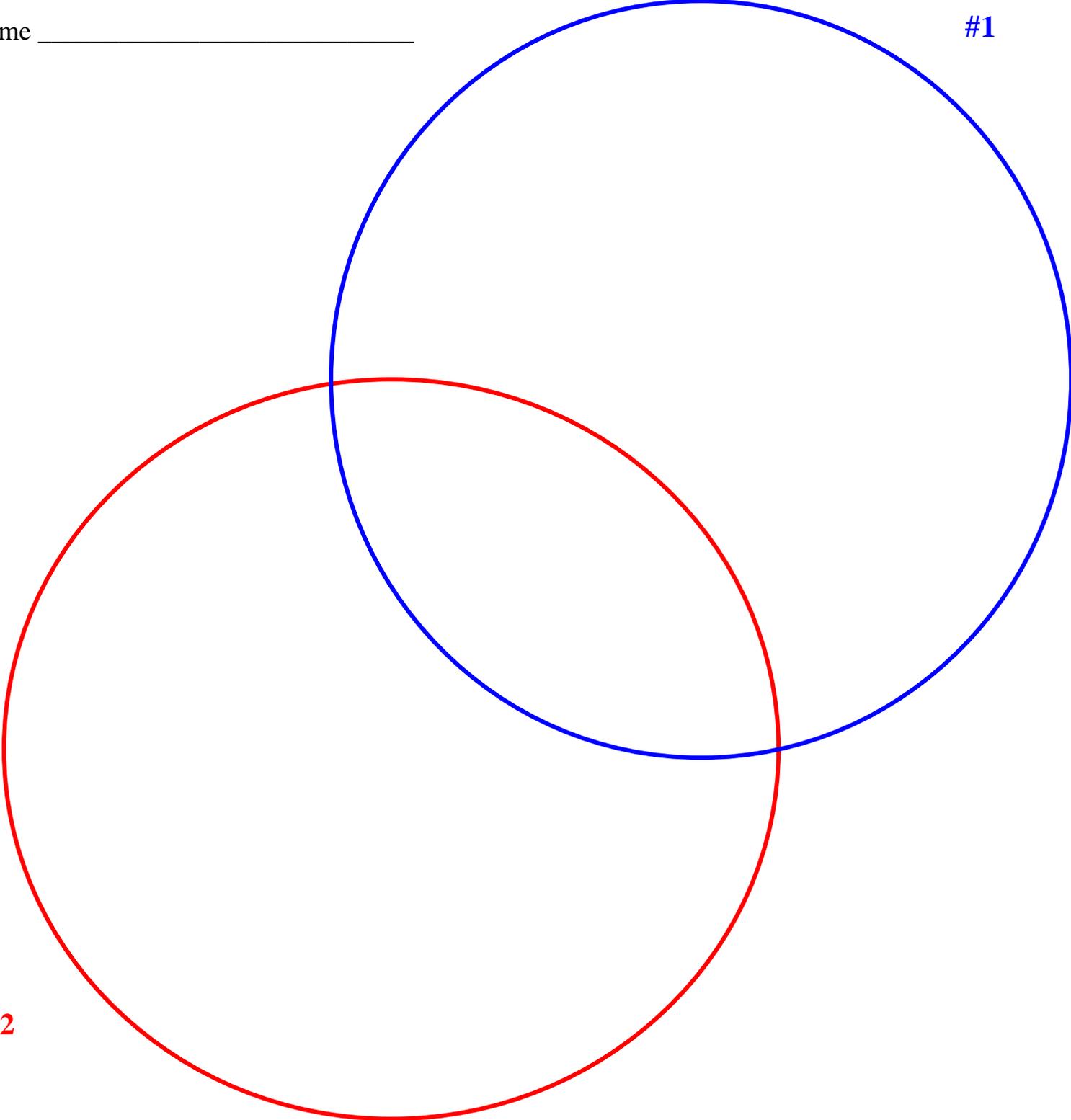| Looks Like	Sounds Like

Venn Diagram

A comparison of _____

Name _____

#1

#2

3.2 Using Stories

Bible stories have been effective teaching tools for thousands of years. In *Teaching the Faith: An Essential Guide for Building Faith-shaped Kids*, Donna Habenicht and I present a basic ten-step process for using stories of all kinds in teaching children (pp. 122-124). The steps are as follows:

3.2.1   **Select a great story.** These stories can come from your own life, the Bible, magazines, or books. Keep all your great stories in an easy to find location, such as a notebook or a file folder.

3.2.2   **Learn the story.** Read and reread the story. Memorize the flow of action and events in the story, not the specific written words. Try to picture the story in your mind as you tell it. Decide how you will start and how you will end the story. And don't be afraid to use cue cards.

3.2.3   **Select props.** The type and number of props you will use depends on the nature of your story and the age of the children you are telling it to. Be sure to know the interest level of your audience and what props or actions will draw them in to the story.

3.2.4   **Practice out loud.** This is particularly important for new story tellers. Stand in front of a mirror or recruit other adults to listen as you practice. Recruit children from outside of your Sabbath school class and practice the story with them.

3.2.5   **Get the children's attention.** Grab the children's attention from the start. Begin with an action scene, a prop, a question, or a surprise.

3.2.6   **Tell the main events in logical sequence.** Adding too much detail is a common mistake beginning story tellers make. Focus on the main events and avoid unnecessary embellishments. The younger the children, the fewer details they can follow.

3.2.7   **Make the story sound natural and true.** Use language the children can understand. Use conversation. Mimic sounds in the story.

3.2.8   **Close your story at the peak of interest and conviction.** After the climax of the action in the story, bring it to a quick close. Don't sermonize or summarize the story and the lesson you want the children to learn. If your story is told well the children will "discover" the lesson and expand on it during the discussion of the story.

3.2.9   **Engage the children in discussion of the story.** Use the guidelines found in this syllabus for creating good questions and fostering discussion in Sabbath school. Ask the children what types of decisions the characters had to make. Ask them how the characters felt, if their actions were positive or negative.

3.2.10 **Prayer is essential.** As you prepare your story, be sure to ask for God's guidance, both in the preparation and in the actual lesson. You are not alone in your ministry to God's children.

3.3   Questions and Discussions

3.3.1   Framing Good Questions

Limit the number of factual recall questions. While knowing the facts of a biblical event is important, we need to make sure that our questions move beyond the "Remember" and "Understand" levels of Bloom's Taxonomy. Remind training participants to review the questions they plan for a Sabbath school lesson to insure they are asked at various levels and get at different types of knowledge. The "Cognitive Processes and Types of Knowledge Matrix" presented in this syllabus is a good tool to help teachers map the kinds of questions they develop for a Sabbath school lesson or activity.

Ask questions that make children think. This principle complements the previous principle. We need to move our children beyond simple factual understanding of biblical events, stories, and verses. We do this by framing questions that fit in the upper levels of Bloom's Taxonomy: Apply, Analyze, Evaluate, and Create.

Ask children to relate biblical events and principles to their lives. Getting children to explore and explain how biblical events and principles relate to their personal lives is another important principle for Bible study and discussion. Children's responses give the teacher an opportunity to "see" inside the child's mind. The teacher may discover the child misunderstands a biblical principle. Perhaps the teacher will discover a child chooses to hold another belief instead of the biblical principle presented in the lesson. By better understanding how the children in our class are thinking, we as teachers are better able to design learning activities that present the truths our children need to learn and apply.

Write your questions in advance. The typical teacher is terrible at creating good, thoughtful questions while a lesson is underway. It is critical to write potential questions out in advance of teaching the lesson. Almost all questions created while a lesson is in process ask for simple factual recall. These are the most boring of all questions and don't provide natural openings for discussion. By writing questions in advance, the teacher can analyze them to see if she is truly writing a variety of levels of questions.

3.3.2   Principles for Promoting Sabbath School Discussions

Jesus told His disciples to let the let children come to Him. He wanted ALL of the children to be allowed to approach Him. I imagine that if Jesus were to teach a Sabbath school class, He would want all children to be actively involved. During discussion time the teacher's actions usually determine whether all children will be involved or whether some will sit silently and not participate. I also believe that if a question is important enough to ask during class time, then it is important for ALL children to respond to it. That my seem impossible when you think about the typical discussion pattern for Sabbath school (and other) classes. It usually goes something like this.

First, the teacher asks a question. Second, children with answers raise their hands. Third, the teacher calls on a student to answer. Fourth, that student replies so that all children can hear. Finally the teacher tells whether the answer was correct or incorrect.

In this scenario very few students ever get to voice their ideas or to discuss their agreement or disagreement with classmates. If the teacher calls on volunteers, troublemakers, or 'sure-bets' then most children in the class have little chance to benefit from class discussion. A more equitable solution is to use this pattern for class discussion.

First the teacher poses a question. Next, the teacher allows 'wait time' for all children to think of their answer. Third, the teacher asks students to share answers with a partner. Fourth, the teacher randomly selects a few children to share responses with the whole class. Next, the teacher allows for volunteers to share responses to the question or reactions to other children's responses. Finally, if appropriate, ask follow-up questions based on the children's responses. Many of these principles are explained in greater detail below.

Providing "Think Time." Giving children time to think about their response to a question or their response to a scenario is one of the most important things a teacher can do to promote thoughtful discussion. Too often, as teachers, we feel uncomfortable with silence. As a result we want someone to answer immediately after we ask a question. But that allows no time for children to think about the questions. Some children can respond quickly to questions, but many children and adults need a few seconds to prepare a response. Even allowing a three-second pause after asking questions will increase the number of children who are able to respond.

Avoid calling on volunteers. The problem with calling on volunteers is that the same children always volunteer. Usually about 20% of the students account for 80% of the responses to questions. In large groups even fewer persons will volunteer. Have children share their answer with a friend first (see below) and then randomly call on a few students to share a response with the whole class.

Don't always ask 'troublemakers' to answer your questions. Sometimes we find ourselves teaching a child who is a constant behavior problem. It is easy to resort to asking questions of the group and then calling on the 'troublemaker' in an effort to keep him or her on task and out of 'trouble.' However, this practice is not fair to other children in the class. Other children need opportunities to respond to questions and prompts. They need to hear ideas from more than one or two other children in the class.

Allow children to share ideas with a friend. One of the reasons many children and adults are hesitant to share their responses to questions is insecurity. Many of us don't feel comfortable giving a reply to a group of persons even if we think we have a good idea to share. We are afraid of looking silly or embarrassing ourselves. This problem can be avoided by asking our students to share their answers with one other classmate. Sharing our ideas with one other person is not such a stressful act as is sharing with a whole class. Sometimes a child will discover they were giving an incorrect answer and their partner can correct them. Other times a child may discover their partner thinks their answer is really good. When having children share answers with a

friend, the teacher will need to 'work the crowd' by moving around the class to ensure that all children are discussing the question the teacher asked.

Have some children share responses with the whole group. After children have discussed a question with a partner, the teacher may want to have the whole class hear some of the responses. This can be done by randomly selecting two or three children to share with the full group. Each child who is called on to respond to the whole class can choose to share either her own answer or the answer she heard from her partner. If you do not randomly choose children to share with the whole group, you will need to have a way of keeping track of which children you have called on. You need to ensure that all children get the opportunity to respond.

Don't force children to respond to the whole group. Some children may not want to respond in front of the whole group. It is important that you honor their preference to not respond. They may choose to have their discussion partner reply instead of replying themselves. However, you should continue to give them the opportunity to respond by calling on them periodically. As you use this process and your class begins to see it as normal, even shy children may become comfortable enough to share answers with the whole class.

Don't limit "acceptable" responses to your personal response. Many times as we prepare to teach a particular lesson, we develop new understandings of a Bible verse or principle. Sometimes we create open-ended questions that cluster around this new insight. However, as an inspired document the Bible has many things to teach from a single chapter, story, or verse. Perhaps you have observed a Sabbath school class where the teacher asked an open-ended question and then "fished" for the response they had in mind. When someone finally comes up with the idea the teacher was looking for, the teacher pronounces that response a "good" answer. As a result of looking for someone to express the ideas she had in mind, the teacher can overlook important insights suggested by class members. As teachers we need to be open to multiple lessons that God is teaching our students through His word.

To extend the discussion, frame follow-up questions based on responses. Many times the children in your Sabbath school class will raise new ideas or unique insights into the topic being studied. Sometimes the children will demonstrate misconceptions about key biblical ideas. With practice, teachers can develop the ability to create follow-up questions while the discussion is in process to get the class to think more deeply and critically about the new ideas, insights or misconceptions raised by the previous responses. Sometimes you may find the initial responses to your questions are shallow or limited. Follow-up questions can be used in those situations to help the children develop a more complete understanding of the issue, event, or idea.

3.4 Basic Corporative learning

3.4.1   Cooperation, not Group Work. Many people react negatively when they hear the phrase "cooperative learning." Their minds immediately turn to a time in school when they were asked to work in a group on a project. Often their experience went one of two directions. Either they did almost all of the work to ensure a good grade or someone else did almost all the work and they did virtually nothing. It is important to make the distinction between group work (just described) and cooperative learning.

Cooperative learning has two primary defining characteristics that separate it from group work. They are (in educational jargon) (1) Positive Interdependence and (2) Individual Accountability. In simple language, these two characteristics are (1) everyone in the group needs each other in order to be successful and (2) every person is responsible for their own learning. When these two characteristics are in place, cooperative learning can help children learn while meeting their need for social interaction at the same time.

3.4.2   Cooperation in the Bible. There is a great level of support for cooperation in the Bible and in the Spirit of Prophecy. *Education* contains a chapter titled **"**Cooperation." That chapter and the verses that appear on the following page can be used as the basis for learning activities for the Teaching Principles course. Step-by-step instructions for several cooperative learning 'structures,' or teaching processes, can be found following the "Cooperation in the Bible" handout. Teachers can use these structures in their Sabbath school teaching without worrying about Positive Interdependence and Individual Accountability. Those two characteristics of cooperative learning are built into these cooperative learning structures. As presenter of this course, you can use these same structures as you present the content of this syllabus. That will provide the workshop participants with the experience of participating in the cooperative learning process before they try teaching with it.

Cooperation in the Bible

OLD TESTAMENT

Tower of Babel	Genesis 11
Instructions to Moses regarding judging Israel	Exodus 18
Building the Tabernacle	Exodus 25
Rebuilding the wall	Nehemiah 2:20 & 3:1-32
Blessing for unity	Psalm 133
Sharpening one another	Proverbs 27:17

NEW TESTAMENT

The Golden Rule	Matthew 7:12
Feeding the 5000	Matthew 14:15-21
Sending out the disciples	Luke 9:1-6, 10:1
Washing the disciples feet	John 13
The vine and the branches	John 15
Sharing and cooperating	Acts 4:32
Deacons minister to widows	Acts 6
Paul and Barnabas together	Acts
The working of the body	I Corinthians 12
Burdens	Galatians 6:1-10
Unity	Ephesians 4
"One another"	Ephesians 4:31-32; Philippians 1:27; 2:1-8
Encourage and comfort	I Thessalonians 4:18
Everyone a teacher	Titus 2
Exhorting one another	Hebrews 10:24-25

3.4.3 Basic Cooperative Learning Structures

I have included a brief description of each of the following simple cooperative structures on the following pages. These are printed each on a separate page so you can copy them and use them as handouts in your training programs. Encourage your participants to use them in their teaching as well. They could post them in the classroom and teach the students each technique as they use it.

- ? Blooming Worksheets
- ? Corners
- ? 4S Brainstorming
- ? Jigsaw
- ? Numbered Heads Together
- ? Pairs (Turn To Your Neighbor)
- ? RoundTable
- ? Share
- ? Team Projects
- ? Think-Pair-Share
- ? Think-Pair-Square
- ? Think-Square-Share
- ? Values Line (Continuum)

Here are the definitions of several basic terms used in these structures that will help you better understand the step-by-step instructions as you read them.

Pair – A group of two children/students. During pair time, the two children are to follow the teacher's directions, such as discuss their response to a question.

Share – During Share time, the teacher selects children to share their responses to questions or learning prompts with the whole class. Four techniques for letting children share their ideas and answers can be found on the page labeled "Share" below.

Square – A group of three to four children/students seated in a circle or at a table. During square time, the children are to follow the teacher's directions, such as discuss their response to a question.

Think – This term refers to "think time" given to individual children to decide what their response is to a question or learning prompt. Unless the teacher allows several seconds for all children to think of their answer, you will end up relying on the children with the fastest mental processing skills and the other children will not try to "think" because they know someone faster will be called on.

Most of these cooperative techniques or structures are presented in more depth in the book *Cooperative Learning*, by Spencer Kagan, which is published by Resources for Teachers, San Jaun Capistrano. The book can be ordered by calling 1-800-WEE-CO-OP in the United States.

Blooming Worksheets

Blooming Worksheets are designed to be completed in cooperative groups. The structure of the worksheet is based on Bloom's taxonomy. Therefore each worksheet will include at least one item from each of the levels of Bloom's taxonomy: remember, understand, apply, analyze, evaluate, and create. Since the worksheets are to be completed by cooperative groups, each worksheet also typically includes a sponge activity or lesson extension for those cooperative groups which finish early. An example, based on readings about the geography of Kenya, is pasted below.

Blooming Worksheet
Solomon's Kingdom

Complete all of the following tasks, but not on this page:

1.   (Remember) List the countries and natural features that formed the boundaries of Solomon's kingdom.

2.   (Understand) Describe "Solomon's" Temple.

3.   (Apply) If you were traveling to the Temple for the Passover, what type of clothing would you need to take along for the weather?

4.   (Analyze) Compare and contrast David's Kingdom with Solomon's Kingdom. Which kingdom was most like the current nation of Israel? Support your choice with at least three (3) facts.

5.   (Evaluate) Do this individually: Select the one geographic region or city in Solomon's Kingdom you would most like to visit and explain why. Write a paragraph explaining your choice. Include a topic sentence, statements of fact and opinion that support your topic sentence, and a concluding statement.

7.   (Create) Illustrate one of the pieces of furniture in "Solomon's" Temple.

Sponge Activity (if you finish early)

8.   (Create) If Solomon's Kingdom were turned into a musical selection, what instruments would be playing? Why?

Corners
Step-by-Step

Corners is a cooperative technique that requires students to choose one expression of four different options and then verbalize the reasons for their choice. Here is the procedure for corners:

1.   Present the question and four possible responses

2.   Think time. Students decide on their personal choice.

3.   Announce corners. You can actually post the choices in the different corners.

4.   Students group in corners. Form pairs and express reasons for their choice.

5.   Paraphrase. Pairs form squares and paraphrase their partner.

6.   Corners report. Teacher calls on students from one corner to announce to the class reasons for their choice.

7.   Corners paraphrase. Student pairs in the other corners paraphrase these reasons. Step 6 and Step 7 are repeated for each corner.

8.   Teams review. Make sure everyone in each team can name reasons supporting each choice.

4S Brainstorming
Step-by-Step

1. Introduce the rules for brainstorming sessions:
    a. **Speed**: go as fast a possible
    b. **Synergy**: build on the ideas of others
    c. **Silly**: what may seem like a silly idea one minute may lead to a fantastic idea a minute later. Suggest something silly on purpose
    d. **Support**: this is a team effort -- no put-downs or slamming of peoples' ideas

2. Assign team roles.   One member of each team will be responsible for enforcing each of the rules listed above. If you know how to construct T-charts, build a T-chart for each of the rules above. If you are not familiar with T-charts, ask each cooperative team to come up with actual words, phrases, or sentences that a person could say to encourage the team to follow each of the rules above. For example, to encourage the speed rule a team member could say, "Faster, faster, faster."

Jigsaw
Step-by-Step

1.   Prepare the information --
       Divide the information that needs to be presented into roughly equal
       parts (typically four). Label these #1, #2, #3, and so on.

2.   Distribute the information —
       In each cooperative group, each individual is assigned one part of the
       information. (Use materials monitors or materials gophers to
       distribute the information.)

3.   Individual students work --
       a.   Each student reads his or her information;
       b.   The student decides on the most important details to learn from
              this information; and
       c.   The individual student decides the best way to teach this
              information to the cooperative group.

4.   Experts Teach
       Each student has an assigned amount of time to present their
       information to the cooperative group.

5.   Assessment
       The teacher decides on an appropriate method of assessing the
       students' learning. This could be a traditional quiz or an alternative
       assessment.

Numbered Heads Together
Step-by-Step

1. Teacher plans for type of responses. For example:
   > Black Board Response – Designate a section of the chalk board for each team
   > Slate Response – give each team a small slate, chalk, or white board
   > Choral Response – each team representative calls out the answer

2. Each person on a team takes a different number beginning with one (1).

3. Teacher poses a question.

4. Teams put heads together and decide on their answer.

5. Teacher calls time. Team discussion stops.

6. Teacher randomly selects a number (use a spinner or deck of number cards).

7. Those students whose numbers were selected respond as directed by the teacher.

8. Repeat steps 3 - 7 until all questions are answered.

You may give each team a point for each correct answer and then calculate a quiz grade for the team members if you choose.

Pairs
Step-by-Step

Pairs, sometimes called **Turn to Your Neighbor**, **is** perhaps the simplest cooperative technique. The procedure works like this:

1.   The teacher poses a question.

2.   The students form pairs.

3.   The pairs discuss the question.

Roundtable
Step-by-Step

1.   Teacher poses a question.

2.   The first student in each group writes down their response and passes the paper to the second student.

3.   The second student in each group writes down their response and passes the paper to the next student.

4.   This process continues (without talking) around the table.

For some questions, you may want the group to send the paper around the table only once. For other questions you may want to have the paper go around the table several times, sort of like a silent brainstorm session.

Typically after the paper has gone around the table the teacher has plans for sharing the results with the class or another group. Sometimes the teacher will assign a particular follow-up activity based on the list generated during the Roundtable.

Note: If you follow the same procedure orally, you call it *Roundrobin*.

Share

Options for Having Students Share with the Whole Class

Shuffle the Deck -- Have students' names on 3x5 cards and randomly draw names and call on the students.

Volunteers -- Be careful or the same old students will respond every time.

Simultaneous Share -- Have each pair of students write their responses on a large sheet of paper (or an assigned portion of the chalk board) in large letters. Then one student from each pair posts the sheet on the wall so everyone can see it.

3 Stay - 1 Stray — One representative from each cooperative team travels to the next cooperative group as an official reporter.

Team Projects

Team Projects can range from simple to complex. One primary outcome of team projects is synergy or team building. Team projects can be as simple as designing a team formation from gum drops and toothpicks. They can be as complex as a team chooses. However simple or complex, team projects should share the following characteristics:

1.   Equal participation — All team members have an important function to perform.

2.   Division of labor or responsibilities — For simple projects assign roles. For complex projects divide the job so that everyone shares equally.

3.   Regular team meetings and debriefings — Simple projects could be finished in a single class period, but the team should still evaluate their efficiency as a group. For complex projects, team members need to meet regularly to report on progress and discuss ways of improving group effectiveness.

4.   A team product — When completed, teams should present a final, polished product.

Simple Team Project Examples

These team projects are designed to help cooperative learning teams develop their team identity. Opportunity should be provided for each team to share or demonstrate each of these team products. (I have identified the intelligences I feel each activity requires.)

1. Choose a name for your team that fits with [class topic]. (Linguistic, Interpersonal, Logical)

2. Make a team logo. This is a graphic (drawing, etc.) that represents your group. It should be prominently displayed in your team area. Check with your teacher about where to display this. (Visual, Intrapersonal, Interpersonal)

3. Team Number - choose a number and be able to form it with your bodies. (Mathematical/Logical, Bodily/Kinesthetic, Interpersonal)

4. Team Handshake (Bodily/Kinesthetic, Interpersonal)

5. Team Song/Rap (Rhythmical/Musical, Linguistic, Interpersonal)

6. Team Cheer (Linguistic, Bodily/Kinesthetic, Interpersonal)

7. Team Mascot -- Select an animal or plant that represents your team. (Naturalist)

Think-Pair-Share
Step-by-Step

1.   Teacher poses a question.

2.   Individuals *think* about their answer (you may request the students to write down their ideas)

3.   Students form *pair*s and share their ideas with a partner. The simplest way to form pairs is to have the students turn to the person sitting next to them. Or if students are sitting in groups of four, have the foursome form two pairs. You will probably end up with one group of three since many classes have an odd number of students.

4.   Students *share* with the whole class. They may share their own idea of that of their partner. There are many ways to do this. You decide which to use:

> **Shuffle the Deck** -- Have students' names on 3x5 cards and randomly draw names and call on the students.

> **Volunteers** -- Be careful or the same old students will respond every time.

> **Simultaneous Share** -- Have each pair of students write their responses on a large sheet of paper (or an assigned portion of the chalk board) in large letters. Then one student from each pair posts the sheet on the wall so everyone can see it.

> **3 Stay - 1 Stray** — One representative from each cooperative team travels to the next cooperative group as an official reporter.

Think-Pair-Square
Step-by-Step

1. Teacher poses a question.

2. Individuals *think* about their answer (you may request the students to write down their ideas)

3. Students form *pair*s and share their ideas with a partner. The simplest way to form pairs is to have the students turn to the person sitting next to them. Or if students are sitting in groups of four, have the foursome form two pairs. You will probably end up with one group of three since many classes have an odd number of students.

4. Students *square* with their cooperative group. Each student may share their own idea of that of their partner.

Think-Square-Share
Step-by-Step

1. Teacher poses a question.

2. Individuals *think* about their answer (you may request the students to write down their ideas)

3. Students *square* with their cooperative group and share their ideas with each other.

4. Students *share* with the whole class. They may share their own idea of that of their partner. See the instructions for **Think-Pair-Share** for ideas on sharing techniques.

Value Line (Continuum)
Step-by-Step

1. The teacher presents a question or problem with two divergent "answers."

2. The teacher identifies an imaginary (or real) line on the classroom floor which runs from one side of the room to the other.

3. Students think where on this line (continuum) their response to the question would fall.

4. Students get out of their seats and move to the point on the continuum that represents their answer.

5. Class discussion follows. An effective way to conduct the discussion is to have students first form pairs, state their opinion, and paraphrase their partner's answer. This pair discussion could then be followed by small group or whole class discussions.

   Here are three techniques for having students in the line form pairs:

A. Turn to the person standing next to you
B. Slide the line. Divide the line into two equal halves and have one half of the line slide past the other half of the line until each person is facing one other person.
C. Fold the line. Have the person at one extreme end of the line begin walking to the opposite end. The rest of the people at that end of the line "follow the leader" until each person in facing one other person.

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