

# 3<sup>rd</sup> Grade Project- Start your own Trucking Company

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## Math Standards

**MAFS.3.OA.1.1-** Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .

**MAFS.3.OA.1.3-** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawing and equations with a symbol for the unknown number to represent the problem.

**MAFS.3.OA.1.4-** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = ? \div 3$ ,  $6 \times 6 = ?$ .

**MAFS.3.OA.2.5-** Apply properties of operations as strategies to multiply and divide. Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)  $3 \times 5 \times 2$  can be found by  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ , or by  $5 \times 2 = 10$ , then  $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that  $8 \times 5 = 40$  and  $8 \times 2 = 16$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)

**MAFS.3.OA.4.8-** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

## Materials

- One copy of “Trucking Company Project Directions” for each student
- One copy of “Trucking Company Project Reference Sheet” for each student
- A computer with access to PowerPoint or Sway

## Teacher Notes

Students will work independently to complete the project. The objective of the project is for students to demonstrate mastery of the math standards listed above. This project also requires students to apply critical thinking skills, organize information to write explanatory text, and create a presentation using PowerPoint or Sway. Additional Florida standards addressed include LAFS.3.W.3.7, LAFS.3.W.1.2, LAFS.3.L.1.1, LAFS.3.L.1.2, LAFS.3.L.2.3, and LAFS.3.SL.2.4

## Trucking Company Project Directions

Trucking companies use trucks to transport goods and merchandise to customers all over the country. You have decided to start your own trucking company. Follow the steps below to develop a business plan for your trucking company.

1. Select the type of product you'd like to transport.
  - Food- transport food to restaurants and grocery stores
  - Clothing- transport clothing to retailers like Walmart, Target, and shopping malls.
  - Toys- transport toys to retailers like Walmart, Target, Toys-R-Us, and shopping malls
2. Calculate the cost of the truck cab and trailer you will buy for your business.
  - Truck cab with a sleeper
    - higher cost, but saves money if driver travels long distances.
  - Truck cab without a sleeper (A day cab)
    - lower cost, but driver cannot travel long distances without paying for a hotel room
  - A 48 foot trailer
    - can be used to transport all items except food
  - A 48 foot refrigerated trailer
    - higher cost, but necessary to transport food
3. Calculate the total amount of money you need to run your company for the first year. Be sure to include the purchase price of one truck cab, one trailer along with the yearly cost for fuel and other yearly costs listed on the "Trucking Company Project Reference Sheet".
4. Create a PowerPoint or Sway to persuade investors to lend you money to start your trucking company. Your presentation must include your company name, a company slogan or logo, an explanation of what your company will transport, the total amount you need to borrow to start your company, and a detailed plan of how the borrowed money will be spent.

**\*\*You will receive two grades for this project- a math grade for your calculations and a language arts grade for your presentation.**

## Trucking Company Project Reference Sheet

Use the information below to calculate your trucking company's expenses for your first year of operation. You may write on this paper or complete your calculations on sheet of loose leaf paper.

<b>Equipment</b>	<b>Purchase Price</b>
Truck cab with a sleeper (Sleeper cab)	\$150,000
Truck cab without a sleeper (Day cab)	\$100,000
48' trailer	\$30,000
48' refrigerated trailer	\$65,000

<b>Equipment</b>	<b>Average Monthly Fuel Cost</b>
Sleeper cab and a 48' refrigerated trailer	\$750
Day cab and a 48' refrigerated trailer	\$650
Sleeper cab and a 48' trailer	\$600
Day cab and a 48' trailer	\$500

<b>Other Yearly Costs</b>	
Tires	\$4,000
Permits, licenses, and tolls	\$3,600
Maintenance	\$15,000
Insurance	\$6,500

## Trucking Company Project Presentation Rubric

Each section is worth 10 points

- Presentation includes a unique/creative company name
- Presentation includes a unique/creative company logo or slogan
- Presentation includes an explanation of what your company will transport
- Presentation includes the total amount needed to start company
- Presentation includes a detailed plan of how the borrowed money will be spent
- The presentation is persuasive
- Presentation is typed in the student's own words
- Pictures are included to represent each slide/page
- Presentation has 0-2 spelling or grammar errors
- Student presented PowerPoint or Sway to class

Total points: \_\_\_\_/100

Grade: \_\_\_\_\_