

# COOPERATION

**Week 4**

**Great Lakes**

# Cooperation

**Working well together.**

# Objectives

## Cooperation States and Regions Week 4

### General Objectives

- To practice the character trait of cooperation within the family
- To learn the Great Lakes Region

### Specific Objectives

- To learn the names of the Great Lakes
- To study about canals and locks
- To make a model of the Erie Canal
- To research the major cities of the region
- To write a paper about the automobile industry
- To assemble model cars on an assembly line
- To learn to sort and identify cars by manufacturer
- To visit an assembly line plant
- To learn about the Kellogg Company
- To identify dairy products
- To draw dairy cows
- To visit a dairy farm
- To play ice or roller hockey

# Alert

Cooperation States and Regions Week 4

Week 5

Plaster of Paris or modeling clay

Week 8

Pine cones

# Weekly Supplies

## Cooperation States and Regions Week 4

- Plastic tub or wading pool, sand, 1x4x4" wood planks, plastic horses, toy boats, twine 99 (p.118)
- Wooden model cars (at least 3), glue, rubber bands, 12' butcher paper or paper drop cloth 102 (p.118)
- Match box cars (many) 103 (p.118)
- Pencil and paper 108 (p.119)
- Ice skates or roller blades, hockey stick or broom, puck or ball, net 111 (p.119)

# Bible Verse

## Cooperation States and Regions Week 4

*If the foot says, "Because I am not a hand, I am not {a part} of the body," it is not for this reason any the less {a part} of the body.*

*And if the ear says, "Because I am not an eye, I am not {a part} of the body," it is not for this reason any the less {a part} of the body.*

*If the whole body were an eye, where would the hearing be? If the whole were hearing, where would the sense of smell be?*

*But now God has placed the members, each one of them, in the body, just as He desired.*

*If they were all one member, where would the body be?*

# Focus Books

## Cooperation States and Regions Week 4

A Atlas

Road Atlas

*Walk Across America* by Bruce Jenkins

O *The Great Lakes* by James P. Barry

*The Story of the Haymarket Riot* by Charnan Simon

*Illinois* by Kathleen Thompson

M-Y *Ohio* by Kathleen Thompson

*Michigan* by Martin Hentz

\* *Along Came the Model T: How Henry Put the World on Wheels* by Robert M. Quackenbush

# Music

Cooperation States and Regions Week 4

**"They'll Know We Are Christians By  
Our Love"**

**"Erie Canal"**

[http://www.kididdles.com/lyrics/e014.ht  
ml](http://www.kididdles.com/lyrics/e014.html)

(Erie Canal music)



# Websites

## Cooperation States and Regions Week 4

- <http://www.youtube.com/watch?v=IXsto9qtG0U&feature=related> (Accelerated Panama)
- <http://www.youtube.com/watch?v=8Jj3HDTdJXs&NR=1> (Good explanation of locks)
- <http://www.youtube.com/watch?v=Lx71jRnZbJc> (Great video for Eric Canal today)
- <http://www.youtube.com/watch?v=l3Ha7daI7Ps> (Assembly line)
- <http://www.youtube.com/watch?v=3CzuQ3DtsPc&NR=1> (Cool robotics)
- <http://www.youtube.com/watch?v=Z8ut5ND3agI&feature=related> (Lego engine)
- [http://www.ext.vt.edu/resources/4h/virtualfarm/dairy/dairy\\_breeds.html](http://www.ext.vt.edu/resources/4h/virtualfarm/dairy/dairy_breeds.html) (Dairy Cows)
- <http://aipl.arsusda.gov/kc/cowfacts.html> (Dairy Cows<sup>9</sup>)

# **Writing Assignment**

**Cooperation States and Regions Week 4**

**Y-M-O 101 (p.118) Write about the automobile industry or Henry Ford.**

# Writing Tip

Cooperation States and Regions Week 4

**Y-M-O (same as whaling paper)**

- **Begin by creating boxes for each paragraph:**
  - **Designing the car**
  - **Assembling the car on the line**
  - **Advertising the car on TV**
  - **Selling the car at the dealer**
- **Next, group words into each box.**
- **Next, order the words.**
- **Finally, begin to write sentences for each word explaining the process.**

# Vocabulary

## Cooperation States and Regions Week 4

### Great Lakes

Huron

Ontario

Michigan

Erie

Superior

### Canals

Erie Canal

Panama Canal

Suez Canal

Locks

Half-gate

Draft animal

Barge Towboat

Watertight

### Terms

Windy City

Chi-town

Motor City

Hockeytown, USA

Chicago Fire

Sewage System

Skyscraper

Retailer

Mayo Clinic

# Vocabulary (Cont'd 2)

## Cooperation States and Regions Week 4

Auto Industry

United Auto Workers

UAW

Union

Assembly Line

Conveyor Belt

Interchangeable Parts

Model T

The Brickyard

Turnover

Rust Belt

Bailout

Pacifist

Anti-Semitic

# Timeline Characters

Cooperation States and Regions Week 4

Michigan

Henry Ford

Walter Chrysler

W.K. Kellogg

Minnesota

Mayo Brothers

Illinois

Abraham Lincoln

Barack Obama

# Map Study

## Cooperation States and Regions Week 4

### Michigan

#### Cities:

Detroit

Battle Creek

#### Lakes:

Erie

Huron

Michigan

#### Landmarks:

Auto Industry

### Illinois

#### Cities:

Chicago

#### Lakes:

Lake Michigan

#### Landmarks:

O'Hare International  
Airport

# Map Study (Cont'd 2)

## Cooperation States and Regions Week 4

### Ohio

#### Cities:

Cleveland

#### Rivers:

Ohio River

### Lakes:

Erie

### Wisconsin

#### Cities:

Milwaukee

Green Bay

#### Lakes:

Superior

Michigan

### Indiana

#### Cities:

Indianapolis

#### Lakes:

Michigan

#### Landmarks:

Indy 500

### Minnesota

#### Cities:

Twin Cities= Minneapolis/St.  
Paul

#### Lakes:

Superior

#### Landmarks:

Mayo Clinic

3-M



# States and Capital of the Great Lakes

Cooperation States and Regions Week 4

**Minnesota, St. Paul**

**Michigan, Lansing**

**Illinois, Springfield**

**Ohio, Columbus**

**Indiana, Indianapolis**

**Wisconsin, Madison**



# Activities

## Cooperation States and Regions Week 4

### Monday: Great Lakes and Canals

97 (p.118) Learn the names of the Great Lakes.

98 (p.118) Research canals and locks.

99 (p.118) Make your own Erie Canal.  
(optional)

Continue learning state capitals.

# Great Lakes= HOMES

## Cooperation States and Regions Week 4

Great Lakes are 20% of world's surface fresh water

- H for Lake Huron
- O for lake Ontario
- M for Lake Michigan
- E for Lake Erie  
(so shallow it freezes)
- S for Lake Superior  
(over 1,000 feet deep - so deep, that it could fill up all the other lakes with water left over!!!)



# Canal

## Cooperation States and Regions Week 4

- Canals are man-made, artificial channels dug across narrow strips of land to connect 2 bodies of water making a shortcut for ship traffic.
- Famous canals are
  - Panama Canal (Panama)
  - Suez Canal (Egypt)
  - Erie Canal (New York)



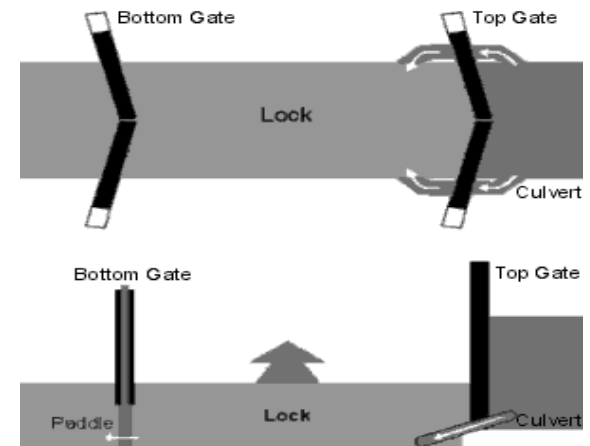
# Canal Lock

## Cooperation States and Regions Week 4

Lock is chamber built between 2 bodies of water of different levels; used for raising and lowering boats betw/ water of different levels

- Chamber with 2 gates-1 at each end
- Ships enter 1st gate; both gates closed
- Water is either added or taken away to match the new level of water
- 2<sup>nd</sup> gate opened; ship goes out at new water level
- All locks have:
  - watertight chamber
  - 2 gates
  - valve or a pump

[http://en.wikipedia.org/wiki/Locks\\_\(canal\)](http://en.wikipedia.org/wiki/Locks_(canal))



# Erie Canal

## Cooperation States and Regions Week 4

- Man-made waterway in NY state.
- Runs 365 mi. from Albany to Buffalo at Lake Erie.
- Took eight years to build; completed in 1825
- Connects the Atlantic Ocean to the Great Lakes.
- Barges pulled by draft animals, cut transport costs by about 95%.
- Population grew in western NY state.
- Ohio Valley and the Great Lakes swelled with people.
- NY City become the chief US port.
- Still part of the NY State Canal System today; bringing raw products in to Great Lakes; food grains and manufactured goods to eastern markets with diesel powered barges

# Low Bridge

## Cooperation States and Regions Week 4

Low Bridge  
By Thomas S. Allen

I've got an old mule and her name is Sal  
Fifteen years on the Erie Canal  
She's a good old worker and a good old pal  
Fifteen years on the Erie Canal  
We've hauled some barges in our day  
Filled with lumber, coal, and hay  
And every inch of the way we know  
From Albany to Buffalo

Chorus:

Low bridge, everybody down  
Low bridge for we're coming to a town  
And you'll always know your neighbor  
And you'll always know your pal  
If you've ever navigated on the Erie Canal

We'd better get along on our way, old gal  
Fifteen miles on the Erie Canal  
'Cause you bet your life I'd never part  
with Sal

Fifteen miles on the Erie Canal  
Git up there mule, here comes a lock  
We'll make Rome 'bout six o'clock  
One more trip and back we'll go  
Right back home to Buffalo  
Chorus

Oh, where would I be if I lost my pal?  
Fifteen miles on the Erie Canal  
Oh, I'd like to see a mule as good as Sal  
Fifteen miles on the Erie Canal  
A friend of mine once got her sore  
Now he's got a busted jaw  
Cause she let fly with her iron toe  
And kicked him in to Buffalo

Chorus

Don't have to call when I want my Sal  
Fifteen miles on the Erie Canal  
She trots from her stall like a good old gal  
Fifteen miles on the Erie Canal  
I eat my meals with Sal each day  
I eat beef and she eats hay  
And she ain't so slow if you want to know  
She put the "Buff" in Buffalo

Chorus

<http://www.kididdles.com/lyrics/e014.html><sup>23</sup>  
(Hear Music)

# Great Lakes Region

## Cooperation States and Regions Week 4

- **Economy – North American center:**
  - automobile manufacturing
  - agricultural machinery
- **Technology – Inventions/advancements in science and industry:**
  - assembly line
  - Mayo Clinic
- **Geography – Natural resources:**
  - freshwater lakes for water and transportation
  - raw material such as iron ore, coal, copper, lumber
  - rich soil for grains, corn, wild rice, cranberries

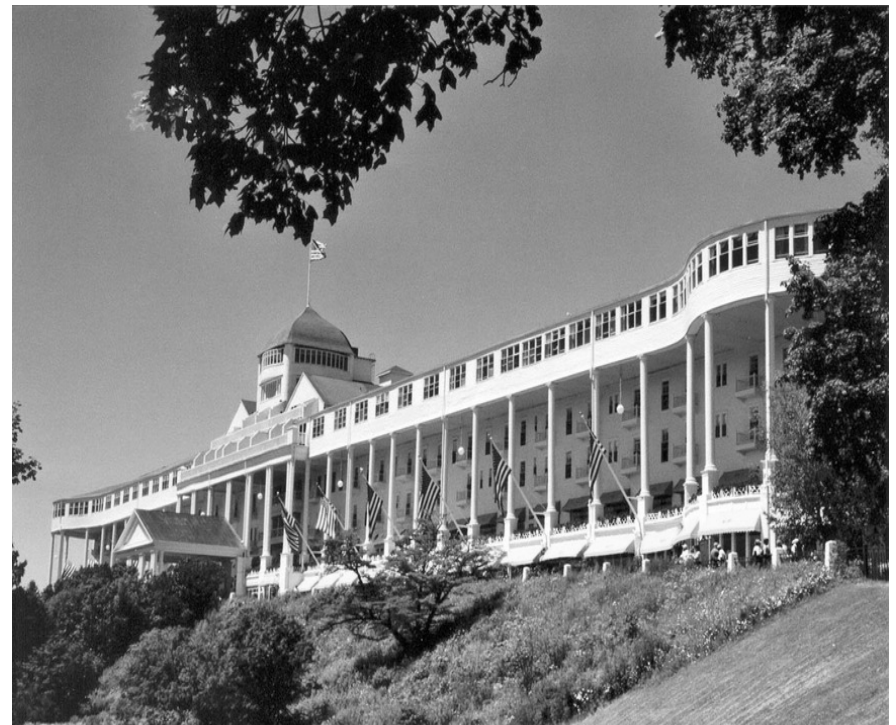


# Great Lakes Region (Cont'd 2)

## Cooperation States and Regions Week 4

- Landmarks

- Abraham Lincoln home, IL
- Indianapolis Motor Speedway, IN
- Mackinac Island,
  - Grand Hotel, MI
- Henry Ford Museum, MI
- Hillsdale College, MI



# Activities (Cont'd 2)

Cooperation States and Regions Week 4

## Tuesday: Automobile Industry

Read about Henry Ford.

102 (p.118) Form an assembly line to make a car.

103 (p.118) Sort cars by American manufacturers.

Research the bailout money being given to American automobile companies.

# Henry Ford

## Cooperation States and Regions Week 4

- Father was Irish farmer, mother was Belgian
- Worked on family farm (hated farming)
- Rebuilt pocket watches at 15
- Chief engineer for Edison Illuminating (encouraged by Thomas Edison to build cars)
- First auto company failed
- Henry Ford auto company was taken over by Henry Leland; Ford left company; Leland renamed it Cadillac
- Launched Ford Motor Company in 1903
- Ford cars won many races with Barney Oldfield as driver
- Introduced the Model T for \$825 in 1908
- Moving assembly line introduced in 1913 which dropped car price to \$360 in 1916
- Paid workers \$5 per day (double standard pay); considered high pay as part of sharing in the profits of the company
- Richest man on earth
- Hated Jews (Anti Semitic)
- Pacifist (Hated war), but made money off building B-24 bombers

# The Genius of Henry Ford

Cooperation States and Regions Week 4

- Build a basic automobile - no frills
- Cut manufacturing costs - assembly line
- Pay workers well - reduce turnover
- Lower price of each auto - priced for everyone
- Change American life - no more horses
- Did the same thing with farm tractors



# Cars Produced by Continent

Cooperation States and Regions Week 4

**In the world = 71.9 million  
cars made in 2007**

- 22.9 million - Europe
- 21.4 million - Asia-Pacific
- 19.4 million - USA and Canada
- 4.4 million - Latin America
- 2.4 million - Middle East
- 1.4 million - Africa

# Automobile Industry

Cooperation States and Regions Week 4

## Ranking of Top Automakers

- |               |                  |
|---------------|------------------|
| 1. Toyota     | 9. Hyundai       |
| 2. GM         | 10. Suzuki       |
| 3. Volkswagen | 11. Chrysler     |
| 4. Ford       | 12. Daimler Benz |
| 5. Honda      | 13. BMW          |
| 6. Nissan     | 14. Mitsubishi   |
| 7. Fiat       | 15. Kia          |
| 8. Renault    | 16. Mazda        |

# General Motors

## Cooperation States and Regions Week 4

### General Motors

- 2<sup>nd</sup> largest car co. in world in 2007
- Produced 9,350,000 cars and trucks
- Global sales of \$181,000,000
- Employed about 266,000
- Lost \$18,800,000 in first half of 2008
- Stock dropped 76% in 2008
- Brands:
  - Chevrolet
  - Pontiac
  - Cadillac
  - Buick
  - Hummer
  - GMC
  - Saab
  - Daewoo
  - Holden
  - Opel
  - Saturn
  - Vauxhall
  - Wuling



# Ford Motor Company

Cooperation States and Regions Week 4

## Ford Motor Company

- 4<sup>th</sup> largest car co. in world in 2007
- Produced 6,553,000 cars and trucks
- Global sales of \$172,500,000
- Employed about 245,000
- Lost \$2,700,000,000 in 2007
- Brands:
  - Ford
  - Lincoln
  - Mercury
  - Mazda
  - Volvo
  - Aston Martin



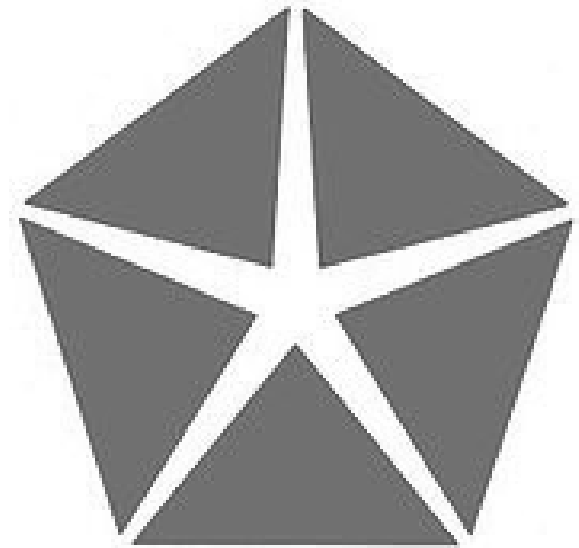


# Chrysler Corporation

Cooperation States and Regions Week 4

## Chrysler Corporation

- Global sales of \$373,679,000
- Produced 2,076,000 cars and trucks in 2007
- Employed about 273,000
- Lost \$2,920,000,000 in 2007
- Sales down 35% in 2008
- Brands:
  - Chrysler
  - Dodge
  - Jeep



# Turn of the Century

Cooperation States and Regions Week 4

- **Technology explosion (A perfect storm)**
  - Internal combustion engine to power cars
  - Gasoline refineries - to fuel the cars
  - Vulcanized rubber for tires
  - Steel making process for parts
  - Electricity for lights
  - Electric motor to power factories
  - Interchangeable parts for assembly line
  - Assembly line for rapid production
  - Steam engine and railroad lines for shipping raw materials and distribution of finished cars
  - Henry Ford to put the pieces together

# Teaching the Big Picture

Cooperation States and Regions Week 4

## Industrial Revolution

Category	Before	After
Transportation	Foot or horse	Car or truck
Light source	Candle or lantern	Elec. lights
Chief jobs	Farming	Factory
Farming methods	Mule and plow	Tractor

# Daimler Buys Chrysler

Cooperation States and Regions Week 4

1998 Daimler, a German car company that makes Mercedes Benz cars, bought Chrysler \$36 billion

2007, 9 years later, Chrysler was doing so badly that Daimler could not even sell it to anyone, so...

Daimler paid Cerberus, a US financial group, \$650 million just to take Chrysler off their hands.

How much did Daimler loose in 9 year?

How much did Chrysler receive in bailout money?

# **Sales and Bailout 2009**

**Cooperation States and Regions Week 4**

**Feb. 2009 Auto Sales:**

**GM Down 53%**

**Ford Down 43%**

**Chrysler Down 44%**

**GM and Chrysler have rec'd 17.4 billion in  
bailout money (taxpayer money) so far.**

**Ford none yet!**

# Activities (Cont'd 3)

## Cooperation States and Regions Week 4

### Wednesday: Cities and Mayo Brothers

100 (p.118) Research what major industries make up Chicago, Detroit, and Cleveland.

Read about the Mayo brothers and the Mayo Clinic.

112 (p.119) Cooperate tonight at dinner using an assembly line.

# Detroit

## Cooperation States and Regions Week 4

- Founded by Frenchman Antoine de la Mothe Cadillac in 1701.
- Nicknames - Motor City or Mo-Town
- Automobile capital of the world (Motor City)
  - Ford Motor Co.
  - General Motors Corp.
  - Chrysler Corp.
- Home of many black recording studios (Mo-Town)
- Home of United Auto Workers (UAW)
- Sports Teams: Detroit Lions, Detroit Tigers, Detroit Red Wings, Detroit Pistons

# Chicago History

Cooperation States and Regions Week 4

- Founded in 1833; 350 people
- 1st railway station 1838
- 1st sewage system in US in 1856
- Great Chicago Fire in 1871
- 1st great corporate retailers (Sears and Montgomery Ward)
- 1st skyscraper built in 1885
- World's Fair 1893
- Sears Tower was tallest in world when completed in 1974



# Chicago

## Cooperation States and Regions Week 4

- Nickname The Windy City or Chi-town
- 3rd largest city in America; 2.8 million people
- Transportation center
  - Shipping- Lake Michigan, Mississippi River
  - Railroads- Hub between east and west coast
  - Air travel- O'Hare International Airport
- Economic center
  - Banking and insurance
  - Meat packing
  - Corp. home for large companies
- Cultural Center
  - Arts, ballet, Chicago Symphony, Jazz, and Theater
- Sports teams
  - Chicago Bulls, Chicago Blackhawks, Chicago Bears, Chicago Cubs, and Chicago Whitesox



# Cleveland

## Cooperation States and Regions Week 4

- Founded in 1796 on the south shore of Lake Erie
- Major American manufacturing center. Steel and other manufactured goods were produced.
- Declining manufacturing hurt all Great Lakes states.
  - Region called the Rust Belt (rusting, empty factories).
  - Drop in population (more people leaving than moving in).
- Changing economy; Cleveland lands more corporate headquarters: American Greetings, Progressive Insurance, Eaton Corporation, Sherwin-Williams Company
- Home of Rock and Roll Hall of Fame
- Sports teams: Cleveland Indians, Cleveland Browns, Cleveland Cavaliers



# Indianapolis Motor Speedway

Cooperation States and Regions Week 4

- Founded in 1909 (100 years!)
- Nickname is The Brickyard
- First auto race held in 1911
- 2-1/2 mile rectangle
- Indy 500 held every May
- Total attendance is 400,000 (largest attendance of any sport)
- 2008 purse was \$14,406,580

# Activities (Cont'd 4)

## Cooperation States and Regions Week 4

### Thursday: Kellogg and Dairy Cows

106 (p.119) Learn about W.K. Kellogg; is his vision being accomplished today?

107 (p.119) Identify types of dairy products.

108 (p.119) Draw the different types of dairy cows.

# W.K. Kellogg

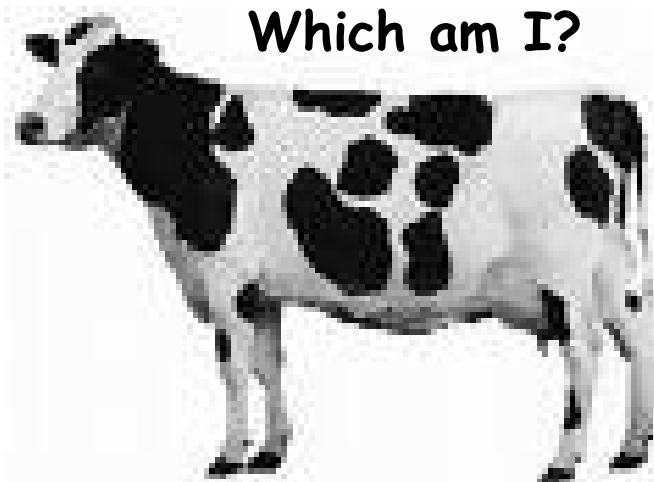
## Cooperation States and Regions Week 4

- Discovered the wheat flake while running the Battle Creek, MI sanitarium with his brother, John.
  - Left wheat mixture for granola in cooker too long.
  - Sent through rollers anyway where each wheat berry became a separate flake.
  - Wanted to keep discovery a secret but his brother shared discovery with patients and guests.
  - C.W. was a guest who quickly made his own wheat flakes and called them Post Toasties.
  - Post Cereals is now General Foods.
- Kellogg changed the breakfast meal habits around the world.
- Made millions and gave away millions through his Kellogg Foundation.

# Dairy Cows

## Cooperation States and Regions Week 4

- Imported from Europe
- Produce 25 gal. of milk per day or 2,000 gal. per yr.
- Each cow is milked for about 4 years.
- Cow must be pregnant to produce milk.
- Cow has first calf at 2 years of age.
- Cows drink about a bathtub full of water and eat around 40 pounds of food a day.
- Dairy breeds:
  - Holstein 95%
  - Jersey 3.8%
  - Guernsey <1%
  - Ayrshire <1%
  - Brown Swiss <1%
  - Milking Shorthorn <1%



# **Activities** (Cont'd 5)

## **Cooperation States and Regions Week 4**

### **Friday:**

**109 (p.119) Visit a dairy farm OR...**

**105 (p.119) Visit an assembly line OR...**

**111 (p.119) Play "ice hockey."**

# Permission Slip

## Permission Coupon

Free pass to skip one activity  
or other assignment  
(Feel free to copy as often as needed)

## Permission Coupon

Free pass to skip one activity  
or other assignment  
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# Field Trips

Cooperation States and Regions Week 4

- Visit an assembly line plant.
- Visit a dairy farm.

# Suggestions for Dad

Cooperation States and Regions Week 4

- Teach the children the different car manufacturers and how to identify various makes of cars.
- Help them with the assembly line project.
- Play hockey with the kids.

# Focus of the Week

## Cooperation States and Regions Week 4

- To practice the character trait of cooperation within the family
- To learn about the geography and industries of the Great Lakes Region
- To learn the names of the lakes of the Great Lakes
- To study about canals and locks
- To make a model of the Erie Canal
- To research the major cities of the region
- To write a paper about the automobile industry
- To assemble model cars on an assembly line
- To research Henry Ford
- To learn about the Mayo brothers
- To learn to sort and identify cars by manufacturer
- To visit an assembly line plant
- To learn about the Kellogg Company
- To identify dairy products
- To draw dairy cows
- To visit a dairy farm
- To play ice or roller hockey

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Thanks,  
Wade and Jessica Hulcy