

# **SUGGESTED ASSIGNMENTS FOR COGNITIVE EXTENSION**

## **SOCIAL STUDIES**

Consider the struggles of many immigrants in the United States at the beginning of the 20<sup>th</sup> century.

- ✓ What do you think were some of the obstacles encountered by immigrants coming from Europe, Eastern Europe, Asia, and Ireland?
- ✓ What do you think were some of the problems that government officials encountered as a result of large numbers of immigrants pouring into their cities and states?
- ✓ What was the impact of immigration on industry, such as textiles, steel, and food production?
- ✓ How do the immigration problems of early 20<sup>th</sup> century compare with those of today, being sure to include the modern problem of illegal immigration?
- ✓ What would be your policy suggestions to solve the illegal immigration problem in areas such as Southern California, Arizona, and New Mexico?

## **GEOGRAPHY**

Physical environment has always been a main factor in the development of towns, cities, states, and entire nations. Where a community is located may very well have an effect on how economically wealthy and secure they become.

- ✓ How did the physical environment affect commercial and industrial success in America's early developmental period (1755 through 1870s)
  - In the lower Mississippi Valley, including Louisiana
  - In the Northeast, i.e. New England
  - In the Far West, California, Nevada, Arizona, New Mexico
  - In the Florida Peninsula
  - In the Southern states, i.e. Mississippi, South and North Carolinas, West Virginia, Virginia, Georgia, Alabama
- ✓ To what degree do you think that the physical environment affects commercial and industrial success today?
- ✓ In which of the above listed regions is the physical environment still an important factor in the economic wealth and security of its inhabitants? Why?

## MATHEMATICS

You are the owner of a shipping company, and as such you are concerned with costs and time on job. You must have funds to pay your workers as well as the employment taxes that are required by law. Much of the profit made from shipping must go for fuel, maintenance, replacement, insurance, and highway fees and tolls. You also have office expenses such as paying for secretaries, computers, paper products and technology and communication fees.

Considering all of the above, solve the following problems using algebraic formulas where possible.

### **Data To Solve Problem:**

- ✓ You have a contract to haul 450,000 lbs of grain which are in 100 lb bags.
- ✓ You decide to use three trucks to haul the load.
- ✓ Each cannot legally weigh over 28,000 lbs.
- ✓ Riding empty, the trucks weigh as follows: Truck A = 5600 lbs; Truck B = 6000 lbs; Truck C = 6500 lbs.
- ✓ Gas prices are stable at \$2.85 per gallon.
- ✓ Each truck utilizes diesel fuel when fully loaded at the following rate: Truck A gets 24 mpg. Truck B gets 21 mpg. Truck C gets 18 mpg.
- ✓ When riding empty the mpg is: Truck A – 28 mpg; Truck B – 25 mps; Truck C 21 – mpg.
- ✓ Tolls for this trip amount to \$1.75 per 1000 lbs including the weight of the truck. There are four tolls to the destination.
- ✓ The distance to the buyer is 980 miles, one way.
- ✓ The wages and benefits for each trucker are estimated to be 725\$ per each for the job. (This figure includes their food and motel.)

Problem # 1: How many bags of material can each truck carry and how many loads will it take to ship the full 450,000 lbs?

Problem # 2: What will be the total cost to ship the material to the buyer?

Problem # 3: What will the fuel cost be for all three trucks for the round trip?

Problem # 4: What price will you need to charge the buyer for the entire load if you wish to realize a 15% profit?