## Solar Lesson Plan Format

Age Level: $4^{\text {m }}$ grade
Subject(s) Area: Social Studies
Materials Needed: tape, pictures, scenarios

## Standards:

- 4.2.11: Describe the effects of changes in industry, agriculture, and technology in North Dakota (e.g. transportation)


## Objectives:

- The students will identify how the railroad and other types of transportation used to travel in North Dakota.
- Level 1: Knowledge


## Learning Activities:

Technology: N/A
Required Vocabulary:
Opening Element:

- As students walk in we will begin by asking them what they think this lesson will be about (everything around us is based on transportation. E.g. big wheel, pictures of railroad, etc.)
- After having a short discussion, we will begin our lesson with the time era of the early 1800s.


## Reflective Questions:

- What do you think was difficult about only having a horse for transportation?
- How does a covered wagon slow the settlers down?
- What were some troubles they ran into?


## Instructional Methods:

1. Scenarios:
a. Horse:We will begin with "Okay the time is 1807. The only residents on North Dakota are the Native Americans. They use horses for their transportation."
b. Horse and Wagon:Next era. " The time is 1861. Europeans have moved to North Dakota for a chance a new life. To move all of their belongings, they created a covered wagon."
c. Steam Engine:Next era. "The time is 1865. The only way big companies can move items in bulk is by a steam boat on the Missouri River. The only problem is the river winds across the state, so it took forever to get a short distance."
d. Railroad:Next era. "The time is 1884. The Northern Pacific Railway has come to North Dakota! Now, people can travel a far distance in a short period of time and companies can ship items quickly!"
2. Set up the game:

Tape a finish line and a beginning line.
i. Each type of transportation will have a different amount of spots
a. Put tape on each different type of transportation

The wagon will have the most dots
i. The horse would have the second most dots
ii. The steam engine would have the second least amount of dots
iii. The railroad would have the least amount of dots
3. Begin the game

We will start with a horse. There will be different cards and the students will follow what the card says (all students)
a. When we cross the state, we will introduce the horse and wagon and follow the same idea

Before crossing, one teacher will get rid of some dots
b. Then we will cross again with the steam boat and less dots. (different scenarios)
c. Last, we will cross with the railroad. This will have the least amounts of dots and scenarios. They will cross the fastest.
4. We will go back into discussion again.

Guided Practice Strategies: We will demonstrate and then they will do it together as a group.
We will also have the steps and scenarios basically drawn out for them.
Independent Concrete Practice/Application: Each student will reflect and participate in group discussion
Classroom management/movement: Students will be walking throughout the game and following the dots
Differentiation: Students can participate in the group discussion how they want.
Wrap-Up: At the end, we will ask the students what was different between the different types of transportation.

- What is different between the railroad and the horse?
- What types of challenges did you face?
- How do you think the car changed this?
- What about the airplane?


## Assessment:

## - Clear Connection to Objective

Formative: Group Discussion
Summative: N/A

## Reflection:

| Horse | Horse and <br> Wagon | Steam <br> Boat | Railroad |
| :--- | :--- | :--- | :--- |
| Your horse broke his leg. You <br> can't move. | You came to a river <br> crossing. Your wheel fell <br> off your wagon. Take 1 <br> step back. |  |  |
| The buffalo herd is on the move! <br> You follow behind quickly and <br> capture lunch for your tribe. <br> Move 3 steps. | You were stopped by a <br> tribe of Native Americans <br> and couldn't travel until <br> noon. Move 2 step. |  |  |
| You came to a river crossing <br> and made it through okay, but <br> your horse it tired. Move 2 |  |  |  |


| steps. |  |  |  |
| :--- | :--- | :--- | :--- |
| There is a thunderstorm and <br> your horse is frightened. Take 1 <br> step back. |  |  |  |
| It is a beautiful day and you do <br> not run into any problems. Move <br> 4 steps. |  |  |  |
| DANGER AHEAD! Take 4 <br> steps back. |  |  |  |
| You are trying to ride south <br> because of a nasty blizzard. You <br> and your horse can't see <br> anything. Take 2 steps back. |  |  |  |
| You have smallpox. You cannot <br> travel with the rest of your tribe. <br> You can't move. |  |  |  |
| You found a short cut! Take 4 <br> steps. |  |  |  |
| You stopped to pick some <br> berries. Take 2 steps. |  |  |  |
| It's your lucky day. You found <br> eagle feather. Take 5 steps. |  | 9 dots |  |
|  |  | 11 dots |  |




