Using Scientific Process with Child Development

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Overview

As a ninth grade health teacher, I have realized that some students are very weak in their ability to organize information, set up a method to approach a problem or question and then record their results or summarize their ideas in a way that is clear and concise. This has been more apparent with the low achieving and special education students. They often are not able to think about what will happen next or why something happened. Another reason may lie in the fact that for these students, they are not highly invested in learning and not motivated to think in an organized manner. To increase motivation, this unit focuses on a topic of considerable interest for many of the students – early childhood development.

The elementary science curriculum introduces the scientific method, a systematic method of approach to inquiry, and this topic is revisited in the ninth grade biology and science classes. (1)The skills of setting up a method to approach a problem or situation, to gather information, organize the information or data and to draw a conclusion from the data or evidence are components of the scientific process. This unit will focus on three skills that are related to scientific practices. They are 1) Asking Questions. Students will develop the skills to ask probing questions that will help identify the premises of the topic. 2) Planning and Carrying Out Investigations: Students will decide what data or information that they need to gather and how they will go about doing it. They will develop a scope of information that they think is important to child development. In addition, they will expand their scope to include research on subcategories for each developmental stage. 3) Analyze and Interpret Data. Students will look for patterns and overlapping characteristics in each stage of development, focusing on the changing needs of a child from birth to age 4.

Rationale

The Scientific Process is a method that is easily transferred from science and science experiments to other areas of the curriculum, in this case, Health, particularly, Child Development. It has been my experience, that there are a number of students that do not know how to implement the components of the scientific method to other areas of the curriculum, and in some cases to their personal lives.

This unit will focus on the steps of the scientific method. The students will brainstorm what they think should be included in the study of child development from birth through age four. Students will be asked to draw on their personal experience with children in these age groups. They will be asked to organize the responses and categorize them when applicable. Students will develop a time line of growth and development and relate activities and equipment or toys that are appropriate to the age or stage of development. This is necessary because many students are responsible for younger siblings, relatives and their own children.

I chose this particular area of growth and development because I have students that are either pregnant or are parents. They are very eager to discuss areas of pregnancy and child development because it is relevant. We are seeing teenagers, fourteen years of age and even younger, having children and being responsible for their well-being. Granted, many of the teen mothers live with their families and have the support and guidance of their family, especially the teen parent's mother and grandmother. Even with this support, the teen mother is responsible for caring for her child. It is up to her to care for and nurture her child. She is responsible for making many decisions that will affect her child. These decisions cover the areas of clothing, food, toys and activities that need to be appropriate for the child at each stage of development. As an adult mother, we have the intuition that comes from experience, knowledge and exposure to know for the most part what is the appropriate: what food to feed a child at a given age, what precautions to take when it comes to safety, the size of toy pieces etc. Teen moms often do not have the life experiences or knowledge to make these choices or decisions. There is also the influence of the lag in frontal lobe development of a teen's brain, which can account for even older teens having a reduced ability to anticipate consequences and their ability for plan for possible safety concerns.

Other components of the development of a child include social and emotional development. The dilemma a teen parent faces is that she is still growing socially and emotionally and in many cases does not recognize that this is as important as physical development. Often, the teen mom sees a temper tantrum as a time of unexpected and annoying crying, yelling or kicking without understanding the causes of the tantrum and how it possibly can be avoided. Ensuring that the child is not overly tired or frustrated often will eliminate the tantrum. Other areas of social and emotional development:

recognizing familiar people, responding to facial expressions and learning how to show emotions are also occurring during a child's first year. (2)

One stage of development that students will study in this unit will cover the physical development from birth through age one. During this stage of development, the infant experiences a stage of rapid growth through approximately the fourth month. Weight is typically doubled from birth. Body length is growing by about one inch a month. By the end of the first year, it is not uncommon for body weight to be three times the birth weight and body length to continue to grow about one inch a month. With regards to weight, an infant will drop anywhere from 5 – 10% of its birth weight in the first week due mainly to a lose of water. It is during this time that the infant is no longer dependent on fluids and nourishment from its mother, and now is depending on receiving fluids/nourishment from being feed. The amount of fluid depends on the baby's ability to suck and swallow, reflexes that are developed after birth. It is also during this time that you will see a change in the proportions of the infant's body. At birth, the head of an infant is almost one-fourth or 25% of its length where at the age of one year, the head is only one-fifth or 20% of its length. Compare this to the size of head of an adult, which is approximately one-eighth or 12. 5% of its length (or height). The weight that is gained during the first year changes from fatty weight to muscle and bone weight. In the first several months, an infant's weight gain is mostly fat. The fat supply is used for insulation and nourishment in case of illness or not being able to eat. (4) There is true validity in the statement that a child "grows like a weed".

Changes in motor skills also occur this time. The change from not being able to move to lifting the head and shoulders, turning over, sitting unassisted, scooting, crawling and in many cases, even walking unassisted. Along with this you will see reflexes appear and then when not needed, disappear. For example, the breathing reflex, which is necessary for survival, is present at birth and continues to develop and become stronger. Evidence of this development can be seen while observing a newborn's breathing pattern. Initially, the breathing can be irregular with hiccups, sneezes and spitting up. These occur because the infant is trying to coordinate it's breathing, sucking and swallowing which are needed for its intake of food. Other reflexes include motor reflexes such as the Babinski reflex, which is evident when you stroke the bottom of an infant's foot. With this reflex, the toes spread out. You also will see a swimming reflex of the arms and legs moving when you hold an infant on its stomach horizontally. Another reflex that is very evident is the grasping reflex which develops over time from holding on until the infant loses interest to where the child is able to pick up small items using 2 fingers (pincher reflex). (4)

The newborn has its first social encounter immediately after birth when the baby is given to its mother for the first time. This is not a new encounter, but a continuation of the intimate relation that was building through out the pregnancy. Communication by the infant is initially by crying or making noises. Communication continues through visual contact, making noises (dahdah, goo-goo), smiling, and laughing and then first words. (6)

Between the age of twelve and twenty-four months, the child is still experiencing height and weight gain that is still considered rapid, but not as much as during the first twelve months. Walking is more coordinated and the child will learn to jump, run and climb usually by twenty-four months. The child is able to play with objects, can sort objects into categories, has longer attention span, engages in make believe, and is getting better at recalling memory for people, places and objects. Language skills begin, and by age twenty-four months the child is combining two words. Emotional and social growth includes playing with adults, siblings and peers. At approximately thirteen to eighteen months the emergence of "me" is apparent, and the child recognizing himself in the mirror, pictures and videos. This is the time where the child is beginning to be able to follow directions. From nineteen to twenty-four months the emotions related to feelings: shame, embarrassment, guilt and pride are starting to emerge as well as the vocabulary to match the emotions. The child starts to use its own name. (5)

The ages of three and four (thirty-six to forty-eight months) has the child walking upstairs alternating feet and down stairs leading with one foot. The child is able to jump up off the floor using arms and can hop on the same foot several times. You will also see the child throwing a ball and can catch a ball or object by catching and holding object to its chest. This is the age where the child is able to ride a tricycle. (5)

As adults, we are very open and inquisitive to learning the latest trends in parenting. We read books and articles on what to expect during pregnancy, childbirth and for each stage of our child's development. There are many books and magazines available keep us informed. Many teen moms are still pre-occupied with being a teen and don't take the time, nor do they really have the interest in learning more about a baby's development. The Parent Magazine has a wealth of information for all aspects of parenting, from pregnancy information to suggestions on games to play with your one year old. This is a resource that can be found on line as well as in print. New moms to be and new mom's find this to be a great source of information and practical ideas to help with parenting. (3)

Objectives

Objectives of this unit:

1. Students will be able to apply the scientific process to a subject area that is not part of a typical natural science curriculum.
2. Students will be able to identify a problem that they feel has relevance to them in the area of child development
3. Students will be able to create questions that will act as a guide in their research.
4. Students will be able to develop organizational skills. This will enable them to organize the information that they have, to identify what they need to research and then develop a plan of attack.
5. Students will be able to analyze data and use the data to answer their guiding questions and where appropriate, revise their questions based on data collected.

6. Students will be able to simulate the responsibilities of having an infant by caring for their “flour” baby.

Strategies

Strategies that will be implemented in this unit include small group/cooperative learning, accessing prior knowledge, sharing out, use of technology for research as well as graphic organizers (KWL chart, T chart, contrast and comparison).

Situations You Might Encounter

Possible difficulties in this unit might include motivating students to think in a scientific manner, especially when the subject is health and not a science course. It may be difficult to focus on the organization of information because of the different subcategories of development (i.e. physical, social, cognitive and motor skills) and the possibilities of the overlapping of these, skills and activities. The students will learn that there is no definite skill that is acquired at a specific time or age.

Another difficulty may arise; especially if your students do not have a strong understanding of the importance to organizational skills is why the organization is important, and then how to organize facts. Many students that I have had, do well if you provide detailed instructions, or work sheets that are created in an organized method, but asking the student to create an agenda of what they are going to research and then have them organize their information has been a problem. This is a skill that is necessary for success in everyday living.

In this unit, students will have the opportunity to work in small groups and brainstorm ideas and ways to approach the topic. Sharing out to the whole group will give students the opportunity to hear other suggestions and ideas as well as developing their communication and public speaking skills. This will broaden their resources so that they can determine what will work best for them. Students will also be given a detailed rubric to guide their work. This rubric will be used for both formative and summative assessments. The rubric will guide the formative assessments that will not be graded. Rather, teacher/student discussions should be held throughout the unit. This will allow the student to see where he/she has made progress, met or surpassed expectations and what areas still need to be developed. The rubric is set up with expectations ranging from 4 to 1, with 4 being advanced and 1 label as “try again”. This gives the student the opportunity to revisit the areas that he/she was not able to complete at a higher degree of proficiency.

Use of computers for research requires serious monitoring, as students will drift off to unrelated sites. Providing a list of sites that would be acceptable to use will reduce the time spent surfing and going to other sites such as twitter, face book and you tube. As a

fall back resource, having a supply of baby and parenting magazines and books and toy and clothing catalogs. This will give students access to the same information when computers are being misused.

Classroom Activities

This unit will contain five lessons that will encompass the subject area of child development from birth to age 4. The activities will include research using the computer, gathering observational data from either younger siblings, relatives or in some case, the student's own child. Other activities will include word searches, games and projects.

Lesson One: Introduction of the components of the Scientific Process and how it will be used in the unit on Child Development. Focus will be on identifying the components of developmental stages from birth through age three.

Objective: Students will identify the following scientific skills: asking questions, planning and carrying out investigations (research) and analyzing and interpreting data.

Objective: Students will be able to use the scientific skill of developing questions that will help them understand the growth and development of a child, ages birth to age four.

To prepare for the lesson (Do Now) the students will list three characteristics of an infant birth to three months, three to six months, six to twelve months, one-2 year old, two-3 year old and three-four year old.

Activities:
1). Teacher has chart paper on wall labeled INTU (I Need To Understand). Teacher describes the unit of study for class: studying the growth and development of a childbirth to age four. Students are given a moment to think about the topic so that they can provide one area that they need to understand at the end of the unit. Teacher writes down each student's INTU on the chart paper. (When INTU is identified by student's name, teacher can refer back to that point as the subject area is covered. A great way to reinforce what is relevant to each student.)

In order to stimulate questions, Teacher will discuss the purpose of developing questions and the role questions play in the scientific process. As students pose their question for the INTU chart, discussion between Teacher and students is directed toward the "question". Is the question going to provoke deeper thought or can it be answered with little to no research? If we study or research this "question" will it lead to other questions, or stop with the facts that we find? This type of class discussion will help the students understand the rationale of developing higher order thought questions and how it can expand the possibility of more questions.

2) Chart paper is hung around the room and Marked “Birth to three months”, “Three – six months”, Six months – twelve months,” “One Year-Two Years” “Two Years-Three Years” and “Three Years-Four Years”.
Students will do a “Gallery Walk” and write down what type of development they would expect to see at that age. These charts will be used in another lesson when students are researching activities, toys and other necessities that are relevant to that particular age group.

3. Teacher reviews each stage with the class and clarifies any questions. Students have graphic organizers that allows them to see possible overlapping of skills during the following age groups: birth to age one, one through two years of age and two through three years and three to four years of age. Depending on size of class, teacher can have developmental skills written on note cards, pass them out to students and have students arrange themselves with the skill in order of development: rolling over, sitting up, crawling, walking, talking in short sentences, developing social skills (not sharing, sharing, cooperative play), temper tantrums (those associated with terrible two’s), being able to express themselves with several words, short sentences, asking questions, putting a name to or identifying an object (i.e. showing the child a ball, and child responds with the word “ball”). Students will move to a place where they think that skill occurs. Teacher can either hang signs on wall or on floor indicating the age so students know where to go with their skill. Another version is to have students in small groups and give each group note cards with skills that are related to motor skills, verbal skills, social skills and have each group align them and share out.

Teacher should anticipate possible confusion when the skill can be learned or acquired at different age groups. A few of these skills can include: learning to walk, talking, temper tantrums, etc. This can provide opportunity for additional research for proficient and advanced students, or is an opportunity to discuss the reasons for the overlapping of skills in different age groups.

4. In small groups or groups of two, students are encouraged to related these skills to siblings or small children they know and to reflect on the pattern of skills to see if that is similar to how their sibling developed. Questions to ask: Where was there a difference, do all children develop at same time? Does the presence of older siblings affect how quickly a baby or infant develops? If so, in what areas? Is development different with multiple births (twins or triplets, etc.)? Students share out their findings.

Supplies: Chart paper, markers, rubric for the unit.

Lesson Two: Developing a bank of questions that will guide their research and help the students make predictions. Students work in small groups, with each group focusing on a particular age/developmental stage. They will decide as a group what they think they will discover about that age group: the developmental milestones both physical and

mental, clothing/food requirements, stimulators (toys and activities), required equipment (cribs, car seat, and clothing). This lesson can spread over two days depending on the resources that are available for information: websites, magazines, newspaper and store advertisements.

Objective: Students will be able to develop their own questions that relate to the needs of their targeted age group.

To prepare for the lesson (Do Now): What is the purpose of asking questions when you are going to search for information? What type of questions should you be asking, as you get ready to search for information? What are predictions?

Activities:
1. In small groups, students will develop questions that will guide their research for the needs of a particular age group. They will make predictions as to what they think a child needs in the way of clothes, accessories (car seats, strollers,) and toys. As an extension, students can consider safety precautions; such as an infant six to twelve months should not be given small items because everything goes into the mouth. Another extension: students can also research laws and safety precautions, product recalls etc.

2. Using the computer, students will research the type of clothing, toys and other accessories that can be used at that age group. For example, birth to three months, a crib mobile and music box are stimulating, but wooden blocks are not. Clothing needs would vary depending on the weather, but staples would include onesies, diapers, bibs, receiving blankets, booties and sleepers. Extras would include clothing outfits, shoes, hats or bonnets, sweaters and fancy socks and shoes. Have students identify what is essential and what is not.

3. Using computer or parenting magazines and books, students will research the types of social interactions and stimulations that are most appropriate for each age group. Research questions on the age that children start socially interacting with others and when the “me” or “mine” phase appears. What types of stimulations are appropriate for developmental stages? When are visual and auditory stimulation important and why?

An extension activity: Provide a budget amount and have students make a plan for buying what is essential for a child in the age group they are studying.

Supplies needed: computers, magazines, newspapers, advertisements, and notecards.

Lesson Three: Organization skills: Research using the computer to find information on child development, stages and ages of each step and characteristics and milestones and needs of each stage.

Objective: Students will develop strong organizational skills by categorizing their data for their age group. Students will learn how to use notecards as a method of recording data and sorting into categories or groups.

Objective: Students will be able to analyze the differences of the uses of various graphic organizers so they can choose or develop one that will allow them to effectively organize their research findings.

Students will use graphic organizers to record their findings. Teacher will provide examples of several types of graphic organizers (www.educationoasis.com/curriculum/GO/compare_contrast.htm,) and discuss the purpose of each one. Students should be encouraged to develop their own organizers. Encourage students to explain why they choose the graphic organizer that they did. Questions to ask students: After choosing their graphic organizer, did they need to modify it as they continued to gather information and if they did, why? Did you find that the graphic organizer helped you gather information? Why or why not? Do you think that there may have been a different way to organize your data? If so, describe it. Compare your process of gathering information on baby related items to that of a scientist who is gathering data for their experiment.

Activities:
1. Students will take the information (data) that they found and organize the data in a graphic organizer. Provide students the opportunity to experiment with several types of organizers to find one that best suits their information and what they are trying to show.

2. Provide time for students to discuss with partners or small groups: Purpose of graphic organizers and reasons why choose the one they did. Have partners/small groups critique their choice.

Supplies: Variety of graphic organizers, colored pens, pencils (for students to use to help organize their data).

Lesson Four: Data: Gathering data from observation. Students will observe siblings and relatives, to see if the children exhibit the developmental milestones, play with the appropriate toys/activities, what they eat, etc. They will then compare their observations to the information that they found in their research.

Objective: Students will be able to collect data from observations. They will observe, collect, record and interpret data.

To prepare for lesson (Do Now): How do you observe children? What will you be looking for? How will you record your information?

1. Students will document their "subject": sibling, relative or neighbor. If students do not have the ability to observe siblings, relatives or neighbors, they will gather data on the older children, ages four and five. Students can easily observe this age group at libraries during story time, neighborhood parks, community centers, church or shopping areas. If this is not possible, students will go to grocery stores and stores that carry children's clothing, games, and other necessities. Suggested stores include: Wal-Mart, Target, K-Mart, Toys R Us and Babies R Us to name a few. Students will observe child behavior in the store, interaction with parent and/or with siblings. Observe their interest in toys, clothes. Record what they are attracted to, their reaction or interaction with the item/object. Determine if it is appropriate/inappropriate. Observe how parent interacts with child as well as parent's reaction to child's actions. Shopping malls also provide an opportunity to observe children ages 3 to 4 as they interact with people and different situations. (This will also provide an opportunity for your proficient/advanced students to create a graphic organizer that would record and display their data.)

Activity:
1. Students will prepare for their observations. In small groups, students will discuss various ways to record and organize their data. Discussion will also focus on exactly what they will be looking for. Students can choose to observe specific components or activities/behaviors or do a general observation on activities and behaviors of a particular age

Lesson Five

Objective: Students will be able to simulate the experience of parenting by caring for a "flour" baby for two days**.**

To prepare for the lesson (Do Now):

1. Project: Provide the details on the unit project. Provide a checklist for the project. Refer back to the rubric and identify the components that relate to this project.

Scope of the Project:
Students will care for a "flour baby" for two days. Students will be instructed to carry their "baby" with them at all times, or arrange for a baby sitter to care for the "flour baby" when they can't. They will record their activities as a caregiver for the two day period. Students will be given 2# bags of flour to use as their "baby". Time can be given to design clothes, blanket and baby carriers in class. Other options can include using doll babies. Provide students with timers to set every 4 fours to simulate time frame for feeding and changing diapers. (If your have a budget to purchase "Baby Think It Over", the experience is definitively very real. This baby operates just as a real baby does. There is a tape that tracks the time taken to change diaper, feed or just pick up the baby to

try to stop the crying. Tape also records what would be considered abusive care: letting head drop, mistreating child, etc.)

Lesson extension: While discussing the different developmental and activity stages, activate a floor-cleaning robot to roam around the room to simulate the activity of a toddler. Another suggestion, if you are permitted to bring in a pet dog, gives the dog free reign to roam around and interact with the students. The purpose is to imitate the activity level and constant changing of direction and attention that a toddler has. Students will observe how the robot or pet needs to be watched constantly because you don't know what a child will do or where the robot or pet will wander off too.

Lesson Six: Conclusions concerning their questions/Accepting or rejecting their predictions: Students will come to conclusions that will either support or reject their predictions on their expectations of a particular developmental stage and summarize their answers to their questions.

Objective:

To prepare for the lesson (Do Now): Why would a scientist decide not to accept their original predictions? What is the purpose of developing predictions? What do we use to form our conclusions? What conclusion did you come to regarding the developmental stage that you researched? Did your conclusion support your predictions? Why or why not?

Activities
1. Students will discuss within their small groups their findings and determine if their conclusions support their predictions. They will discuss why or why not and then share out to the rest of the class.

2. After small groups share their findings, as a whole group, have students discuss how they used the steps of the scientific process during this unit. Did they have difficulty following the process as they were researching their stage of development? Did they find it helpful? Why or why not? Can this method be used in other situations or subject areas? Why or why not?

Lesson Seven: Students will create posters that support the data and information that they have gathered. Each group will share out their questions, predictions and findings. Posters will be displayed in the classroom showing the progression of development.

Objective: Students will be able to analyze the information that they have collected and present their finds in posters. Students will be able to share their findings about each age group.

To prepare for lesson (Do Now): What age group do you think will be the easiest to parent? Why? What activities or toys would you recommend for this age group? Do you feel your recommendations are needed for child to successfully mature at this stage of development?

1. Students will create posters in their groups that show the information that they collected.

2. Using the posters as visual displays, students will then share their findings on their age group. Students will discuss the challenges as well as the high points of parenting each of the age groups.

3. Students will reflect on their experience as a "flour" baby parent. They will write about their personal challenges, whether they are ready to parent and why or why not.

Annotated Bibliography/Resources

Teacher Bibliography

1. Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (http://nap.edu.catalog.php?record_id=13165)

2. PBS Parents: Child Development Tracker. www.pbs.org/parents/childdevelopment . Great source of information on development.

3. www. Parents.com.

4. Berger, Kathleen. The Developing Person Through Childhood and Adolescence. Worth Publishers, 3rd edition, 1991.

5. Berk, Laura E. Infants, Children and Adolescents. 4th ed., Allyn and Bacon.2002. This book has access code to use online teaching tools. Go to http://www.abinteractive.com/login. Select book from menu, click GO. Click "Log in here" button. Enter access code: BEAA-PAWS-SOME-GALA-PUNT-BEEP.

6. Clark-Stewart, Alison, Friedman, Susan. Child Development: Infancy through Adolescence. John Wiley & Sons. Inc., 1987.

Annotated Bibliography:

Books

Bee, Helen. The Developing Child, 2nd edition. Harper & Rowe.1978.

Even though this book was published in the late seventies, the summaries at the end of each chapter are useful. Also has many references with each chapter.

Fogel, Alan. INFANCY Infant, Family and Society. 3rd edition. West Publishing Co. 1997.

Book is a good resource on development. Charts are very helpful. Good illustrations of reflexes. Has a section on family and society, dealing with sibling interactions.

Gallagher, Richard PhD. "Organizational Skills for School Success." The Parent Letter. Vol. 1, Issue 3, April, 2003, www.aboutkids.org.

Article deals with the relationship between organizational skills and school success.

Grime, Richard W.," A School's Experience of the Discrete Teaching of Scientific Skills at Early Secondary Level" School Science Review. V. 94 n346 p 99-102 Sep 2012

Papalia, Diane E. Olds, Sally Wendkos. A Child's World, 4th edition. McGraw-Hill Book Co, 1987.

Book provides "Summary" at end of each chapter, which I found helpful. Has a section on different screening tests for developmental schedules. Also has suggested readings.

Spock, Benjamin M.D., Neediman, Robert, M.D. Editor. Dr. Spock's Baby and Child Care. 8th edition. Pocket Books, NY. 2004.

Time tested resource book. Many good pointers and helpful suggestions for anything and everything related to babies and children.

Young, Mary Eming, Richardson, Linda M. Early Child Development. The World Bank, Washington, D.C., 2007. This book is very data driven with charts and graphs.

Web Sites:

www. Scholastic.com/parents/resources. 12 Ways to Develop Your Child's Organizational Skills.

This article addresses ways to develop organizational skills in children.

Pregnancy and Baby. www. Kidshealth.org/parent/pregnancy _newborn.

This site has several links for different topics that deal with growth and development for parents and kids.

Normal growth and development: MedlinePlus Medical Encyclopedia

This website is a great resource for both parents and children. Covers many aspects of newborn development.

www.nlm.nih.gov/medlineplus/ency/article/002456.htm.

Article states some basic developments at early months. Has links for other developmental milestones, also as links to other sites that provide information on what type of development is to be expected for that age.

www.extension.purdue.edu/…/child%20 growth-development/main-c…

Provider-Parent Partnerships || Child Growth and Development www.extension. Purdue.educ/providerparent/child.

This website speaks from the care provider aspect. This is a different perspective and will benefit teens that are seeking childcare. Also the information is applicable to parents also.

www.extension.purdue.edu/.../child%20growth-development/main-c.

Website has links for other areas of development, such as brain development in infants and children.

Top 10 Child Development Articles - Parenting.com www.parenting.com/article/top-10-child-development-articles-10000...

Great website for information on parenting. Good milestone development link.

Growth and Development pediatrics.about.com › Health › Pediatrics › Parenting Advice

Appendix/Content Standards

1. Pennsylvania Department of Education Standards

2. Rubric for unit

3. Check list for “Flour” Baby

Academic Standards for Health, Safety and Physical Education

1. **0.1.3.A**
   Identify and describe the stages of growth and development.
   Infancy, childhood, adolescence, adulthood, late adulthood

2. **11.4.3.A**
   Identify characteristics in each stage of child development.
   Infancy/BIRTH TO 1 YEAR, Early childhood/1 TO 6 YEARS,
   Middle childhood/6 TO 9 YEARS, Late childhood/NINE – 13 YEARS,
   Adolescence/13 – 18 YEARS

3. **11.4.6.A**
   Compare and contrast child development guided practices according to the stage of child development.

4. **11.4.9.A**
   Analyze physical, intellectual and social/emotional development in relation to theories of child development.

5. **11.4.12.C**
   Analyze practices that optimize child development (e.g., stimulation, safe environment, nurturing caregivers, reading to children).

6. **11.4.12.D**
   Analyze plans and methods to blend work and family responsibilities to meet the needs of children.

http://www.pdesas.org/Standard/StandardsBrowser#2358

Rubric for Unit

	4 Advanced	3 Proficient	2 Basic	1 Try Again
Guidelines	All guidelines were followed.	4 guidelines were followed	3 guidelines were followed	2 or less of the guidelines were followed
Use of Class Time	Efficiently used class time. Very little distraction from project. Well organized.	Used class time well with some distractions. Good organizational skills	Used 50% if class tune effectively. Poor organizational skills	Very little of class time was used efficiently. Unorganized and spent more time off task
Required Elements	All elements of project are met. Student exceeds state requirements	4 elements of project are met	3 elements of project are met	2 or less elements are met.
Content and Accuracy	Exhibits a very strong understanding of the content. Information is accurate, strong references with proper notations, no spelling or grammatical mistakes	Exhibits a solid understanding of content. Information is accurate, has references with proper notations. 1-3 spelling or grammatical mistakes.	Exhibits an average understanding of content. Several mistakes with accuracy of information, 4-6 spelling or grammatical mistakes	Weak understanding of content. Careless with accuracy of information. Few references. Many spelling or grammatical mistakes.
Attractiveness And Relevance.	Project is well constructed and attractive, excellent use of color, pictures and print. No mistakes in spelling or punctuation. Student explains in detail the relevance this unit and project has to them on a personal level. Explains why, how it has changed their attitude toward caring for a small child, challenges, and responsibilities.	Project is attractive, above average use of color, pictures and print. 1-2 spelling or grammatical mistakes. Format is appropriate for the topic. Student explains relevance of this unit and project to themselves in a general sense, shows a moderate appreciation of the challenges and responsibilities for caring for a small child	Project has limited appeal and below average use of color, pictures and print. 3-4 spelling or grammatical mistakes. Format is not appropriate for topic. Student explains or expresses the relevance of this unit and project in an impersonal manner. Indicates very little relevance and shows a limited appreciation of the challenges and responsibilities for caring for a small child.	Project is incomplete, sloppy and is not relevant to the topic. There are many spelling and punctuation mistakes. Format does not work well with the topic. Student does not express any relevance of the unit to themselves.
Knowledge Learned	Student is able to respond well to questions that require critical thinking skills as well as solid foundation of knowledge. Answers are organized,	Student is able to respond to questions with some critical thinking skills and has a better than average foundation of	Student is able to respond to questions with some knowledge. Answers have limited detail and	Student is able to respond to questions with very limited knowledge. Sentence structure is simple and grammar is poor.

	detailed and grammatically correct.	knowledge. Answers have some detail and are grammatically correct.	have some grammar mistakes.	
Required elements of baby/parenting experience	Student provided a detailed journal recounting his experience and reflections on parenting his/her "flour" baby. Fulfilled all criteria of parenting experience	Student provided journal entries that provided some detail and reflection. Provided some detail	Student provided journal entries that were basic, without much reflection. Details were omitted	Student did not provide journal entries or reflection.

Check list for “Flour” Baby Project

1. _____ Dress “flour” baby.

2. _____ Give “flour” baby a name.

3. _____ Make a baby carrier or blanket to carry baby in.

4. _____ Minimum of four journal entries a day. Include tasks such as feeding, bathing, baby crying without an apparent reason, wake up at night to feed the baby.

5. _____ Set timer to go off every four hours. Start when you get home from school and have it go off three times, 7 pm, 11 pm, 3 am. Record journal entries on your feelings, i.e. Red, you didn’t want to get up, etc.

6. _____ Extra credit: set timer to go off at 7 am and 11 am.

7. _____ Write a summary on your feelings regarding the responsibility of having an infant to care for. Paragraph: 4: Three paragraphs, strong opening and strong conclusion. 3: Two paragraphs, moderate opening and conclusion. 2: One to two paragraphs with weak opening statements and conclusion. 1: Several sentences to one paragraph with no opening or conclusion.