What is GIS?

AL – the GIS guy
Who am I?

Who are you?

What are we going talk about today?
Geography

study of the earth and where things are

“Geo” = Earth
What is GIS?
Geographic Information Systems
Computer systems and programs that help answer questions about the world...
GIS

try to model things on the Earth
Use a **process** to build these models.
Free GIS software - ArcGIS Explorer
What can we do with GIS?
make maps!
Maps and charts

Transportation Map
Paris

State Atlas
Michigan

Aeronautical Charts
NGA

Navigation Chart
USA
cool maps...
What else can a GIS do?
put important information on maps...
information = things in the real-world
information is organized into layers

Rivers

Lakes

States

Roads

Cities
What else can a GIS do?
answer questions!
Where is the closest Chuck E Cheese?

Where was the last earth quake?

The population of people in the United States?
Here’s my question...

How do I get to your School?
Many ways to use GIS in the real-world!

- Energy Forecasting
- Agricultural Efficiency
- Carbon Management
- Aviation Safety
- Homeland Security
- Community Growth
- Disaster Management
- Public Health
- Coastal Management
- Invasive Species
- Water Management
- Air Quality
What else can a GIS do?
Help us plan

City & Urban Planning
California

Virtual City
Bangkok

Land Use Suitability
Montana
Manage the land

- Native Land Selection
  - Alaska

- Integrated Land Management
  - BLM

- Tax Mapping
  - Connecticut

- Property Evaluation
  - Germany

- Canada
Increase public safety & help law enforcement
Help manage natural disasters

Wildfire
*Idaho*

Wenchuan Earthquake
*China*

Flooding Simulation
*Houston*

Aftershocks
Manage electricity, water, phone...
Model transportation

Real Time Traffic
Korea

Ride Share
Kansas

Transit Analysis
Jamaica
Earth science & water resources

Seismic Hazards
Indonesia

Flood Risk
Portugal

Online Soil Information
Australia
Monitor climate and energy

Tropical Cyclones
National Hurricane Center

Weather Monitoring
U.S.A.

Wind Generation Potential
U.S.A.
Impact of global climate change

Sea Level Rise Modeling
Florida

New York

Coastal Zone Planning
Louisiana

Vegetation Trends
Arctic
Protect our country

Model areas in Europe

Geographical Security
Kingdom of Bahrain

Global Surveillance
kids can use GIS in the real-world too
Find & collect field information
Geo-caching

www.geocaching.com
GPS – Where am I?

Global Positioning System

Latitude: 40 N
Longitude: 110 W
Who uses GPS?
Use GIS & GPS for fun too!
You can use GIS and GPS too!
GIS is for thinkers!

Use it to answer questions...

Think about a topic or a place

Ask a question about it

Make a map

Perform analyses

Ask a new question
Your turn!

1) Use ArcExplorer to find Los Angeles

2) Find your school

3) Drive/Fly to Disneyland

4) Find out what has changed over time?
Pop Quiz

1. What is your favorite part of GIS?
2. What does “Geo” stand for?
3. What can you do with GIS?
GIS is for:

- Mapping
- Decision making
- Planning our future

Use it every day!

AL - the GIS Guy!