1. What is being learned? What are the underlying assumptions (explicit and implicit) about the nature of knowledge? The student is learning various mathematic skills. The game “New Math Blaster Plus” wants to know what the student knows, either through games with repetitive drills (E.G., rocket launcher) or complicated drills (E.G., number recycler). The four different games want the student – or the learner – to think logically and act minimally.

2. How does learning take place? What are the underlying assumptions (explicit or implicit) about the nature of learning? Learning takes place in four different “skill and drill” games. The games go the full spectrum of games, from very basic addition to more difficult division and multiplication games. The underlying assumptions about the nature of the game are if you play it enough times, you become familiar with the math problems. The answers become more memory than process. Through repetition and “skill drills,” students, who may not know why they do a math problem a certain way, may know how to do a math problem a certain way and apply it to the Math Blaster game. If a student sees “2+2” enough times, he ‘knows’ the answer is “4.” Enough repetition on a game such as Math Blaster will elicit such responses from the students on the game.

3. What role does technology play? What advantages or disadvantages does the technology hold for this role? What unique contribution does the technology in facilitating learning? Technology plays a significant role in the game. It combined animation, sound effects, and rewards for each level of the game. The advantages include instant gratification, interest in learning mathematics and structured learning. The disadvantages include outdated images and familiarity with the game, which leads to less application of skills and more memorization of skills. Technology impacts learning, bringing interested students into the realm of learning different styles and techniques. It also impacts teaching, allowing a teacher to incorporate new and creative ideas into the classroom environment. One of the unique contributions, I noted, from the “New Math Blaster Plus” game includes the graphics, which may bring more visual students into its realm to learn about mathematics. The flashy graphics may entice a student to work on his math skills. The visual content may capture the student’s attention faster and quicker than a more cognitive student.

4. How does it fit within existing school curriculum? (E.G., is it intended to supplement or supplant existing curriculum? Is it intended to enhance the learning of something already central to the curriculum or some new set of understandings or competencies?) The “New Math Blaster Plus” game fits into the existing school curriculum more supplant to the existing curriculum. It is available for students to continue to improve their math skills. The games also enhance the learning process by practicing the process they learn during the regular lessons.

5. How does the technology fit or interact with the social context of learning? (E.G., are computers used by individuals or groups? Does the technology/activity support collaboration or individual work? What sorts of interaction does the technology facilitate or hinder?) The technology fits into the social context of learning because it offers individual work; though, I could see a small group of two or three students working on the program. The technology is more individual work, but again, I feel collaboration could enhance the learning process for a mentally challenged student. If a student is having
trouble learning a math skill and wants to improve and “learn the right way” instead of learning like Benny did, the student will go over the math questions and try to learn the problems. The interaction is vital for the success of the games because the graphics enhance the learning experience and bringing students into the program. I like how you bring the social interaction with the technology into your argument here.

6. How are important differences among learners taken into account? What do teachers and learners need to know? What demands are placed on teachers and other “users”? What knowledge is needed? At times, the games seem mindless. A student gets a problem, and if the student knows the problem, he answers. It is the “I teach it, you spit it back” situation. If anything, it makes teachers work harder to show the learning process, and for students, it allows them to interact and work on math problems with another tool – computers – available to them in the classroom. A very basic knowledge of mathematics and problem solving is required for the game. I am not sure how this addresses the question about the important differences among learners. I felt Math Blaster did take into account various learning styles and differences among learners into the program. A teacher works with students to learn different math techniques such as counting on fingers or using physical items such as apples to count, subtract, etc., and students must have a basic understanding of the math techniques taught to them by their teachers.

7. What knowledge supports does the innovation provide? (E.G., skills in using particular kinds of technology) The “New Math Blaster Plus” game provides an entertaining, yet informative, way to learn about mathematics and problem solving. The games allow students to interact with a computer program, working on math equations and solving them to improve their existing knowledge. It also gives students the opportunity to slow down their pace and study the math questions, asking questions and interacting with classmates.