Think back to when you were eight years old. Are you the same person? How have you changed?

What is Development?

Development: The process by which humans change both quantitatively and qualitatively in physiological and psychological functioning as they get older.

Principles of Child Development:

1. The child develops as a whole.
2. Development follows predictable patterns.
3. Rates of development may vary.
4. Development is influenced by maturation and experience.
5. Development proceeds from the top down and from the center outward.
6. Culture affects development.

Why Study Child Development?

1. Guide interactions with children
2. Guide curriculum planning
3. Guide observation of children and identify special needs
4. Guide understanding of and appreciation for diversity
5. Guide advocacy and public policy understanding and involvement
Historical Perspectives in Human Growth and Development

An overview of how we have historically viewed children:

- **Original Sin:** In the Middle Ages children were viewed as being born into the world as evil beings and the goal was to remove sin from the child's life and to provide salvation.

- **Tabula Rasa:** Was proposed by John Locke in the seventeenth century who believed that children were not innately bad, but were "blank slates". He advised parents to spend time with their children to help them develop into contributing members of society.

- **Noble Savages:** Introduced in the eighteenth century by Jean Rousseau who felt that children were innately good and should be allowed to grow naturally with little parental involvement or constraints.

- **Natural Selection and Survival of the Fittest:** According to Charles Darwin, the human child, from conception to maturity, follows the same developmental plan as the evaluation of the human species.

- **African History:** Historically illustrates a high degree of caring and concern toward children.

- **Native American:** Historically children have been highly cherished and protected.

- **Chinese and Japanese:** Influenced by the writings of Confucius, children were respected and received only a moderate amount of punishment.

Out of these early attempts to study and document ideas about development, the science of child study was born.
The Psychoanalytic Perspective: Seeking an answer to the question, how and why do children become the way they are, many parent turned to psychoanalysis. According to this approach, children move through stages in which they confront conflicts between their biological drives and social expectations. The way these conflicts are resolved determines the child's ability to learn and to get along with others.

<table>
<thead>
<tr>
<th>Stage Ages</th>
<th>Basic Important Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Oral</td>
<td>The infant must form a first loving, trusting relationship or develop a sense of mistrust.</td>
</tr>
<tr>
<td>2. Muscular-18</td>
<td>The child's energies are directed toward the development of physical skills, including walking, grasping, and rectal sphincter control. The child learns control but may develop shame and doubt if not handled well.</td>
</tr>
<tr>
<td>3. 3 to 6</td>
<td>The child continues to become more assertive and to take more initiative, but may be too forceful, leading to guilt feelings.</td>
</tr>
<tr>
<td>4. Latency 6 to 12</td>
<td>The child must deal with demands to learn new skills or risk a sense of inferiority, failure and incompetence.</td>
</tr>
<tr>
<td>5. Young 19 to 40</td>
<td>The young adult must develop relationships or suffer feelings of isolation.</td>
</tr>
</tbody>
</table>
Behaviorism and Social Learning Theory: Believed in studying what could be directly observed, rather than the unobservable workings of the mind.

Ivan Pavlov

Ivan Pavlov was born in a small village in central Russia. His family hoped that he would become a priest, and he went to a theological seminary. After reading Charles Darwin, he found that he cared more for scientific pursuits and left the seminary for the University of St. Petersburg. There he studied chemistry and physiology, and he received his doctorate in 1879. He continued his studies and began doing his own research in topics that interested him most: digestion and blood circulation. His work became well known, and he was appointed professor of physiology at the Imperial Medical Academy.

The work that made Pavlov a household name in psychology actually began as a study in digestion. He was looking at the digestive process in dogs, especially the interaction between salivation and the action of the stomach. He realized they were closely linked by reflexes in the autonomic nervous system. Without salivation, the stomach didn’t get the message to start digesting. Pavlov wanted to see if external stimuli could affect this process, so he rang a metronome at the same time he gave the experimental dogs food. After a while, the dogs — which before only salivated when they saw and ate their food — would begin to salivate when the metronome sounded, even if no food were present. In 1903 Pavlov published his results calling this a “conditioned reflex,” different from an innate reflex, such as yanking a hand back from a flame, in that it had to be learned. Pavlov called this learning process in which the dogs nervous system comes to associate the sound of the metronome with the food, for example “conditioning.” He also found that the conditioned reflex will be repressed if the stimulus proves “wrong” too often. If the metronome sounds repeatedly and no food appears, eventually the dog stops salivating at the sound.

Pavlov was much more interested in physiology than psychology. He looked upon the young science of psychiatry a little dubiously. But he did think that conditioned reflexes could explain the behavior of psychotic people. For example, he suggested, those who withdrew from the world may associate all stimulus with possible injury or threat. His ideas played a large role in the behaviorist theory of psychology, introduced by John Watson around 1913.

Pavlov was held in extremely high regard in his country — both as Russia and the Soviet Union — and around the world. In 1904, he won the Nobel Prize in physiology/medicine for his research on digestion. He was outspoken and often at odds with the Soviet government later in his life, but his world renown, and work that his nation was proud of, kept him free from persecution. He worked actively in the lab until his death at age 87.
Operant Conditioning

B.F. Skinner

The theory of B.F. Skinner is based upon the idea that learning is a function of change in overt behavior. Changes in behavior are the result of an individual's response to events stimuli that occur in the environment. A response produces a consequence such as defining a word, hitting a ball, or solving a math problem. When a particular Stimulus-Response S-R pattern is reinforced, rewarded, the individual is conditioned to respond. The distinctive characteristic of operant conditioning relative to previous forms of behaviorism e.g., Thorndike, Hull is that the organism can emit responses instead of only eliciting response due to an external stimulus.

Reinforcement is the key element in Skinner's S-R theory. A reinforcer is anything that strengthens the desired response. It could be verbal praise, a good grade or a feeling of increased accomplishment or satisfaction. The theory also covers negative reinforcers - any stimulus that results in the increased frequency of a response when it is withdrawn and different from adversive stimuli - punishment - which result in reduced responses. A great deal of attention was given to schedules of reinforcement e.g. interval versus ratio and their effects on establishing and maintaining behavior.

One of the distinctive aspects of Skinner's theory is that it attempted to provide behavioral explanations for a broad range of cognitive phenomena. For example, Skinner explained drive motivation in terms of deprivation and reinforcement schedules. Skinner 1957 tried to account for verbal learning and language within the operant conditioning paradigm, although this effort was strongly rejected by linguists and psycholinguists. Skinner 1971 deals with the issue of tree will and social control.

Scope/Application:

Operant conditioning has been widely applied in clinical settings i.e., behavior modification as well as teaching i.e., classroom management and instructional development e.g., programmed instruction. Parenthetically, it should be noted that Skinner rejected the idea of theories of learning see Skinner, 1950.
Bandura

Social Learning Theory

A. Bandura

The social learning theory of Bandura emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others. Bandura 1977 states: "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action," p22. Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences. The component processes underlying observational learning are: 1 Attention, including modeled events distinctiveness, affective valence, complexity, prevalence, functional value and observer characteristics sensory capacities, arousal level, perceptual set, past reinforcement, 2 Retention, including symbolic coding, cognitive organization, symbolic rehearsal, motor rehearsal, 3 Motor Reproduction, including physical capabilities, self-observation of reproduction, accuracy of feedback, and 4 Motivation, including external, vicarious and self reinforcement.

Because it encompasses attention, memory and motivation, social learning theory spans both cognitive and behavioral frameworks. Bandura's theory improves upon the strictly behavioral interpretation of modeling provided by Miller & Dollard 1941. Bandura's work is related to the theories of Vygotsky and Lave which also emphasize the central role of social learning.

Scope/Application:

Social learning theory has been applied extensively to the understanding of aggression Bandura, 1973 and psychological disorders, particularly in the context of behavior modification Bandura, 1969. It is also the theoretical foundation for the technique of behavior modeling which is widely used in training programs. In recent years, Bandura has focused his work on the concept of self-efficacy in a variety of contexts e.g., Bandura, 1997.

Cognitive Development Theory: Children actively construct knowledge as they manipulate and explore their world, This was developed by Jean Piaget, the most influential child development theorist,
Swiss biologist and psychologist Jean Piaget (1896-1980) is renowned for constructing a highly influential model of child development and learning. Piaget's theory is based on the idea that the developing child builds cognitive structures—in other words, mental "maps," schemes, or networked concepts for understanding and responding to physical experiences within his or her environment. Piaget further attested that a child's cognitive structure increases in sophistication with developments moving from a few innate reflexes such as crying and sucking to highly complex mental activities.

Piaget's theory identifies four developmental stages and the processes by which children progress through them. The four stages are:

1. Sensorimotor stage (birth - 2 years old)—The child, through physical interaction with his or her environment, builds a set of concepts about reality and how it works. This is the stage where a child does not know that physical objects remain in existence even when out of sight: object permanence.

2. Preoperational stage (ages 2-7)—The child is not yet able to conceptualize abstractly and needs concrete physical situations.

3. Concrete operations (ages 7-11)—As physical experience accumulates, the child starts to conceptualize, creating logical structures that explain his or her physical experiences. Abstract problem solving is also possible at this stage. For example, arithmetic equations can be solved with numbers, not just with objects.

4. Formal operations (beginning at ages 11-15)—By this point, the child's cognitive structures are like those of an adult and include conceptual reasoning.

Piaget outlined several principles for building cognitive structures. During all development stages, the child experiences his or her environment using whatever mental maps he or she has constructed so far. If the experience is a repeated one, it fits easily—or is assimilated—into the child's cognitive structure so that he or she maintains mental "equilibrium." If the experience is different or new, the child loses equilibrium, and alters his or her cognitive structure to accommodate the new conditions. This way, the child erects more and more adequate cognitive structures.

How Piaget's Theory Impacts Learning

Curriculum and Instruction—Educators must plan a developmentally appropriate curriculum that enhances their students' logical and conceptual growth. Teachers must emphasize the critical role that experiences—or interactions with the surrounding environment—play in student learning. For example, instructors have to take into account the role that fundamental concepts, such as the permanence of objects, play in establishing cognitive structures.
Vygotsky and Social Cognition

The social cognition learning model asserts that culture is the prime determinant of individual development. Humans are the only species to have created culture, and every human child develops in the context of a culture. Therefore, a child's learning development is affected in ways large and small by the culture—including the culture of family environment—in which he or she is enmeshed.

1. Culture makes two sorts of contributions to a child's intellectual development. First, through culture, children acquire much of the content of their thinking, that is, their knowledge. Second, the surrounding culture provides a child with the processes or means of their thinking, what Vygotskians call the tools of intellectual adaptation. In short, according to the social cognition learning model, culture teaches children both what to think and how to think.

2. Cognitive development results from a dialectical process whereby a child learns through problem-solving experiences shared with someone else, usually a parent or teacher but sometimes a sibling or peer.

3. Initially, the person interacting with child assumes most of the responsibility for guiding the problem solving, but gradually this responsibility transfers to the child.

4. Language is a primary form of interaction through which adults transmit to the child the rich body of knowledge that exists in the culture.

5. As learning progresses, the child's own language comes to serve as her primary tool of intellectual adaptation. Eventually, children can use internal language to direct their own behavior.

6. Internalization refers to the process of learning—and thereby internalizing—a rich body of knowledge and tools of thought that first exist outside the child. This happens primarily through language.

7. A difference exists between what child can do on her own and what the child can do with help. Vygotskians call this difference the zone of proximal development.

8. Since much of what a child learns comes from the culture around her and much of the child's problem solving is mediated through an adult's help, it is wrong to focus on a child in isolation. Such focus does not reveal the processes by which children acquire new skills.

9. Interactions with surrounding culture and social agents, such as parents and more competent peers, contribute significantly to a child's intellectual development.

How Vygotsky Impacts Learning:

Curriculum—Since children learn much through interaction, curricula should be designed to emphasize interaction between learners and learning tasks.
With appropriate adult help, children can often perform tasks that they are incapable of completing on their own. With this in mind, scaffolding—where the adult continually adjusts the level of his or her help in response to the child's level of performance—is an effective form of teaching. Scaffolding not only produces immediate results, but also instills the skills necessary for independent problem solving in the future.

Assessment: Assessment methods must take into account the zone of proximal development. What children can do on their own is their level of actual development and what they can do with help is their level of potential development. Two children might have the same level of actual development, but given the appropriate help from an adult, one might be able to solve many more problems than the other. Assessment methods must target both the level of actual development and the level of potential development.

Bronfenbrenner: Urie Bronfenbrenner is one of the most well-known psychologists. He has had an extremely long and productive career. Bronfenbrenner is most famous for his views on ecological psychology. Very briefly, he suggests that:

- Interactions with others and the environment are key to development,
- We all experience more than one type of environment, including the microsystem—such as a family, classroom, etc—is the immediate environment in which a person is operating,
- The mesosystem—which is two microsystems interacting, such as the connection between a child's home and school,
- The exosystem—which is an environment in which an individual is not involved, which is external to his or her experience, but nonetheless affects him or her anyway. An example of an exosystem is the child's parent's workplace. Although a child may never have any role in the parent's workplace, or, in fact, never even go there, the events which occur at the child's place of employment do affect the child. For example, if the parent has a bad day at work, or is laid off, or promoted, or has to work overtime, all of these events impact the child, and finally,
- The macrosystem—or the larger cultural context,

Each of these systems are characterized by roles, norms expected behavior and relationships. For example, an individual usually acts differently within his or her own family than within a classroom. The person may speak more often at home, be less goal-oriented, and, almost certainly, will not sit at a desk for hours on end. Other things being equal, according to Bronfenbrenner, when the relation between different microsystems is a compatible one, development progresses more smoothly. A common example of this is the relationship between home and school, when role expectations are similar in both settings, e.g., try your hardest, do your...
own work, be on time, etc., children will be expected to perform better than if role expectations differ substantially from one setting to the next.

The above is just a very brief, simplified introduction to Bronfenbrenner's theory. In my opinion, it is one of the most interesting theories in psychology and one that includes the largest percentage of truly important concepts eg., your relationship with your mother, cultural expectations for women in your society, the national economy, your socioeconomic status and much more. Obviously, it is also a very complex theory that has only been touched upon in this discussion.
Suggested Assessment:

Oral Group Presentation on a theorist

Theorist Research Paper

Historical Perspectives Timeline

Have students research the lives of the leaders in the study of child development. Prepare for a role play in which the historical figures are portrayed as members of a panel or in a debate with one another. They should introduce themselves, by giving their name and brief personal history, and a description about their beliefs about children. Student should respond to questions from the audience, the moderator, or others on the panel.
Suggested Assessment:

Oral Group Presentation on a theorist

Theorist Research Paper

Historical Perspectives Timeline

Compare and contrast major theories of child and adolescent development by having students research the lives of the leaders in the study of child development. Prepare for a role play in which the historical figures are portrayed as members of a panel or in a debate with one another. They should introduce themselves, by giving their name and brief personal history, and a description about their beliefs about children. Student should respond to questions from the audience, the moderator, or others on the panel.

Suggested Activities:

Eight Corners- List each major theorist on a separate piece of chart paper. Students will divide into eight groups. Each group will receive a different color marker. The groups will each begin at one chart and list the major contributions of the particular theorist. The groups will rotate through each of the eight charts while keeping the same color marker 3-5 minutes at each. Discuss the points listed in a whole group discussion at the end.

3-2-1- List three contributions of the theorist, 2 connections to another theorist, and one connection to child development today can be completed in a small group.

Invite program directors from area ECE programs to discuss connection between theorists and practice in the schools specifically Piaget and Vygotsky.

View videos of early childhood settings. Categorize your observations according to the specific theorist they connect with.
REFERENCES:


Examines the life of the man who was once derided as the `Doctor of Love'. From the childhood that inspired many of his radical ideas to his eventual worldwide fame, this program explores the details of Sigmund Freud's life, including his obsessive behavior and dangerous bouts with addiction.

5627


Published description all locations


Description: 1 videocassette 32 mm., 30 sec. : sd., col, ; 1/2 in. + 1 learning guide.

Location: Towson University, Media Resource Services Video Cassette BF724.3.S35 A36

Holdings: VHS.

Credits: Written and narrated by David Elkind ; producer, Frances W. Davidson ; director, John M. Davidson.

Summary: Referring to the work of Piaget, Erikson, Goffman and his own studies, David Elkind looks at the intellectual, emotional and social consequences that result from the changes in thinking as adolescents undergo the sometimes awkward transition into adult forms of thought.

Subjects: Adolescent psychology, Thought and thinking, Self-perception in adolescence.

Other Authors: Elkind, David, 1931-, Davidson, Frances W., Davidson, John M.

Format: Videos/Films - VHS.
title: Operant conditioning [videorecording] / produced by Coast Community College District in cooperation with City Colleges of Chicago ... [et al.]; producer/director, Carrol Ellerbee; writer, Dan Logan.

description: 1 videocassette 29 mm. : Sd., col. ; 1/2 in.

series: Understanding human behavior; 16

series: Understanding human behavior; 16, all locations

Availability: Towson University, Media Resource Services Video Cassette BF319.5.06 064

notes: Licensed off-air copy.

notes: VHS.


local: No CCTV, 396

subjects: Operant conditioning.

Human behavior -- Study and teaching -- Audio-visual aids.

Operant conditioning -- Study and teaching -- Audio-visual aids.

other: Coast Community College District.

format: Videos/Films all

Videos - VHS

Description: 2 videocassettes VHS 50 mm. : sd., col. ; 1/2 in.

Series: Richard Evans discussions with notable contributors to the psychology series

Availability: Location: Towson University, MediacD Media Resource Services Video Cassette I RC339.52.B35 A3 1988

Holdings: Summary: Richard I. Evans interviews noted psychologist Albert Bandura.

Local Note: pt.1 2302

pt.2 2303

Subjects: o Bandura, Albert, 1925- -- Interviews.

o Psychologists -- United States -- Interviews.

Other Author: o Evans, Richard I. Richard Isadore, 1922-

o of Houston.


Format: Videos/Films all

Videos - VHS

http://catalog.umd.edu/F/V89L6FKVT53ID6 1 U5B6S4E2L47CKYYBFNR755E56VU84H... 2/14/2006
Title: Piaget's Developmental Theory: An Overview, with David Elkind
Written and Narrated by: David Elkind
Produced and Distributed by: Davidson Films, Inc.

Published: Davis, Calif. : Davidson Films, c1989

Description: 1 videocassette (27 mm) : sd., col, ; 1/2 in.

Availability: Location: Towson University, Media Resource Services Video Cassette

Notes: VHS.

Credits: Music, Thad Davidson.

Summary: Combines archival footage of Dr. Jean Piaget with newly shot footage of Dr. Elkind conducting interviews with children of various ages. Serves as an introduction to Piaget's work.

Local Note: 1697

Subjects: Piaget, Jean, 1896-
Child Psychology.
Learning, Psychology of.

Other Author: Piaget, Jean, 1896-
Elkind, David, 1931-

Other Author: Davidson Films.
Title: Using what we know applying Piaget’s developmental theory in primary classrooms

Videorecording: /written and narrated by David Elkind; produced and distributed by Davidson Films, Inc.

Published: Davis, Calif.: Davidson Films, 1991.

Description: 1 videocassette: Ca. 34 mm. : sd., col. ; 1/2 in.

Availability: Towson University, Media Resource Services Video Cassette

Notes: VHS.

Credits: "Humphrey" music composed and performed by Judy Hallberg.

Summary: Shows three teachers working with their classes. Linda Wiezorek has a multi-aged group that is shown performing their operetta about Humphrey, the whale. Margie Wong has a multi-cultural class that is shown making number stories. Jeannette Amidon is shown teaching phonics to her class.

Local Note: 2809

Subjects: Piaget, Jean, 1896-

Learning Psychology.

Education, Primary.

Piaget, Jean, 1896-

Other Author: Elkind, David, 1931-

Piaget, Jean, 1896-

Other Title: Applying Piaget’s developmental theory in primary classrooms.

Format: Videos/Films

Videos - VHS

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http://catalog.umd.edu/F/V89L6FKVT53ID6 1 U5B6S4E2L47CKYYBFNR755E56VU84H... 2/14/2006

Available at locations:
- Towson University, Media Resource Services Video Cassette
- BF724.3.S35 A36

Notes: VHS.

Credits: Written and narrated by David Elkind; producer, Frances W. Davidson; director, John M. Davidson.

Summary: Referring to the work of Piaget, Erikson, Goffman and his own studies, David Elkind looks at the intellectual, emotional and social consequences that result from the changes in thinking as adolescents undergo the sometimes awkward transition into adult forms of thought.

Subjects: DAdolescent psychology. 
-DThought and thinking.
-DSelf-perception in adolescence.

Other Authors: DElkind, David, 1931- 
-Davidson, Frances W.
-0Davidson, John M.

Other Author: DDavidson Films.

Format: Videos/Films all
-Videos - VHS
Title: Growth and Development [videorecording] / producers, Pat Barey, Maureen Mullen, Terry Burson.

Published: St. Louis, Mo, : Mosby, c1996.

Description: 1 videocassette 28 mm. : sd., col. ; 1/2 in. + 1 program notes.

Series: Whaley & Wong's pediatric nursing video series

Locations: Availability

- Location: Towson University, Media Resource Services Video Cassette
- Holdings: Availability

Notes: VHS.

Consultant/presenter: Donna L. Wong.

Credits: Editors, Pam Hughes, Wade Mastro.

Summary: Donna Wong and other pediatric nurse specialists demonstrate the most important techniques for measuring the child's physical growth and for assessing mental, emotional, and psycho-social maturation. The program also explores the personality and cognitive development theories of Erickson and Piaget, and looks at the most commonly used developmental screening tools.

Local Note: 7459

Subjects: Pediatric nursing.
Development.
Children -- Growth.

Other Authors: a Barey, Pat.
Mullen, Maureen.
Burson, Terry.
Wong, Donna L. 1948-
Hughes, Pam.
Mastro, Wade.

Other Publisher: Mosby-Year Book.
Format: Videos/Films all

ISBN: 081517053X

Additional Information: Videos - VHS

Return to top
Piaget's developmental theory: concrete operations is a written and narrated by David Elkind, published by Davis, Calif. Davidson Films, [1994?].

Description:
1 videocassette 30 mm. : sd., col. ; 1/2 in. + 1 teaching guide 6 p.

All locations: Availability

Location: Towson University, Media Resource Services Video Cassette

Holdings: Availability

Credits:
Music, Chris O'Connell.

Notes:
VHS.

Subjects:
Piaget, Jean, 1896-
O Child psychology.
D Learning, Psychology of.

Other Authors:
Piaget, Jean, 1896-
Elkind, David, 1931-

Other Title:
Concrete operations.

Format:
Videos/Films all

Videos - VHS
Title: Play: A Vygotskian Approach / Script written and narrated by Elena Bodrova and Deborah Leong; producer, Frances W. Davidson; director, John M. Davidson. [Videorecording]

Published: Davis, CA: Davidson Films, c1996.

Description: 1 videocassette 25:56 mm. : sd., col. with b&w sequences ; 1/2 in. + 1 program

Notes: VHS.

Summary: Presents Lev Vygotsky's early childhood learning theories and demonstrates them in a classroom. Examines play and how it benefits cognitive and social skills and fulfills emotional needs. Identifies the necessary components to play.


Other Author: Bodrova, Elena. Leong, Deborah. Davidson, John. Davidson, Frances.

Other Author: Davidson Films.

Format: Videos/Films all Videos - VHS.
Title: Vygotsky's developmental theory [videorecording] : an introduction / script written and narrated by Elena Bodrova and Deborah Leong ; director, John Davidson ; producer, Frances Davidson.

Published: Davis, Calif. : Davidson Films, Inc., [1994]

Description: 1 videocassette 27 mm., 35 sec. : sd., col. ; 1/2 in. + 2 leaflets.

Location: Towson University, Media Resource Services Video Cassette BF109.V95 V9

Holdings Availability:

Notes: Title on cassette label and container : vygotsky : an introduction.
Fact sheet laid in container.

Notes: VHS.

Summary: An overview of the work of the Soviet psychologist L.S. Vygotsky.

Local Note: 2797


Psychologists -- Soviet Union.

Other Author: D Bodrova, Elena.
Leong, Deborah.
a Davidson, John Jr.
a Davidson, Frances W.

Other Author: a Davidson Films.

Other Title: a Vygotsky : an introduction [videorecording]

Format: Videos/Films all

Videos - VHS

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Unit 2: Pre-Service Portfolio

What is a portfolio?
According to Bradley 1997 and Cooper 1997, a portfolio is an instrument for documenting student preparation and professional development. It is a collection of your best work, organized according to the INTASC Principles. It allows for the presentation of tangible evidence that you are growing and developing as a future teacher.

What is an Artifact?
All of the items selected for the portfolio are termed artifacts. An artifact is tangible evidence that the student has an understanding of the given INTASC Principle.

INTASC Principles:
Interstate New Teacher Assessment and Support Consortium
* Dedicated to the reform of preparation, licensing, and on-going professional development of teachers.
* Created in 1987 and guided by one basic premise: an effective teacher must be able to integrate content knowledge with the specific strengths and needs of students to assure that all students learn and perform at high levels.
* INTASC has developed 10 core standards for what all beginning teachers should know, be like, and be able to do in order to practice responsibly, regardless of the subject matter or grade level being taught.
* 10 agreed upon standards for preparing, licensing, and certifying educators as beginning teachers,
* An attempt to identify what effective teachers should know and be able to do,
* The standards identify the knowledge, dispositions, and performances that a beginning teacher should possess.
* An attempt to have new teachers across the country possess a common core of professional abilities,
* [http://www.ccsso.org/intasc.html](http://www.ccsso.org/intasc.html)
Consider purchasing the following items:
- A large extended binder, Wilson Jones www.wilsonjones.com and Avery www.avery.com have the particular binder in white, black and navy blue.
- Large box of page protectors
- Divider tabs that will extend beyond the page protectors
- Decorative border paper optional

Recommended Format:
- The cover and spine of your portfolio should include:
  - Your Full Name
  - Your School Name
  - Pre-Professional Portfolio Program Name
- Page 1 should repeat the outside cover information.
- Page 2 is your Philosophy of Education Statement. This is a clearly written, concise and thoughtful paper which demonstrates your commitment to educating young children, and expresses your goals for the classroom. This statement can include poems, quotes, or phrases.
- Next is your Table of Contents. This should identify the 3 distinct sections of the portfolio I Personal Data, II Professional Background, III Appendix, and list all artifacts.

Personal Data
- This should have a tabbed cover page. This section includes all vital statistics and personal information. Recommended artifacts include but are not limited to:
  - Resume
  - Official transcripts
  - Evaluations from employment
  - Letters of recommendation
  - Certificates & Awards
  - Internship evaluations
U. Professional Background

Provide a tabbed cover page followed by:

1. A complete and updated list of the ten INTASC Principles see attachment and
2. The professional section is arranged using the INTASC Principles. Each one of the 10 INTASC Principles needs to have a tabbed cover page.

Suggested artifacts include:

Class Assignments
Lesson Plans
Child Case Studies
Letter to Parents
Assessments
Observation Documents
Journal Entries
Educational Theory Papers and Presentations

All items in this section are referred to as Artifacts and must be accompanied by a Reflective Narrative see attachment.

III. Appendix

The appendix is the final section of the portfolio and contains items not critical to demonstrating competencies, but is important to the intern. Examples include letters from parents, photographs, and journals. Reflective narratives are not necessary in the appendix; items in the appendix can be explained by a caption.
The Interstate New Teacher Assessment and Support Consortium INTASC is a consortium of state education agencies and national educational organizations dedicated to the reform of the preparation, licensing, and on-going professional development of teachers. Created in 1987, INTASC's primary constituency is state education agencies responsible for teacher licensing, program approval, and professional development. Its work is guided by one basic premise: An effective teacher must be able to integrate content knowledge with the specific strengths and needs of students to assure that all students learn and perform at high levels.

Mission of INTASC

The mission of INTASC is to provide a forum for its member states to learn about and collaborate in the development of:

* compatible educational policy on teaching among the states
* new accountability requirements for teacher preparation programs
* new techniques to assess the performance of teachers for licensing and evaluation
* new programs to enhance the professional development of teachers

Standards are the Policy That Drive the System

INTASC believes that all education policy should be driven by what we want our P-12 students to know and be able to do. Thus, all aspects of a state's education system should be aligned with and organized to achieve the state's policy as embodied in its P-12 student standards. This includes its teacher licensing system. Teacher licensing standards are the state's policy for what all teachers must know and be able to do in order to effectively help all students achieve the P-12 student standards.

The teacher licensing standards become the driving force behind how a state's teacher licensing system program approval, licensing assessments, professional development is organized and implemented. Thus, a state's process for approving teacher preparation programs should be designed to verify that a program is aligned with the teacher licensing standards and provides opportunities for candidates to meet the standards. The state licensing assessments should verify that an individual teacher candidate has the knowledge and skills outlined in the licensing standards. The state's professional development requirements for re-licensing should document that in-service practicing teachers are receiving professional development that is aligned with and helping them reach the licensing standards.
Using the above conceptual framework for state teacher policy, INTASC has been working to develop model policy that states can use as a resource as they work to align their own teacher licensing systems. So far INTASC has accomplished the following:

- Developed model "standards for what all beginning teachers should know, be like, and be able to do in order to practice responsibly, regardless of the subject matter or grade level being taught".
- Translated the core standards into model licensing standards in mathematics, English language arts, science, special education, foreign languages, arts, and are developing standards for elementary education and social studies/civics.
- Initiated development of a new licensing examination, the Test for Teaching Knowledge, which will measure a beginning teacher's knowledge and skill in the core standards.
- Developed and validated a candidate portfolio in math, English/language arts and science that is linked to INTASC's standards.
- Developed programs for quality teacher preparation programs to guide teacher preparation programs on how to incorporate INTASC's performance-based standards.
- Hosts an annual professional development academy to help states develop capacity to implement a standards-based licensing system by teaching individuals to score INTASC portfolios, to serve as mentors for beginning teachers, and to reform teacher preparation programs so that they incorporate the model standards.
- Provides technical assistance to states as they implement standards-based licensing systems.
- Commissioned research on the implications of a standards-based teacher licensing system, and on assessment instruments for teacher licensing.

Who Develops INTASC's Model Policies?

Various committees of practicing teachers, teacher educators, school leaders, and state agency staff crafted INTASC's standards, which articulate what all beginning teachers should know and be able to do to teach effectively. The various committees' missions were to take the INTASC core standards and translate them into appropriate policy for the teacher licensing system, specifically into licensing standards for individual candidates and standards for institutions that provide preservice and inservice programs. These committees worked from existing documents of the various professional associations, particularly with recommended subject area standards for P-12 students. The purpose of this work was not to create yet another standards document, but to consider the best thinking of education practitioners and researchers, and to articulate the collective voice of the states regarding sound teacher licensing policy.

Public Comment Is Requested on the Model Policies

INTASC engages the profession and the public in a dialogue about the soundness and appropriateness of all the proposed teacher standards. First, INTASC collects feedback on the standards through a questionnaire. Second, INTASC conducts focus groups that respond to the model standards, analyze how current state policies and programs would have to be revised to reflect the standards, and suggest strategies for bringing about these changes. The purpose of the focus groups is not only to refine and fine-tune the standards, but also to start laying the groundwork necessary for states to take ownership of the standards.

INTASC's Standards are a Resource for States

INTASC's role is one of consensus building among the states, and not decision making. All authority for state policy resides within each state's governance structure. The INTASC standards are "model" standards and intended to be a RESOURCE that all states can use to develop their own state standards. INTASC encourages states to take the model standards and discuss and debate them among their own stakeholders to come up with their own language. INTASC's hope is that states will agree with and honor the values in the model standards, and in this way move us toward consensus and compatible educational policies around what good teaching looks like and how it can be assessed.
INTASC Principles

Interstate New leachers Assessment and Support Consortium

Principle 1: making content meaning
The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Principle 2: child development and learning theory
The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Principle 3: learning styles/diversity
The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Principle 4: instructional strategies/problem solving
The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Principle 5: motivation and behavior
The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Principle 6: communication/knowledge
The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Principle 7: planning for instruction
The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Principle 8: assessment
The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Principle 9: professional growth/reflection
The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others, students, parents, and other professionals in the learning community and who actively seeks out opportunities to grow professionally.

Principle 10: interpersonal relationships
The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.
WHAT ARE ARTIFACTS?

An artifact is tangible evidence of knowledge gained, skills mastered, values clarified, and personal dispositions and attitudes of the student.

Only those artifacts that represent your very best professional work should be included as evidence. Thus, students ask themselves:

Would I be proud to have my future employer and peers review my portfolio?
Is this an example of what my future professional work might look like?
Does this represent what I stand for as a professional educator? If not, what can I do to revise or rearrange so that it represents my best efforts?

SUGGESTED ARTIFACTS:

* Article Summaries or Critiques
* Assessments
* Bulletin Board Ideas
* Case Studies
* Classroom Management Strategies
* Community Resources Documents
* Computer Programs
* Cooperative Learning Strategies
* Curriculum Plans
* Essays
* Evaluations
* Field Trip Plans
* Floor Plans
* Goal Statements
* Individualized Education Plans
* Interviews with Students, Teachers, Parents
* Journal Entries
* Lesson Plans
* Letter to Parents
* Media Competencies
* Observation Reports
* Peer Critiques
* Philosophy
* Pictures and Photographs
* Professional Development Plans
* Professional Reading List
* Projects
* Research Papers
* Seating Arrangement Diagram
* Teacher Made Materials
* Unit Plans
* Video Scenario Critique

WRITING REFLECTIVE NARRATIVES CAPTIONS

For each artifact there must be an accompanying statement indicating the title, a description of the task, and the impact or implication on the growth of development of the teacher candidate. The following questions need to be answered:

What did I do?
Why did I do it?
What did I learn?
Dear Colleague:

For the past eighteen months the Interstate New Teacher Assessment and Support Consortium (INTASC), a program of the Council of Chief State School Officers, has been at work crafting model standards for licensing new teachers. Drafted by representatives of the teaching profession along with personnel from 17 state education agencies, these standards represent a common core of teaching knowledge and skills which will help all students acquire 21st century knowledge and skills. The standards were developed to be compatible with the advanced certification standards of the new National Board for Professional Teaching Standards. This effort takes another step toward a coherent approach to educating and licensing teachers based upon shared views among the states and within the profession of what constitutes professional teaching.

This document addresses the knowledge, dispositions and performances deemed essential for all teachers regardless of their specialty area. It is chapter one of a long term effort. When these standards have been reviewed and revised, the Committee will begin the process of developing subject area standards for new teachers. This process will use the National Board’s standards, accepted standards for student outcomes K-12 and this conception of common knowledge as its reference points. As an integral part of this process, the Committee will also work on the development of assessment prototypes for evaluating the achievement of these standards.

The intent of this document, and those which will follow, is to stimulate dialogue among the stakeholders of the teaching profession about the best thinking of their colleagues regarding what constitutes competent beginning teaching. Our work is offered to state education agencies and institutions concerned with the professional development of teachers as a resource to revisit state standards for training and licensing new teachers, and to consider ways these models might enhance their system.
We invite and encourage your comments on this draft. The draft is being widely circulated to members of the public and the profession as well as the policy making community. We invite you to make your comments in any way you like, including on the document itself. Please take time to answer the two questions about each principle. This will help us analyze the responses and make thoughtful revisions.

We thank you in advance for taking the time to review our work. It is only with public consensus on a shared vision of education that we can be successful and that our children can be assured of the education they will need to carry out the responsibilities of the future.

Sincerely,

M. Jean Miller, Director
Linda Darling-Hammond, Chair
INTASC Drafting Committee
Preface

Efforts to restructure America's schools for the demands of a knowledge-based economy are redefining the mission of schooling and the job of teaching. Rather than merely "offering education," schools are now expected to ensure that all students learn and perform at high levels. Rather than merely "covering the curriculum," teachers are expected to find ways to support and connect with the needs of all learners. This new mission requires substantially more knowledge and skill of teachers and more student-centered approaches to organizing schools. These learner-centered approaches to teaching and schooling require, in turn, supportive policies for preparing, licensing, and certifying educators and for regulating and accrediting schools.

As part of the many initiatives that have been undertaken to strengthen the teaching profession, a National Board for Professional Teaching Standards was established in 1987 to develop standards for the advanced certification of highly skilled veteran teachers, much as professional certifying agencies do in assessing physicians, architects, accountants, and others. In the same year the Interstate New Teacher Assessment and Support Consortium (INTASC), a program of the Council of Chief State School Officers, was established to enhance collaboration among states interested in rethinking teacher assessment for initial licensing as well as for preparation and induction into the profession. The National Board and INTASC are united in their view that the complex art of teaching requires performance-based standards and assessment strategies that are capable of capturing teachers' reasoned judgments and that evaluate what they can actually do in authentic teaching situations.

The INTASC Task Force on Teacher Licensing

Under its current sponsorship by the Council of Chief State School Officers, INTASC established a task force last year to consider what kinds of changes in licensing standards would be needed to create "Board-compatible" standards for entry into the teaching profession. These are standards that embody the kinds of knowledge, skills, and dispositions that teachers need to practice responsibly when they enter teaching and that prepare them for eventual success as Board-certified teachers later in their careers.

Education, the National Council on Accreditation of Teacher Education, the National Association of State Directors of Teacher Education and Certification, the National Association of State Boards of Education, the American Federation of Teachers and the National Education Association. A State Networking Committee, composed of 22 additional states which have requested participation in the standards development work, will work with the task force to facilitate a public review of the draft standards.

The task force's goal is to create model standards for "Board-compatible" teacher licensing that can be reviewed by professional organizations and state agencies as a basis for their own standard-setting activities. The task force will continue its work by collecting, developing, and evaluating assessment ideas and options for evaluating candidates' knowledge and performances in relation to the standards, making the results of these activities available to states interested in collaborating on assessment development.

The Starting Point: A Common Core of Teaching Knowledge

The INTASC task force decided to begin its work by articulating standards for a common core of teaching knowledge and skills that should be acquired by all new teachers, to be followed by additional specific standards for disciplinary areas and levels of schooling. Like the first tier of assessment for licensing in virtually all other professions, this "common core" is intended to outline the common principles and foundations of practice that cut across specialty areas -- the knowledge of student learning and development, curriculum and teaching, contexts and purposes which creates a set of professional understandings, abilities, and commitments that all teachers share.

Starting with this shared knowledge was viewed as important for at least two reasons. First, it is the common commitment to ethical practice and foundational knowledge that provides the glue that holds members of a profession together, creating a common language, set of understandings, and beliefs that permit professionals to talk and work together toward shared purposes on behalf of their clients. Just as pediatricians and oncologists share a knowledge of human physiology so that they can work together after they have specialized further, so teachers of mathematics and social studies must share an understanding of child development and learning that allows them to plan together and assess students' needs from a common perspective. Second, the development of assessment possibilities -- a later task for INTASC -- may be enhanced across specialty areas by having developed a conception of the underlying knowledge that informs practice in many different ways.
This draft publication presents the first efforts of the group to develop such standards for a common core of teaching knowledge. Recognizing that applications of these common understandings and commitments are manifested in specific contexts—defined by students, subjects, and school levels, among others—we emphasize that "common core" standards are not analogous to 'generic' or context-free teaching behaviors. The assessment of specific teaching decisions and actions must occur in varied contexts that will require varied responses. In some cases, these are grounded in the discipline being taught: thus, subject-specific pedagogical decisions need to be evaluated in the context of subject-specific standards. These will be developed in the next phase of the task force's work. In other cases, contextual considerations must be made part of the assessment structure and response possibilities. Evaluating how the standards might be assessed is also part of the task force's future work. We invite your comments now and as the work progresses.

The Standards: Performance-Based and Board-Compatible

An important attribute of these proposed standards—and those to be developed in the next phase of the work—is that they are performance-based: that is, they describe what teachers should know and be able to do rather than listing courses that teachers should take in order to be awarded a license. This shift toward performance-based standard-setting is in line with the National Board's approach to developing standards and with the changes already occurring in a number of states. This approach should clarify what the criteria are for assessment and licensing, placing more emphasis on the abilities teachers develop than the hours they spend taking classes. Ultimately, performance-based licensing standards should enable states to permit greater innovation and diversity in how teacher education programs operate by assessing their outcomes rather than their inputs or procedures.

The standards were developed in response to the five major propositions that guide the National Board's standard-setting and assessment work:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to diverse learners.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers are knowledgeable about and committed to the ongoing development of pedagogy.
5. Teachers are accomplished practitioners who continually improve their practice.
Teachers think systematically about their practice and learn from experience. Teachers are members of learning communities. These propositions, articulated in much more elaborated form in the Board's background documents, will provide the foundation for the Board's standards for advanced certification. These are to be developed in each of 30 areas defined by disciplinary area English/Language Arts; Mathematics; etc. and developmental level of students early childhood, middle childhood, early adolescence, and late adolescence/young adulthood. The resulting standards, in fields like “Early Adolescence English/Language Arts” and “Early Childhood Generalist,” will provide the basis for performance-based assessments for advanced certification in each of these areas.

In our work, the task force used the Board’s elaborated propositions, which embody criteria for identifying excellent teaching, as the basis for exploring what beginning teachers ought to be prepared to know and be able to do in order to develop into a teacher with these capacities over time. We drew on work in a number of the states that derives from a shared conception of teaching -- including recent work in California, Minnesota, New York, and Texas -- and on teacher education initiatives, including the Holmes Group’s recent thinking about conceptions of teaching knowledge and Alverno College’s performance-based approach to organizing teacher education. The Board’s criteria remained our reference point, and they permeate these standards. However, our resulting ten principles are not organized within each of the Board’s propositions, since so many abilities are interwoven and cut across several at once.

Having begun with the common core of teaching knowledge, we plan to develop specialty area standards for beginning teachers following on the heels of those the Board is now beginning to issue, area by area, for advanced certification. A decision not yet made, however, is whether to follow exactly the Board’s structure for 30 certification areas and how to reconcile the different structures for licensing areas that already exist across the states.
Levels and Meanings of Standards

Licensing vs. certification

Two important issues arise in creating "Board-compatible" standards for state licensing:

What is the difference between Board certification and state licensing?

How do we distinguish between the kind of practice required of a beginning teacher who is applying for a license and that expected of an experienced, highly-skilled teacher applying for advanced certification?

State licensing performs a different function from professional certification. Members of all professions and many other occupations must be licensed by the states in which they wish to practice, meeting standards of minimal competence established by each state to protect the public from harm. Often these standards are established by professional standards boards to whom the state delegates this function.

Professional certification, on the other hand, is based on standards -- often more advanced or exacting ones -- established by the profession itself, sometimes through a national organization like the National Board of Medical Examiners or the National Architectural Registration Board. These standards generally are developed to represent high levels of competence and skill. Thus, certified public accountants, board-certified physicians, and registered architects have met professional standards that exceed those demanded by most states for licensure. These standards may require additional education or supervised internship as well as greater knowledge and more skilled performances in specific areas.

As these functions are evolving in teaching, states will continue to license beginning teachers and other teachers who want to move into a state to practice. The National Board will award advanced certificates to those who have met the prerequisite experience level of at least three years of practice and who voluntarily sit for and pass its examinations. If certification evolves as it has in other professions, it is likely that at some point states may accept Board certification as satisfying state requirements for incoming veteran teachers who apply for a license when they move into the state.
The task force spent a great deal of time considering two other related questions:

At what stage in a teacher's entry into the profession would these licensing standards apply?

How do we distinguish between beginning and advanced levels of performance?

As entry into teaching has become more staged, with many states requiring probationary periods prior to issuing a continuing license, and an increasing number requiring a year-long internship as part of extended preparation, questions arise about what teachers should be expected to know and be able to do at various junctures in this process. We debated the question of whether these standards should apply before or after teachers have completed an internship, for example, and whether certain kinds of preparation would be needed to enable teachers to succeed. Decisions about what kinds of preparation teachers need to be successful with students are decisions that states must make.

However states handle it though, the issuing of a license should have a common meaning: that the entrant is prepared to practice responsibly as the primary teacher of record for students. We have consequently established these standards with this criterion in mind. Students' needs for well-grounded and adaptive teaching are what must ultimately define the standards for teachers.

States would be expected to apply the standards at the juncture at which they issue a license which allows teachers to practice independently as teacher of record. Then states should consider whether changes in preparation are needed to ensure that teachers have the ability to engage in the kinds of learner-centered practices articulated by the standards and have the opportunity to build their developing practice on a solid foundation that will lead to higher levels of expertise.

The related question is what distinguishes the beginning practice of a competent newly-licensed teacher from the advanced levels of teaching performance expected of a Board-certified teacher. In our deliberations about this question, we considered whether there were certain kinds or classes of knowledge, understanding, commitment, or ability that a Board-certified teacher might exhibit which would be wholly unnecessary for a beginning teacher and consequently should be omitted from licensing considerations. We could not identify any area in which this approach would not seriously undermine the capacity of beginning teachers to develop their practice on a solid foundation.
We concluded that the appropriate distinctions between beginning and advanced practice are in the degree of sophistication teachers exhibit in the application of knowledge rather than in the kind of knowledge needed. Advanced practitioners will have developed their abilities to deal simultaneously with more of the complex facets of the teaching context, with greater flexibility and adaptability, and a more highly-developed capacity to integrate their understandings and performances on behalf of students' individual needs. At the same time, to eventually become an expert practitioner, beginning teachers must have, at the least, an awareness of the kinds of knowledge and understandings needed -- as well as resources available -- to develop these skills, must have some capacity to address the many facets of curriculum, classroom, and student life, and must have the dispositions and commitments that pledge them to professional development and responsibility.

In sum, these standards aim to develop beginning professionals while contributing, at the same time, to the development of the profession. We offer them to you -- the profession and the public -- for your feedback and comments.
Preamble

We hold these truths to be self-evident: that all children have the potential to learn rigorous content and achieve high standards and that a well educated citizenry is essential for maintaining our democracy and ensuring a competitive position in a global economy.

We believe that our educational system must guarantee a learning environment in which all children can learn and achieve their own kind of individually configured excellence -- an environment that nurtures their unique talents and creativity; understands, respects, and incorporates the diversity of their experiences into the learning process; and cultivates their personal commitment to enduring habits of life-long learning.

We believe that states must strive to ensure excellence in teaching for all children by establishing professional licensing standards and learning opportunities which enable all teachers to develop and use professional knowledge, skills, and dispositions on behalf of students.

We believe that these standards and opportunities should enable teachers to support the intellectual, social, emotional, moral, and physical development of students, respond with flexibility and professional judgment to their different needs; and actively engage them in their own learning so that they can use and generate knowledge in effective and powerful ways.

We believe that teaching and learning comprise a holistic process that connects ideas and disciplines to each other and to the personal experiences, environments, and communities of students. Consequently, the process of teaching must be dynamic and reciprocal, responding to the many contexts within which students learn. Such teaching demands that teachers integrate their knowledge of subjects, students, the community,
and curriculum to create a bridge between learning goals and learners' lives.

We believe that professional teachers assume roles that extend beyond the classroom and include responsibilities for connecting to parents and other professionals, developing the school as a learning organization, and using community resources to foster the education and welfare of students.

We believe that teachers' professional development is a dynamic process extending from initial preparation over the course of an entire career. Professional teachers are responsible for planning and pursuing their ongoing learning, for reflecting with colleagues on their practice, and for contributing to the profession's knowledge base. States and local education agencies must be responsible for investing in the growth of knowledge for individual teachers and the profession as a whole, and for establishing policies, resources, and organizational structures that guarantee continuous opportunity for teacher learning.
Principle #1: The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

KNOWLEDGE

Detailed standards for discipline-based knowledge will be included in the subject matter standards to be developed in the next phase of this project.

The teacher understands major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the disciplines s/he teaches.

The teacher understands how students' conceptual frameworks and their misconceptions for an area of knowledge can influence their learning.

The teacher can relate his/her disciplinary knowledge to other subject areas.

DISPOSITIONS

The teacher realizes that subject matter knowledge is not a fixed body of facts but is complex and ever-evolving. S/he seeks to keep abreast of new ideas and understandings in the field.

The teacher appreciates multiple perspectives and conveys to learners how knowledge is developed from the vantage point of the knower.

The teacher has enthusiasm for the disciplines s/he teaches and sees connections to everyday life.
The teacher is committed to continuous learning and engages in professional discourse about subject matter knowledge and children’s learning of the discipline.

PERFORMANCES

The teacher effectively uses multiple representations and explanations of disciplinary concepts that capture key ideas and link them to students' prior understandings.

The teacher can represent and use differing viewpoints, theories, "ways of knowing" and methods of inquiry in his/her teaching of subject matter concepts.

The teacher can evaluate teaching resources and curriculum materials for their comprehensiveness, accuracy, and usefulness for representing particular ideas and concepts.

The teacher engages students in generating knowledge and testing hypotheses according to the methods of inquiry and standards of evidence used in the discipline.

The teacher develops and uses curricula that encourage students to see, question, and interpret ideas from diverse perspectives.

The teacher can create interdisciplinary learning experiences that allow students to integrate knowledge, skills, and methods of inquiry from several subject areas.
Principle #2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.

KNOWLEDGE
The teacher understands how learning occurs--how students construct knowledge, acquire skills, and develop habits of mind--and knows how to use instructional strategies that promote student learning.

The teacher understands that students' physical, social, emotional, moral and cognitive development influence learning and knows how to address these factors when making instructional decisions.

The teacher is aware of expected developmental progressions and ranges of individual variation within each domain physical, social, emotional, moral and cognitive, can identify levels of readiness in learning, and understands how development in any one domain may affect performance in others.

DISPOSITION
The teacher appreciates individual variation within each area of development, shows respect for the diverse talents of all learners, and is committed to help them develop self-confidence and competence.

The teacher is disposed to use students' strengths as a basis for growth, and their errors as an opportunity for learning.

PERFORMANCE
The teacher assesses individual and group performance in order to design instruction that meets learners' current needs.
in each domain cognitive, social, emotional, moral, and physical and that leads to the next level of development.

The teacher stimulates student reflection on prior knowledge and links new ideas to already familiar ideas, making connections to students' experiences, providing opportunities for active engagement, manipulation, and testing of ideas and materials, and encouraging students to assume responsibility for shaping their learning tasks.

The teacher accesses students' thinking and experiences as a basis for instructional activities by, for example, encouraging discussion, listening and responding to group interaction, and eliciting samples of student thinking orally and in writing.
Principle #3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

**KNOWLEDGE**

The teacher understands and can identify differences in approaches to learning and performance, including different learning styles, multiple intelligences, and performance modes, and can design instruction that helps use students' strengths as the basis for growth.

The teacher knows about areas of exceptionality in learning—including learning disabilities, visual and perceptual difficulties, and special physical or mental challenges.

The teacher knows about the process of second language acquisition and about strategies to support the learning of students whose first language is not English.

The teacher understands how students' learning is influenced by individual experiences, talents, and prior learning, as well as language, culture, family and community values.

The teacher has a well-grounded framework for understanding cultural and community diversity and knows how to learn about and incorporate students' experiences, cultures, and community resources into instruction.

**DISPOSITIONS**

The teacher believes that all children can learn at high levels and persists in helping all children achieve success.

The teacher appreciates and values human diversity, shows respect for students' varied talents and perspectives, and is committed to the pursuit of "individually configured excellence."
The teacher respects students as individuals with differing personal and family backgrounds and various skills, talents, and interests.

The teacher is sensitive to community and cultural norms.

The teacher makes students feel valued for their potential as people, and helps them learn to value each other.

PERFORMANCES

The teacher identifies and designs instruction appropriate to students' stages of development, learning styles, strengths, and needs.

The teacher uses teaching approaches that are sensitive to the multiple experiences of learners and that address different learning and performance modes.

The teacher makes appropriate provisions in terms of time and circumstances for work, tasks assigned, communication and response modes for individual students who have particular learning differences or needs.

The teacher can identify when and how to access appropriate services or resources to meet exceptional learning needs.

The teacher seeks to understand students' families, cultures, and communities, and uses this information as a basis for connecting instruction to students' experiences e.g. drawing explicit connections between subject matter and community matters, making assignments that can be related to students' experiences and cultures.

The teacher brings multiple perspectives to the discussion of subject matter, including attention to students' personal, family, and community experiences and cultural norms.

The teacher creates a learning community in which individual differences are respected.
Principle #4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

KNOWLEDGE
The teacher understands the cognitive processes associated with various kinds of learning e.g. critical and creative thinking, problem structuring and problem solving, invention, memorization and recall and how these processes can be stimulated.

The teacher understands principles and techniques, along with advantages and limitations, associated with various instructional strategies e.g. cooperative learning, direct instruction, discovery learning, whole group discussion, independent study, interdisciplinary instruction.

The teacher knows how to enhance learning through the use of a wide variety of materials as well as human and technological resources e.g. computers, audio-visual technologies, videotapes and discs, local experts, primary documents and artifacts, texts, reference books, literature, and other print resources.

DISPOSITIONS
The teacher values the development of students' critical thinking, independent problem solving, and performance capabilities.

The teacher values flexibility and reciprocity in the teaching process as necessary for adapting instruction to student responses, ideas, and needs.
The teacher carefully evaluates how to achieve learning goals, choosing alternative teaching strategies and materials to achieve different instructional purposes and to meet student needs e.g. developmental stages, prior knowledge, learning styles, and interests.

The teacher uses multiple teaching and learning strategies to engage students in active learning opportunities that promote the development of critical thinking, problem solving, and performance capabilities and that help students assume responsibility for identifying and using learning resources.

The teacher constantly monitors and adjusts strategies in response to learner feedback.

The teacher varies his or her role in the instructional process e.g. instructor, facilitator, coach, audience in relation to the content and purposes of instruction and the needs of students.

The teacher develops a variety of clear, accurate presentations and representations of concepts, using alternative explanations to assist students' understanding and presenting diverse perspectives to encourage critical thinking.
Principle #5: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

KNOWLEDGE
The teacher can use knowledge about human motivation and behavior drawn from the foundational sciences of psychology, anthropology, and sociology to develop strategies for organizing and supporting individual and group work. The teacher understands how social groups function and influence people, and how people influence groups. The teacher knows how to help people work productively and cooperatively with each other in complex social settings. The teacher understands the principles of effective classroom management and can use a range of strategies to promote positive relationships, cooperation, and purposeful learning in the classroom. The teacher recognizes factors and situations that are likely to promote or diminish intrinsic motivation, and knows how to help students become self-motivated.

DISPOSITIONS
The teacher takes responsibility for establishing a positive climate in the classroom and participates in maintaining such a climate in the school as whole. The teacher understands how participation supports commitment, and is committed to the expression and use of democratic values in the classroom. The teacher values the role of students in promoting each other's learning and recognizes the importance of peer relationships in establishing a climate of learning.
The teacher recognizes the value of intrinsic motivation to students' lifelong growth and learning. The teacher is committed to the continuous development of individual students' abilities and considers how different motivational strategies are likely to encourage this development for each student.

**PerFormances**
The teacher creates a smoothly functioning learning community in which students assume responsibility for themselves and one another, participate in decision-making, work collaboratively and independently, and engage in purposeful learning activities.

The teacher engages students in individual and cooperative learning activities that help them develop the motivation to achieve, by, for example, relating lessons to students' personal interests, allowing students to have choices in their learning, and leading students to ask questions and pursue problems that are meaningful to them.

The teacher organizes, allocates, and manages the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks.

The teacher maximizes the amount of class time spent in learning by creating expectations and processes for communication and behavior along with a physical setting conducive to classroom goals.

The teacher helps the group to develop shared values and expectations for student interactions, academic discussions, and individual and group responsibility that create a positive classroom climate of openness, mutual respect, support, and inquiry.
The teacher analyzes the classroom environment and makes decisions and adjustments to enhance social relationships, student motivation and engagement, and productive work. The teacher organizes, prepares students for, and monitors independent and group work that allows for full and varied participation of all individuals.
Principle #6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

KNOWLEDGE
- The teacher understands communication theory, language development, and the role of language in learning.
- The teacher understands how cultural and gender differences can affect communication in the classroom.
- The teacher recognizes the importance of nonverbal as well as verbal communication.
- The teacher knows about and can use effective verbal, nonverbal, and media communication techniques.

POSITIONS
- The teacher recognizes the power of language for fostering self-expression, identity development, and learning.
- The teacher values many ways in which people seek to communicate and encourages many modes of communication in the classroom.
- The teacher is a thoughtful and responsive listener.
- The teacher appreciates the cultural dimensions of communication, responds appropriately, and seeks to foster culturally sensitive communication by and among all students in the class.

PERFORMANCES
- The teacher models effective communication strategies in conveying ideas and information and in asking questions.
monitoring the effects of messages, restating ideas and drawing connections, using visual, aural, and kinesthetic cues, being sensitive to nonverbal cues given and received.

The teacher supports and expands learner expression in speaking, writing, and other media.

The teacher knows how to ask questions and stimulate discussion in different ways for particular purposes, for example, probing for learner understanding, helping students articulate their ideas and thinking processes, promoting risk-taking and problem-solving, facilitating factual recall, encouraging convergent and divergent thinking, stimulating curiosity, helping students to question.

The teacher communicates in ways that demonstrate a sensitivity to cultural and gender differences e.g. appropriate use of eye contact, interpretation of body language and verbal statements, acknowledgment of and responsiveness to different modes of communication and participation.

The teacher knows how to use a variety of media communication tools, including audio-visual aids and computers, to enrich learning opportunities.
Principle #7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

KNOWLEDGE
The teacher understands learning theory, subject matter, curriculum development, and student development and knows how to use this knowledge in planning instruction to meet curriculum goals.

The teacher knows how to take contextual considerations into account in planning instruction that creates an effective bridge between curriculum goals and students' experiences.

The teacher knows when and how to adjust plans based on student responses and other contingencies.

DISPOSITIONS
The teacher values both long term and short term planning.

The teacher believes that plans must always be open to adjustment and revision based on student needs and changing circumstances.

The teacher values planning as a collegial activity.

PERFORMANCES
As an individual and a member of a team, the teacher selects and creates learning experiences that are appropriate for curriculum goals, relevant to learners, and based upon principles of effective instruction, e.g., that activate students' prior knowledge, anticipate preconceptions, encourage exploration and problem-solving, and build new skills on those previously acquired.
The teacher plans for learning opportunities that recognize and address variation in learning styles and performance modes. The teacher creates lessons and activities that operate at multiple levels to meet the developmental and individual needs of diverse learners and help each progress. The teacher creates short-range and long-term plans that are linked to student needs and performance, and adapts the plans to ensure and capitalize on student progress and motivation. The teacher responds to unanticipated sources of input, evaluates plans in relation to short- and long-range goals, and systematically adjusts plans to meet student needs and enhance learning.
Principle #8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.

KNOWLEDGE

The teacher understands the characteristics, uses, advantages, and limitations of different types of assessments e.g. criterion-referenced and norm-referenced instruments, traditional standardized and performance-based tests, observation systems, and assessments of student work for evaluating how students learn, what they know and are able to do, and what kinds of experiences will support their further growth and development.

The teacher knows how to select, construct, and use assessment strategies and instruments appropriate to the learning outcomes being evaluated and to other diagnostic purposes.

The teacher understands measurement theory and assessment-related issues, such as validity, reliability, bias, and scoring concerns.

DISPOSITIONS

The teacher values ongoing assessment as essential to the instructional process and recognizes that many different assessment strategies, accurately and systematically used, are necessary for monitoring and promoting student learning.

The teacher is committed to using assessment to identify student strengths and promote student growth rather than to deny students access to learning opportunities.

PERFORMANCES
The teacher appropriately uses a variety of formal and informal assessment techniques, e.g., observation, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests, to enhance her or his knowledge of learners, evaluate students' progress and performances, and modify teaching and learning strategies.

The teacher solicits and uses information about students' experiences, learning behavior, needs, and progress from parents, other colleagues, and the students themselves.

The teacher uses assessment strategies to involve learners in self-assessment activities, to help them become aware of their strengths and needs, and to encourage them to set personal goals for learning.

The teacher evaluates the effect of class activities on both individuals and the class as a whole, collecting information through observation of classroom interactions, questioning, and analysis of student work.

The teacher monitors his or her own teaching strategies and behavior in relation to student success, modifying plans and instructional approaches accordingly.

The teacher maintains useful records of student work and performance and can communicate student progress knowledgeably and responsibly, based on appropriate indicators, to students, parents, and other colleagues.
Principle #9: The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others students, parents, and other professionals in the learning community and who actively seeks out opportunities to grow professionally.

The teacher understands methods of inquiry that provide him/her with a variety of self-assessment and problem-solving strategies for reflecting on his/her practice, its influences on students' growth and learning, and the complex interactions between them.

The teacher is aware of major areas of research on teaching and of resources available for professional learning e.g. professional literature, colleagues, professional associations, professional development activities.

Dispositions

The teacher values critical thinking and self-directed learning as habits of mind.

The teacher is committed to reflection, assessment, and learning as an ongoing process.

The teacher is willing to give and receive help.

The teacher is committed to seeking out, developing, and continually refining practices that address the individual needs of students.

The teacher recognizes his/her professional responsibility for engaging in and supporting appropriate professional practices for self and colleagues.
PERFORMANCES

The teacher uses classroom observation, information about students, and research as sources for evaluating the outcomes of teaching and learning and as a basis for experimenting with, reflecting on, and revising practice.

The teacher seeks out professional literature, colleagues, and other resources to support his/her own development as a learner and a teacher.

The teacher draws upon professional colleagues within the school and other professional arenas as supports for reflection, problem-solving and new ideas, actively sharing experiences and seeking and giving feedback.
Principle #10: The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

KNOWLEDGE
- The teacher understands schools as organizations within the larger community context and understands the operations of the relevant aspects of the systems within which s/he works.
- The teacher understands how factors in the students' environment outside of school, e.g., family circumstances, community environments, health and economic conditions, may influence students' life and learning.
- The teacher understands and implements laws related to students' rights and teacher responsibilities, e.g., for equal education, appropriate education for handicapped students, confidentiality, privacy, appropriate treatment of students, reporting in situations related to possible child abuse.

DISPOSITIONS
- The teacher values and appreciates the importance of all aspects of a child's experience.
- The teacher is concerned about all aspects of a child's well-being, cognitive, emotional, social, and physical, and is alert to signs of difficulties.
- The teacher is willing to consult with other adults regarding the education and well-being of his/her students.
- The teacher respects the privacy of students and confidentiality of information.
- The teacher is willing to work with other professionals to improve the overall learning environment for students.
PERFORMANCES

The teacher participates in collegial activities designed to make the entire school a productive learning environment. The teacher makes links with the learners' other environments on behalf of students, by consulting with parents, counselors, teachers of other classes and activities within the schools, and professionals in other community agencies. The teacher can identify and use community resources to foster student learning. The teacher establishes respectful and productive relationships with parents and guardians from diverse home and community situations, and seeks to develop cooperative partnerships in support of student learning and well being. The teacher talks with and listens to the student, is sensitive and responsive to clues of distress, investigates situations, and seeks outside help as needed and appropriate to remedy problems. The teacher acts as an advocate for students.
Essential Question: How does genetics and prenatal care impact the newborn baby?

How does the genetic information from the mother and the father join to create a unique human being?

Related Reading: Cook and Cook Chapter 2

Discussion Question: How does a baby born equipped for life outside the womb develop from two cells? All humans have features that make them similar, but other features that make them unique. Think about a group of children you know. Write down the physical and behavioral characteristics of these children and their parents. Think about what makes them the same and different?

* The observable characteristics are called phenotypes.
* Phenotypes depend on genotypes- the complex blend of genetic information that determines our individual characteristics.

The nucleus of our cells contains chromosomes which store and transmit our genetic information.

Chromosomes are made of DNA.

A gene is a segment of DNA along the length of the chromosome. Approximately 25,000 -30,000 genes lie along the chromosome.

DNA can duplicate itself through a process called mitosis. This is what enable a single cell at conception to develop into a human being. Two gametes sex cells combine together.

When sperm and ovum combine gametes they form a zygote.

A normal zygote will have 46 chromosomes. When meiosis is complete there will be 23 chromosomes. The first 22 pairs of chromosomes are matching. The twenty-third pair are the sex chromosomes.

* Females sex chromosomes are XX.
* Male sex chromosomes are XY

Crossing over occurs during meiosis when chromosomes pair up and copy themselves. This creates new hereditary combinations.

Fraternal twins dizygotic are the fertilization of two ova.

Identical twins monozygotic is when a developing zygote separates as it has started to duplicate.

* Each form of a gene is called an allele.
* Homozygous- traits of the parents are similar.
* Heterozygous- traits of the parents are different.

Alleles are dominant or recessive. The dominate allele affects the child's characteristics.
**Dominant Recessive**

- Dark Hair
- Blond Hair

**Normal Hair**

- Baldness

- Curly Hair

**Red Hair**

- Dimples

**Normal Vision**

- Some forms of deafness
- Congenital eye cataracts

**Type B Blood**

- Type 0 Blood
- Rh-positive blood

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* Codominance – when both alleles influence characteristics.

* Genetic Counseling – adults who are considering starting a family may choose this option to assess the chances of hereditary disorders.

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**Dominant Recessive**

- Huntington Disease
- Cooley’s Anemia
- Cystic Fibrosis
- Marfan Disease
- Phenylketonuria (PKU)
- Tay-Sachs Disease
- Diabetes
- Hemophilia

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Cawley and Skelley Unit 3 Draft #1
Essential Question- Explain the relationship between culture and genetics.

Many cultural influences effect the physical and emotional development of a child.

Discussion Question- Think about the most important influences in your childhood. Discuss with a partner or group.

* The family is the influence for children to learn language, social and moral values within their culture. Children learn about relationships within the family. It can be the most important context for development.

* Cultural Values and Practices affect development.

* The relationship with family members may have a direct or indirect impact on behavior and how children learn to handle social situations.

* Socioeconomic Statues SES- education, prestige of job, income.

* Neighborhoods- children can offer connections between schools and families.

* Extended Family Households- children who live with more than one adult relative such as a grandparent.

Refer to previous nature vs. nurture discussion from Unit 1

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Essential and Discussion Question- How does the health and nutrition of the mother affect the developing fetus?

* Embryo- the period between implantation and the first eight weeks of pregnancy. Many changes that provide the structure for internal organs happens during this time.

* It is important for the mother to sustain a healthy lifestyle during her pregnancy.

* Teratogens- any environmental agent that can cause damage during pregnancy: tobacco, alcohol, illegal drugs, prescription drugs, environmental pollution, radiation.

* Prenatal malnutrition can cause damage to the central nervous system.

* Nutrition is an important factor in the health of the fetus and the mother.

1. According to the American Dietetic Association, pregnant women should increase their usual servings of a variety of foods from the four basic food groups up to a total of 2,500 to 2,700 calories daily to include the following:

2. Seven or more servings of fruits and vegetables combined three servings of fruit and four of vegetables daily for vitamins and minerals. Fruits and vegetables with vitamin C help you and your baby to have healthy gums and other tissues, and help your body to heal wounds and to absorb iron.

3. Whole grain products and enriched products like bread, rice, pasta, and breakfast cereals contain iron, B vitamins, some protein, minerals, and fiber that your body needs. Some breakfast cereals have been enriched with 100% of the folic acid your body needs each day. Folic acid has been...
shown to help prevent some serious birth defects. Choosing a breakfast cereal or other enriched grain products that contain folic acid is important before and during pregnancy.

4. Mothers and their babies need calcium for strong bones and teeth. Dairy products also have vitamin A and D, protein, and B vitamins. Vitamin A helps growth, resistance to infection, and vision. Pregnant women need 1,000 milligrams of calcium each day. If you are 18 or younger, you need 1,300 mg of calcium each day.

5. Pregnant women need about 60 grams of protein per day. This is about the same as two or more 2-3 oz. servings of cooked lean meat, poultry without the skin or fish, or two or more 1 oz. servings of cooked meat. Don’t eat uncooked or undercooked meats or fish. These can make you sick. Pregnant women should avoid deli luncheon meats, also. Eggs, nuts, dried beans, and peas also are good forms of protein. Most women in this country have no problem getting at least this amount of protein each day. Protein builds muscle, tissue, enzymes, hormones, and antibodies for you and your baby. These foods also have B vitamins and iron, which is important for your red blood cells. Your need for protein in the first trimester is small, but grows in your second and third trimesters when your baby is growing the fastest, and your body is working to meet the needs of your growing baby.

> Essential and Discussion Question- How does alcohol consumption during pregnancy affect the development of the fetus?

* Alcohol impairs cell and migration.
* The body uses more oxygen than normal to metabolize alcohol. This oxygen is taken from the embryo and fetus.

Mothers who consume alcohol while pregnant risk having a miscarriage or exposing their babies to problems, including:

* Premature birth
* Low birth weight
* Facial deformity
* Hearing and vision problems
* Growth deficits
* Motor-skills problems
* Hyperactivity
* Memory, attention and judgment problems
* Language problems
* Difficulties in school
* Brain damage
* Mental retardation
Note—students with access to a computer should visit the www.iio1hs.org website for further study and statistics.

**Essential Question**—What are the major approaches to childbirth? What are the stages of childbirth?

* There are three stages of labor and delivery.
  
  **Stage One**—Dilation and effacement of the cervix. This is often referred to as the transition stage. The uterine contractions become more powerful and frequent. The cervix begins to dilate. The “birth canal” is created during this stage.

  **Stage Two**—Delivery of the baby. The uterine contractions continue. The mother uses abdominal muscles to squeeze and push the baby through the birth canal. Crowning is the term used when doctors can see the top of the baby’s head. The baby is delivered while still attached to the umbilical cord.

  **Stage Three**—Delivery of the placenta. Contractions continue for several minutes and the mother “delivers” the placenta as it becomes detached from the wall of the uterus.

**Major approaches to childbirth:**

* Natural or Prepared—expecting parents often prepare for childbirth through classes that provide information about the process of delivery. Breathing and relaxation techniques are practiced and options for pain medication are explored. The mother is often assisted by a coach another family member or friend. Home deliveries are considered natural childbirth.

  * Anesthetics—the most common known anesthetic during labor and delivery is known as the epidural analgesia.

  * Instrument Delivery—the physician assists the delivery by using forceps metal clamps or a vacuum extractor suction cup to help the baby from the birth canal.

  * Induced Labor—started artificially by breaking the amniotic fluid and giving the mother the hormone oxytocin to stimulate contractions.

  * Breech Position—the baby is turned in the position where the feet will deliver first.

  * Cesarean Delivery—the baby is delivered surgically through an incision in the mother’s abdomen.
Sample Lesson Plan:

Principle #10: The teacher fosters relationship with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Objective: Today we will examine the effects of alcohol on the unborn fetus by researching literature from www.NOFAS.org.

Materials:
Computers with internet access if computers are not available the information can be downloaded and printed previous to class discussion.

Motivation:
Show the students a picture of a child who has Fetal Alcohol Syndrome. What do they notice? Why could be the apparent disability of the child in the photo? Provide statistics on the particular child.

Procedure for lesson:
Students will research the effects of Fetal Alcohol Syndrome with a partner using the internet.

After the appropriate amount of time, students will return to the group to discuss the four guiding questions below:

What are the long term effects of FAS?
How does alcohol consumption by the mother effect the fetus in the womb?
What are the treatment programs available for pregnant mothers?
What specific developmental delays can occur in children with FAS?

Students will divide into four groups.

Each group should have a colored marker.
The guiding questions above should be written on separate pieces of chart paper.

Students will rotate with their groups and respond to each question on the chart paper.

Group should spend approximately 3-5 minutes at each chart before rotating. It is helpful for the groups to keep the same marker throughout the rotation. This enables the teacher to facilitate specific discussion points with the students.

A whole group discussion should follow when each group has rotated through the four charts.

Assessment:
Following the group discussion each student will create a pamphlet providing information about the effects of FAS, various treatment programs etc. that could possibly be distributed to expecting mothers. This will be a portfolio artifact.

The teacher should look for the following in each assignment:
- Long term effects of FAS
- Cawley and Skelley Unit 3 Draft #1
Nash, J.M. “Inside the Womb: What scientists have learned about those amazing first nine months and what it means for mothers” Time Magazine, November 11, 2002 pp.68-78