#### Savant Syndrome CLASS COPY-DO NOT WRITE ON

#### Savant syndrome is a rare, but extraordinary, condition in which persons with serious mental disabilities, including autistic disorder, have some 'island of genius' that stands in marked, incongruous contrast to overall handicap. In fact as many as one in ten autistic persons have such remarkable abilities in varying degrees, although savant syndrome occurs in other developmental disabilities or CNS injury or disease as well.

Whatever the exact figures, mental retardation and other forms of developmental disability are more common than autistic disorder, so it turns out that about 50% of persons with savant syndrome have autistic disorder and the other 50% have other forms of developmental disability, mental retardation, or other CNS injury or disease. Thus, not all autistic persons have savant syndrome, and not all persons with savant syndrome have autistic disorder.  
 Savant skills typically occur in an intriguingly narrow range of special abilities   
Considering all the abilities in the human repertoire, it is interesting that savant skills generally narrow to five general categories: Music, usually performance, most often piano, with perfect pitch (although composing in the absence of performing has been reported as has been playing multiple instruments, often as many as 20); Art, usually drawing, painting or sculpting; Calendar calculating (curiously an obscure skill in most persons); Mathematics, including lightning calculating or the ability to compute prime numbers, for example, in the absence of other simple arithmetic abilities; Mechanical or spatial skills, including the capacity to measure distances precisely without benefit of instruments, the ability to construct complex models or structures with painstaking accuracy, or the mastery of map making and direction finding.

The skills tend to be right hemisphere in type  
These skills can be characterized as non-symbolic, artistic, concrete, and directly perceived, in contrast to left hemisphere skills that are more sequential, logical, and symbolic, including language specialization. The special skills are always accompanied by prodigious memory. Whatever the special abilities, a remarkable memory of a unique and uniform type welds the condition together. Terms such as automatic, mechanical, concrete and habit-like have been applied to this extraordinary memory.

**The Mind of a Savant**

**A singular woman changes the cattle industry and our image of autism**

The cows and bulls climbing the curved ramp to the slaughterhouse are just moments from death. The only sound, intermittent and distant, comes from inside, the mechanical thwaap of a pneumatic bolt--a bit wider and longer than a cigarette--being drilled deep into an animal's forehead. But not a bleat, bray or bellow is heard on the ramp outside, and that's just the way Temple Grandin likes it. She invented this entry chute so that cattle would not experience a moment's panic. At first, her theory of "humane slaughter" sounds like an oxymoron. But then Grandin herself is a bit of an oxymoron: She's a "high-functioning autistic," a woman who has broken through her neurological impairments to revolutionize the design of livestock equipment--and our understanding of autism as well.

One third of the cattle and pigs slaughtered in North America go through livestock equipment she designed. Her campaign for humane handling of animals won the 1995 Industry Advancement Award from the American Meat Institute. But Grandin's most lasting achievement may be describing clearly what it is like to have autism, one of the most impenetrable of all disabilities. Says neurologist Oliver Sacks: "She was the first voice from inside."

Grandin's visual thinking made it easy to design the ramp that is so calming to cattle entering the Shapiro Meat Packing Co. in Augusta, Ga. At work at her drafting table, she could picture what a cow, from its wide-angle perspective, would see while walking through the distinctive curling-chute design she calls the "stairway to heaven." Its curves and 6-foot walls block from view things that can make cattle skittish--sun or shadows, the sight of another animal, a glimpse of a packinghouse worker.

A powerful hug. Grandin understands how an animal's senses are easily overwhelmed: That's a trait of autism, too. "The school bell was like a dentist's drill down my ear," she recalls. A new petticoat worn to church as a child was like "sandpaper rubbing off my skin." Before finding the right dosage of antidepressant medicine 14 years ago, Grandin walked around in a perpetual state of panic--"a constant feeling like I was being mugged on the New York subway." Sensory overload, she says, is common in autism. "If you had a speaker inside of you blaring rock-and-roll with a psychedelic light show," she says, "you'd withdraw, too."

A squeeze machine is found at the very end of Grandin's slaughter system as well--the animals die in its comforting embrace. Grandin has little interest in the design of packing plants after the point at which an animal is killed. Asked to square her extraordinary love of animals with her work, she talks about the symbiotic relationship between humans and animals. At the Georgia plant, virtually every part of the cow gets used. Hamburger patties are ground out at one end of the disassembly line, while the hide rides out on a hook to a tannery at the other. Because animals give humans so much, Grandin argues, they should be treated well up to the moment of death. Her autistic bent toward scientific thinking--she identifies with "Star Trek's" logical Mr. Spock--leads her to view the animals' fate with little emotion.

Such lack of sentiment makes social interaction difficult. Grandin's business projects are her best friends, and she spends 75 percent of her days traveling to ranches and abattoirs or to meetings on autism or livestock. During one early assignment, she thought nothing of writing a nasty letter to the company president about stupid mistakes his engineers had made, then was surprised to find herself resented. She has learned from experience, and now much of her social behavior is guided by observing others. That's why she feels like "an anthropologist on Mars," a description Sacks used for the title of his recent book, with its central essay about Grandin.

Grandin says that the way she acted as a child--she could not speak until age 3--still would be called classic autism. Had her mother heeded the advice of doctors to institutionalize her "brain damaged" daughter, Grandin would have wound up, she believes, on the low-functioning end of autistic behavior. A good early preschool and teachers who played to her peculiar fixations made the difference: Psychiatrists told her to give up the squeeze machine, but a teacher urged her to study science in order to understand why it worked for her.

Were a cure for autism to be invented tomorrow, Grandin would refuse it. She's happy with her life. But as she observes, autism and genius (as well as depression) run in families. Wipe out autism, Grandin suspects, and the world would be "left to boring conformists with few creative ideas." Indeed, fewer high-functioning autistics now hide their conditions. "I personally know several Ph.D.'s with autism--chemists, computer engineers--a pilot, a redeemed art forger," says Sacks. And one group of activists prints buttons that say, "I'm Not Just Weird. I'm Autistic." By humanizing autism, Grandin has led the way in destigmatizing it.

On your own sheet of paper, answer the following in complete sentences please…

1. What is the definition of a savant?
2. What neurological disorder is closely connected to savant syndrome?
3. What are the abilities or intelligences that savants excel in?
4. What side of the brain in the dominant side for most savants?
5. What is the “special skill” that they possess?
6. What does Temple Grandin’s philosophy of “humane slaughter” look like?
7. What is one symptom of someone who is autistic? 1st paragraph
8. What is the “stairway to heaven”? Hint: it’s not a song
9. What is the purpose of this mechanism? Why is it being used?
10. What are some of the issues that Grandin says autistic people have to deal with?
11. What part does the “squeeze machine” play?
12. What does Grandin lack that we possess when it comes to interaction?
13. What did Grandin experience in childhood that she feels kept her from the doom of “being stuck” in a low functioning autistic.
14. What does Grandin think autistics are best at?