

# Child development and theories assignment



**ASSIGN  
BUSTER**

For this activity, I chose Jesus Lares from Tacoma, Washington. Jesus is 8 years old, in the 3rd grade, of Hispanic decent, and is an only child. Jesus enjoys a variety of afterschool activities such as baseball and karate and he also enjoys spending time with his friends. In home play consists of playing with toy guns and building space ships with Legos. The primary language at home is English, though when his grandparents are around, Spanish is primarily spoken. His mother and father are Iso of Hispanic decent and both work in the education system.

I planned a science experiment for Jesus which I decided to name, "Mnegar and Oil". The experiment had Jesus mix oil and vinegar together to see if they will mix. The materials involved were one cup of vegetable oil, one cup of vinegar, one egg, and two bowls. The brisk air outside had us do the experiment inside his house. I prearranged and gathered all the materials needed so time would not be wasted on finding materials, and limit questions. An instruction sheet was also placed so Jesus could read and follow the directions on how to properly do the experiment.

I expected Jesus to be excited about his experiment because he loves to see reactions. This one would not be an explosion, but still an interesting reaction between oil and vinegar. The experiment would show Jesus what emulsifiers are and what they do. Emulsifiers are substances that are soluble in both fat and water and enable fat to be uniformly dispersed in water as an emulsion. Foods that consist of such emulsions include butter, margarine, salad dressings, mayonnaise, and ice cream. I expect him to have a great time while grasping the main concept and to have questions about what is happening in the experiment.

The objective was to see what happens when you mix oil, vinegar, and egg together and what the reaction of the experiment was. He would see that certain foods need emulsifiers to blend and create new foods. 1: Getting started. 2: Independent reading. 3: Hand-eye coordination. 4: 5: 6: Time for vinegar. It's pouring too slowly. This smells disgusting! 7: Much faster now. 8: 9: Added too much. Auto-correcting. This looks cool. 12: What's next? 11: 13: 14: Shake it! 15: 16: That's interesting. 17: What does it look like now? 18: The oils on top and the vinegar is on the bottom. 19: 20: 21: What happens if we add an egg? 22: Or just the yoke? 4: The whites will go in this bowl. 25: 26: 27 : How does it look now? 28: The yoke, vinegar and water are mixed together and the egg white, vinegar and 29: water have remained the same, just with more bubbles. Jean Piaget I believe that Jean Piaget would think this science experiment was very interesting and favorable to a child's learning and development. Piaget " focused on how children construct knowledge and is considered a more practical theory for teachers and parents. " (Trawick-Smith, 2013) Piaget would definitely classify Jesus in the Concrete Operation Stage and would have agreed with having Jesus do the experiment on his own.

Piaget believed that learning is internal and personal which must be done individually. Children should " play' while the teacher only serves as the " facilitator". I agree with Piaget in that this experiment would not have been much fun if I had helped him with each and every step. He was able to accomplish each step with little direction. Piaget would see from this experiment the key to learning and advancement assimilation and accommodation, as well as, decentration and causality. Jesus understands

from previous experiments in school that oil is lighter than water or vinegar, as in, it will float on top of the water.

This experiment would show him though that there are emulsifiers that will allow oil and vinegar to essentially mix together. His previous knowledge of this experiment would have him believe these two substances could never mix together and had he only relied on his previous knowledge, he would have only assimilated the information as seen in picture 19. But instead he used accommodation, he has adapted his view and learned that emulsifiers (egg white and yoke), added and mixed in the vinegar and oil, can in fact, cause the vinegar and water to bind together as seen in picture 28. Piaget would also see decentration as viewed in picture 9.

Jesus knew that he needed to add a cup of vinegar to each measuring cup. He ended up adding almost one full cup to the smaller measuring cup. Instead of pouring the vinegar back into the bottle, he instead pours it into the larger measuring cup, noticing that they do not measure exactly the same when viewed side by side, but knowing that there is still a cup of vinegar in each cup. He can understand that the smaller and thinner measuring cup has the same amount of vinegar as in the larger and wider measuring cup, even though the smaller measuring looks to have more vinegar inside of it.

Lastly, Piaget would view that Jesus showed causality. In picture 29, he explains what made the vinegar and oil mix. By adding the egg, it causes the oil and vinegar to bind, allowing the contents of the bowl to be mixed. He understands that the actions he took caused the vinegar and oil to mix. Lev

Vygotsky I believe that Lev Vygotsky would have also agreed with this science experiment. Vygotsky believed that, " thinking and learning are not as internal and individual, but rather highly influenced by language, social interaction, and culture. (Trawick-Smith, 2013) Jesus definitely demonstrated both verbal thought and self-directed speech in this experiment. He would also agree with my use of scaffolding when guiding Jesus through some of the questions I asked during the experiment. In picture 22, the experiment needed Jesus to separate the yoke from the white. He stared at the egg for a bit and then repeated the question out loud. Still thinking about it, he started to reach into the bowl to retrieve the yoke when he looked to the side and saw the spoon. He said, " This might work. , and he picked up the spoon and then tried to fish out the yoke. He used Vygotsky's theory of verbal thought to help guide his learning. In picture 26 and 27, Jesus is reading the steps and questions out loud, while also stirring the oil, vinegar, and egg bowls. He is using self-directed speech to help guide him through the experiment's steps while also helping him understand what is happening in the bowl he is stirring. This would eventually lead to his solution of what would happen to the contents of the bowl after the egg.

Vygotsky would see that Jesus' interaction with me was also helpful in his development. He was able to not just talk to himself about problems he ended up getting stuck on, but I was there as well to assist him in his learning. When it came to measuring the contents or reading words on the instructions, he was able to interact with me to help him see what it was that needed to be done. Vygotsky would see that my scaffolding helped him

understand some vague concepts of the experiment and it helped guide his learning as well such as in picture 29.

I agree with Wgotsky in that students need to be able to work within groups and talk freely among their peers and teachers about problems and solutions, not sitting at their desks quietly working by themselves. Personal Reflection I believe my planned activity turned out quite well. I had it planned out to where all the materials needed were already provided for him to use. The instructions were basic, but detailed in what each step needed to be accomplished. The one thing I was not expecting was how the smell of the vinegar would affect him or the smell of all the ingredients mixed together.

This is the reason why he is explaining what had happened 3 feet away from the actual experiment. The experiment itself was challenging to him, but I knew that if it was too easy, then no learning would be involved, he would have put himself on autopilot and breezed through the steps. The overall concept of the experiment is higher level learning, but I believe I helped guide him to understand that there are many foods that use emulsifiers to bind certain foods. I believe that in a classroom setting, I would defiantly tone down the steps and questions so everyone is on the same page not making it too hard, but not making it too easy as well.

I would also make sure to go over fractions again, especially when using measuring cups to ensure each student knew how to read one. We ended up taking a break on picture 3 because he did not understand where half a cup was on the measuring cup. We bounced ideas back and forth between each other before he figured it out. Other students may find this concept easy, but

for others, they may find it extremely frustrating. Even Jesus was getting frustrated before I stepped in to help. Overall, I believe the experiment went well with some improvements being made in how the steps are written and some fraction review.

I was able to learn a lot by viewing watching him learn, taking pictures of it, review them, and then applying them to what we learned this semester.

Jesus is a smart and talented child who will go far with his education.

Documenting Children's Learning This assignment really opened my eyes to see the importance of documenting children's learning though photographs. You can really see and in a sense grasp how the child is learning and you, as the teacher, can do to help facilitate and guide his or her learning.

As a father, I myself would love to see what and how my son was learning with picture documentation. As a future special education teacher, I would use this documentation to help me write my individualized education programs (IEPs) and be able to show their parents exactly what they are learning and how they are doing it. This should be practiced already in a special education classroom. Photographs provide a glimpse of what is happening, how they are learning, or in some cases, why they are not learning.

Instead of just saying to a parent that the reason why their son or daughter is failing is because they are constantly talking and disrupting class, you can also provide evidence to back up what you are saying. Overall, I learned so much from this class as I have looked back on everything. There are many different concepts that I will take with me to help me better myself when I do

become a teacher. Using photographs to document children is a brilliant concept and I will implement it my classroom. References Trawick-Smith, Jeffrey W. Early Childhood Development: A Multicultural Perspective. Boston: Pearson, 2014. Print.