Slide 1

Text: What is geography?

1. Definitions
2. Parts of geography
3. Parts of geography in 5 themes and 6 essential elements
4. Jobs of geographers
5. Do you think like a geographer?
6. Misconceptions of geography

Audio: My name is Ron Dorn, professor of Geographical Sciences. The purpose of this talk is to provide an overview of the field of geography from a university academic perspective, covering first formal definitions; parts of geography in a geography department; the parts of geography from a k-12 perspective of the 5 themes and 6 essential elements. So it’s an employment that your students might have as geographer; whether you think like a geographer; and typical misconceptions.

Slide 2

Text: How to listen to the breeze presentations

- You can listen straight through
- You can pause at any time
- You can repeat a “slide” at any time
- You can interrupt the presentation and open up one of the classroom resource movies to watch the indicated animation

- Audio: Before I get into immediate discussion over what is geography, I’d like to introduce you how to listen to this sort of presentation. This breeze presentation, I’ve made it so that you can listen straight through. In other words, all of the slides that you watch will advance automatically. But it’s important for you to understand that you can pause at any time. You can also repeat a “slide” at any time. You can interrupt the presentation. You can then go to another resource that might be available. For example, in a class there might be a classroom resources folder to watch the animation. This is totally under your control. It can be passive or it can be active.

Slide 3

Text: Here is a Play Button that is also the Pause Button – or you can scroll and jump around

[Screenshot of Classroom Resources page]
Audio: For example, before you now, there is a couple of choices for you to manipulate the system and this is just a screenshot of a presentation - the first major presentation - in the physical Geography for teachers class. There is a button that is either a Play or a Pause button. And then if you pause it, you can then scroll on the far right side through all of the different slides to just kind of get a feel for the entire presentation. Again this is meant to be under your control.

Slide 4

Text: 1. Definition

Patricia Gober, Past-President of Association of American Geographers: Geography is more than a repository of place facts. It encompasses the dynamic interactions that give character to places, the spatial organization of human activity and natural processes on the surface of the Earth, and the influence that places have on a wide range of natural and human events.

Audio: Professor Gober stresses that Geography is more than just facts. It’s interactions with a perspective of spatial organization of both human and natural processes. How do you organize Earth from the perspective of natural and human events?

Slide 5

[Screenshot from Association of American Geographers website with definition of geography]

Audio: The Association of American Geographers is the premiere professional organization for geographers in the United States. When you go to there website, www.aag.org, you can see this definition and you can have it to cut and paste for your various handouts.

Slide 6

[Screenshot from Royal Geographical Society’s website with definition of geography]
[Screenshot from BBC website showing “Free Thinking 2006”]

Audio: Other academic geography organizations have similar definitions, such as the Royal Geographical Society.

I encourage you to listen to an hour-long lecture on the importance of geography for the future of our world. It’s available on the BBC website and it gives you a manifesto on why it’s time to put geography back into global thinking and global teaching.

Slide 7

Text: 2. Parts of Geography

Common organization: Jeff Lee, Texas Tech University
Audio: This is a pretty typical structure for a Geography department in a university setting. The core elements of geography are physical and human geography, and then Geographic Information techniques. Included in many departments are environmental studies. In a few departments, a focus on geographic education and in all departments, geography is integrated through different regions.

Slide 8

Text: 2. Parts of Geography (cont’d)

Many geography departments have this organization

Audio: Even the smallest university department that might have only 3 or 4 geographers would be sure to include physical, human and geographic methods.

Slide 9

Text: 2. Parts of Geography (cont’d)

Audio: Human geography is about 60-70% of the discipline. It’s a wide-ranging set of issues: economic, urban, population, historic, cultural, development, transportation and political geography that explores the human landscape.

Slide 10

Text: 2. Parts of Geography (cont’d)

Audio: Physical Geography attempts to integrate climate biogeography - that’s plants and animal distribution, soils, earth materials as in geology, landforms and water to integrate these different elements to understand the physical or the natural landscape.

Slide 11

Text: 2. Parts of Geography (cont’d)

Audio: Geographic techniques are always under development. The core geographic methods are Geographical Information Systems, cartography, field methods, laboratory analysis, quantitative or statistical analysis, and remote sensing typically from satellite or aerial photographs.
Slide 12

Text: 3. Parts of geography in the K-12 World: 5 themes

Five Themes of Geography (thinking like a geographer)

- Location: here is it located? Absolute and relative
- Place: What is it like there?
- Human Environment Interaction: How do people relate to their environment?
- Movement: How are people, goods and ideas moved?
- Regions: How are areas linked together?

Audio: Translating the academic structure of geography to the K-12 world is difficult. One vehicle to do so is to put the lenses of the 5 themes of geography to attempt to get kids to understand what it’s like to think like a geographer. With the 5 themes of: Location: Where is something located? There’s absolute location and relative. Place: What is it like there? Integrating human and physical geography is called Human Environment Interaction: How do people relate to their environment and how does environment affect people? Movement is a theme both from the physical perspective of the movement of water and air or the movement of people, goods and ideas. And regions are how areas linked together.

Slide 13

Text: Relative Location

[Cartoon strip]

Audio: Relative location is a simple concept illustrated by this cartoon. Are you north of something? Are you south of something? There’s not the latitude and longitude. It’s a relative position.

Slide 14

Text: Absolute Location

[Cartoon strip]

Audio: Absolute location involves latitude and longitude for precise orientation and location.

Slide 15

Text: Five Themes of Geography: This will be covered in detail in several lessons for your students that help them learn to think geographically.

- Location: here is it located? Absolute and relative
- Place: What is it like there?
- Human Environment Interaction: How do people relate to their environment?
- Movement: How are people, goods and ideas moved?
• Regions: How are areas linked together?

Audio: A full detailing of the 5 themes of geography will be covered elsewhere in the form of lessons that will help your students think geographically.

Slide 16

Text: 3. Parts of geography in the K-12 World: content of geography

Six Essential Elements (16 national standards of geography)
http://www.ncge/publications/tutorial/standards/

The world in spatial terms
Places and regions
Physical systems
Human systems
Environment and society
The uses of geography

Audio: Whereas the five themes of geography attempt to change the way students think, the six essential elements are the listing of the standards, the 16 national standards of geography that every student should know.

Slide 17

Text: Standard 1: How to use maps and other geographic representations, tools and technologies to acquire, process and report information.

Standard 2: How to use mental maps to organize information about people, places, and environments.

Standard 3: How to analyze the spatial organization of people, places, and the environments on Earth’s surface.

In Arizona, this is Concept 1

Audio: Essential Element one is the world in spatial terms: How to use maps, how to use mental maps, how to organize the spatial structure of people, places, and the environments.

Slide 18

Text: Standard 4: The physical and human characteristics of places.

Standard 5: That people create regions to interpret Earth’s complexity.
Standard 6: How culture and experience influence people’s perception of places and regions.

In Arizona, this is Concept 2

**Audio:** Essential Element two of the national standards attempts to organize the standards in terms of regions and places, the physical and human characteristics of regions, the people that create the regions, and how culture and experience influence perceptions of regions.

**Slide 19**

**Text:** Standard 7: The physical processes that shape the patterns of Earth’s surface.

Standard 8: The characteristics and spatial distribution of ecosystems on Earth’s surface.

In Arizona, this is concept 3 and is linked to Science

**Audio:** Essential Element three is physical geography, both the processes that shape the Earth’s patterns and the ecosystem components.

**Slide 20**

**Text:** Standard 9: The characteristics, distribution, and migration of human populations on Earth’s surface.

Standard 10: The characteristics, distribution, and complexity of Earth’s cultural mosaics.


Standard 12: The process, patterns, and functions of human settlement.

Standard 13: How forces of cooperation and conflict among people influence the division and control of Earth’s surface.

In Arizona, this is concept 4

**Audio:** Essential Element four is an attempt to take the field of human geography and put them into five different standards, focusing on migration, cultural geography, economic geography, urban geography, and political geography as it relates to conflict and cooperation.

**Slide 21**

**Text:** Standard 14: How human actions modify the physical environment.

Standard 15: How physical systems affect human systems.

Standard 16: The changes that occur in the meaning, use, distribution, and importance of resources.
In Arizona, this is concept 5

**Audio:** A core of the academic discipline of geography has always been understanding the interactions between people and place, the tremendous impact that we have had on the environment, and the influence of environmental change on us. And that’s explored in three different standards in Essential Element 5.

**Slide 22**

**Text:** Standard 17: How to apply geography to interpret the past.

Standard 16: To apply geography to interpret the present and plan for the future.

In Arizona, this is concept 6

**Audio:** The last Essential Element can be broken down into ways to apply geography in your classroom: Standard 17, to understand history. Standard 18, for the dynamic excitement of geographic information science and how we can use that to interpret the present and plan for the future.

**Slide 23**

**Text:** Great Review Online (free with registration)

[Screenshot of website for Geography standard review]

**Audio:** With free online registration, you can watch a session or workshop that reviews the 18 national standards online at this web address.

**Slide 24**

**Text:** What is geography?

1. Definitions
2. Parts of geography
3. Parts of geography in 5 themes and 6 essential elements
   Now: Real examples…
4. Jobs of geographers
5. Do you think like a geographer?
6. Misconceptions of geography

**Audio:** Until now, how to think like a geographer, how to think like a geographer has been abstract. Maybe it’s good to just look at the different sorts jobs the geographers will do with a degree in geography.
Slide 25

**Text:** 4. Jobs of Geographers

- One of the hottest job opportunities rests in geography, and this website is a great portal: [http://geospatialcareers.net](http://geospatialcareers.net)

[Picture of a remotely sensed image]

**Audio:** Insights that your students that your students can learn about the latest opportunities in geography can be found at the U.S. Bureau of Labor and at a website created by different industry and government groups called Geospatialcareers.net. Most of the hottest employment opportunities relate to integrating the knowledge of geography that you’ll teach through the technique of geographic information systems.

Slide 26

**Text:** The concept of GIS is very old – Snow’s study of London

[Map of London streets showing cholera outbreaks]

**Audio:** The basic concept of GIS is old. It was used, for example, to understand cholera deaths simply by mapping the relationship of cases to water sources in London.

Slide 27

**Text:** Importance of cities

[Graphs of GIS layering]

**Audio:** But when GIS is exploded in terms of potential planning and understanding urban influences, you can see in these graphs how different types of information is stored on a computer and how it can be analyzed to better our lives.

Slide 28

**Text:** From the BLM to the NIH

[Graphs of GIS layering]

**Audio:** In government, from the Bureau of Land Management to the National Institute of Health, GIS is overhauling and revolutionizing how we can better help people.

Slide 29
Text: Hundreds of Job Titles Involve Geography

[Screenshot of Occupational Info Network website]

Audio: Simply going to websites, such as the OccupationalInfo.org website, and listing geography comes up with hundreds of job opportunities that your students can explore.

Slide 30

Text: 4. Jobs of Geographers

- Aerial Photo Interpreter
- Air Pollution Specialist for a regional air quality district
- Airline Cargo Marketing Executive
- Appraiser for a real estate corporation
- Avalanche Specialist in a U.S. National Forest
- Business Analyst in a corporation
- Cartographer
- Climatologist
- Colonel in the U.S. Army
- Community Development Analyst
- Computer Mapping Specialist
- Demographer
- Demographic Analyst for a county
- Director of Planning and Zoning for a Township
- Economic Development Analyst

Audio: The Association of American Geographers has provided a list of example job titles held by geographers. I’ll run through them here.

Slide 31

Text: More examples

- Environmental Planner for a state department of transportation
- Environmental Scientist
- Geographer at the Smithsonian Institution
- Geographer at the U.S. Bureau of the Census
- Geographer for the U.S. Army Corps of Engineers
- Geographer for the U.S. Forest Service
- Geographer, Consulting
- Geographer in a corporation
• Geographic Specialist at the U.S. Department of State
• GIS Analyst in a corporation
• GIS Program Manager for a county dept. of information and administrative services
• Land Use Planner for a city
• **Audio**: Simply taking one of these job titles GIS Analyst in a corporation or in governmental agencies, this is an exploding industry by itself and, in turn, can be subdivided into separate job titles.

**Slide 32**

**Text**: Yet more examples

• Map Librarian
• Meteorologist at the U.S. National Weather Service or on Television
• Meteorologist, Television
• Planner, County – City – Urban – Transpiration – Region
• Planning information Director for a county
• Ranger in a U.S. National Park
• Real Estate Research Analyst for a corporation
• Resources Planner for a state
• Teacher
• Transportation Planner for City – County - State
• Transportation Planner for a county transit district
• Water Resource Specialist for a state environment department
• Zoning Administrator

**Audio**: Out of this list of job titles, simply focus on the Meteorologist at the U.S. National Weather Service. Students in my academic unit have a competitive advantage over atmospheric science departments because of their training in GIS. Go to the U.S. National Weather Service websites. There’s a huge amount of interactivity that is functionally GIS and so the meteorologists that know GIS have an advantage.

**Slide 33**

**Text**: Do you think like a geographer?

Yes, if you want your students to be aware of a growing field that is founded on a basic need: to understand Earth and its changes.

[Photo of a candle with the caption: “World view without Geography”] [Photo of the earth with sun just behind it with the caption: “World view with Geography”]
Many individuals think like a geographer, they just might not label themselves as such. I believe you think like a geographer if you want your students to be aware of a growing field that is founded on the need to understand Earth and its changes.

Slide 34

Text: Do you think like a geographer?

Yes, if you enjoy being outside and thinking about how nature and people connect.

Audio: You’re a geographer if you like thinking about how nature and people connect. Consider these two cases: In the Mt. Everest region on the left, urban setting avoids a landslide hazard. Whereas in Coastal California, people push themselves right up against the hazard until it affects their lives.

Slide 35

Text: Do you think like a geographer?

Yes, if you are interested in solving real problems that move from place to place.

Audio: People attracted to geography are often interested in solving problems, common problems, but problems that have different solutions that have to be constrained by the place-based culture differences.

Slide 36

Text: Do you think like a geographer?

Yes, if you are interested in solving real problems that spread across Earth.

Audio: Geographers that focus on problems that diffuse from place to place, and the problems move around and interact with the local cultures, and as they interact they change. So solutions to the problems must be constrained by local issues.
Text: Do you think like a geographer?

Yes, if you are interested in solving real problems that connect people and environment.

[Photo of a table laden with animal carcasses with caption: “Understand changes in attitude”]
[Aerial map of Phoenix preserves]

Audio: If you are interested in preserving nature, whether it be in your dietary choice or in interacting the nature preserves that politics establishes, then you are a geographer at heart.

Slide 38

Text: Do you think like a geographer?

Yes, if you are interested in “big” questions about Earth: Why is this city here and why does it grow, fail, decay the way it does?

[Graph of Southern San Andreas Fault Breaks] [Photo of Los Angeles with and without inversion]

Audio: Geographers like to ask the big” questions about why where things are, where they are, such as Los Angeles. It will experience infrequent large earthquakes. It does experience extreme smog, yet it’s this dynamic urban metropolis that exists and people continue to move in out on a regular basis.

Slide 39

Text: Do you think like a geographer?

Yes, if you are interested in “big” questions: Why does it landslide here and why do Californians ignore these risks. Laguna Beach 1978 and again in 2005

[Aerial photo of Laguna Beach landslide from 1978] [Photo of Laguna Beach landslide from 2005]

Audio: Focus on the where, California experience repeated landslides. In Laguna Beach, for example, people built homes on an ancient landslide that moved in 1978 and it began in 2005, yet people continue to move back despite of the risks, despite of the lack of insurance coverage. Why does that take place?

Slide 40

Text: Do you think like a geographer?

Yes, if you are interested in “big” questions about Earth: Worries over global warming, and yet people keep coming to Phoenix?
Audio: The world itself is consumed with concern over global warming, and yet people keep coming to Phoenix, one of the hottest metropolitan areas in the world. Do you get the irony? If you are interested in such ironies, then you are thinking like a geographer.

Slide 41

Text: Do you think like a geographer?

Yes, if you share the view that knowledge should connect together, rather than be isolated pieces.

Audio: With physical geography on the left and human geography on the right, knowledge is not separated into separate disciplines. Economics connects with geology. If you are concerned with how these pieces fit together, then you are thinking like a geographer.

Slide 42

Text: Do you think like a geographer?

Geography is to place like history is to time. Geography focuses on connections of topics that make places special.

Audio: Just as history tends to focus on time, geography focuses on space and place - the spatial connections that make places special.

Slide 43

Text: Do you think like a geographer?

Audio: Many think like a geographer and all it takes is an exposure to different techniques, different ways of thinking and they get it because it’s intuitive to them.

Slide 44

Text: Misconceptions about Geography

Number 1 misconception: that geography focuses on country names and capitals…and that the geography bee will follow you through life….
Place names are to geography like…

- Memorizing birthdays are to historians
- The alphabet is to interpreting Shakespeare
- A phoneme is to reading comprehension
- Picking the right color is to art

**Audio:** Every academic field is aware that the general public has misconceptions and misunderstanding about their discipline. Geography is no exception. Certainly the number one misconception is that we are all about place names: knowing the countries, knowing the capitals, knowing the rivers. Place names are to geography like perhaps historians feel about the need to memorizing birthdays of presidents, or that the alphabet is to interpreting Shakespeare, or a phoneme is to understanding a good book. Yes, you need place names, you need the alphabet, you need phonemes, but it’s the context that matters, not the trivial nature of it.

**Slide 45**

**Text:** Go to [www.youtube.com](http://www.youtube.com) & search for these titles

[Image from Animaniacs Wakko’s America Song] [Image from Animaniacs Geography Song]

**Audio:** If you go to youtube.com and search for these particular titles, you will be able to download or at least watch some pretty funny, amusing things about place-name geography.

**Slide 46**

**Text:** Knowing states, countries, capitals are important:

- But geography is more than memorizing facts
- Not many geographers can name all the countries or capitals off the top of their head…
- Maps: a common *tool* used by geographers to organize, display, and analyze their findings or other data
- Where things are is an important question in geography, but leads to deeper questions of “why” and “so what?”

**Audio:** Geography is not about memorizing. Geographers can’t name many countries or capitals associated with countries off the top of their head. Where things are is an important questions but because it leads to deeper questions of “why” and “so what?”

**Slide 47**

**Text:** Geography combats notions like this!
Audio: Place names, locations are important to combats notions like this.

Slide 48

Text: Misconceptions about Geography

2. That geography has nothing to do with key life choices such as:

long commutes

urban trends

[Photo of traffic at night] [Map of US Suburban Sprawl compared to United Kingdom Planned Growth]

Audio: A second large misconception about geography is that it has nothing to do with important life choices that students will make. Do they have long commutes? Are they aware of the trends of sprawl in a particular city and how to place themselves in that urban context?

Slide 49

Text: Misconceptions about Geography

2. That geography has nothing to do with key life choices such as buying condos, houses in places known to flood and crack

[Map of Phoenix showing elevation] [Black and white photo of bridges over a river]

Audio: Do you buy a condo in a location that has flooded in the past and will likely flood in the future? Do you buy a house in a location that will likely suffer from soil shrink and swell, and ground cracks and break your foundation?

Slide 50

Text: Misconceptions about Geography

2. That geography has nothing to do with enriching the vacations you take…

[Image of people crammed into a car with luggage]

Audio: Certainly everybody who has taken a vacation is practicing the art of applied geography.

Slide 51
Text: Hawaii Trip: Do you stay at the cheap hotel facing the trade winds or the more expensive condo on the rainshadow side?

Does global politics affect where you feel safe when you save up to travel internationally?

[Images of Hawaii illustrating path of trade winds] [Political cartoon]

Audio: Whether it be where you choose to go internationally because of safety issues or whether you stay on the rainy part of a tropical island or a rainshadow sunny part of a tropical island.

Slide 52

Text: Misconceptions about Geography

4. That other academic standards focus on environmental issues…

No! Geography is the central subject that explores and connects on how people affect the environment and how the environment affects people.

Audio: Although other disciplines may, in some states, deal with the subject of environmental issues, in every state, it’s a core geography standard that geography focuses on the issues of people and environment and the connectivity.

Slide 53

Text: Misconceptions about Geography

5. Geographers only make maps… Yes we do. Computers can make mistakes!

[Screenshot of a Google map with directions]

Audio: A fifth conception is that geographers only make maps. That’s all that we do. And this is a pretty amusing example about mapmaking and the computer age. Please look at number 19 pretty carefully, and 20 and 21. It’s for instructions on how you get to London from Chicago using Google maps.

Slide 54

Text: Misconceptions about Geography

5. Geographers only make maps… yes…We do, but…not only. The ways we portray spatial data can get exciting.

[Animated map of the United States as the land appeared in 1650]
Audio: Certainly geographers make maps. Certainly it’s an exciting way to deal with spatial data. But static maps are not the only way to understand Earth and how it changes. This is a very simple, animated map that can highlight and illustrate important issues and changes in the United States historically.

Slide 55

Text: Example of new cartographer: Rob Edsall at ASU and Mark Harrower at Univ of Wisconsin


Audio: The hot, new field of cartographers such as Rob Edsall at Arizona State or Mark Harrower at the University of Wisconsin is animated maps and geo-visualization. This website and this example would be a place for you and your students to explore.

Slide 56

[Examples of different maps]

Audio: The Internet is a fantastic location to see and visualize changes spatially through geo-visualization and animation.

Slide 57

Text: Internet is ideal

[Screenshot from the United States Holocaust Museum website] [Screenshot from the EPA of urban growth in Phoenix]

Audio: These are just a few websites that you can go to to explore the concept of animated mapping.

Slide 58

Text: Misconceptions about Geography

6. Some well-intentioned folks think that geography can be taught within history by just showing maps…

(Can a geography class teach history just by showing a timeline?)

[Image of timeline of scientific discoveries and advancements]
Audio: A sixth misconception about geography, and a very common one in secondary social studies teachers is that geography can be taught within history by simply pulling down a map. My response to that is can a geography class just teach history by showing a few timelines?)

Slide 59

Text: Misconceptions about Geography

7. Geography only teaches boring stuff and not why the great masses in America (and those avoiding geography) maintain silly notions about our world…

For evidence….

Google video “American Geography”

[Screenshot of Google search for “American geography”]

Audio: A misconception that you face all of the time as a geography teacher is that you only teach the boring stuff and not why the great masses in America maintain silly notions about our world. Go to Google video on the web and type in “American Geography” and there is a very funny video made by an Australia television company that deals with this issue.

Slide 60

Text: Misconceptions about Geography

8. Learning about cool places in cool movies, about the places you drive on near to home, and far away, how our land changes, has nothing to do with NCLB and annual yearly progress.

[Image of GeoLiteracy] [Image of Geomath]

Audio: In academic systems that stress annual accountability of knowledge, particularly reading, writing and math, there’s a misconception that learning this cool stuff about cool movies, places you want to visit, has nothing to do with annual yearly progress and that’s simply not true. There are lots of packages, lessons and approaches that indicate, and research reveals, that non-fiction learning will better math, reading and writing performance.

Slide 61

Text: Conclusion

• Geography focuses on the themes of space and place, of how to think spatially
• College geography is exploding with student opportunities in employment
• Geographers think in terms of the core classes you will take (physical, human, techniques), but still with a focus on regions (world, North America)
Audio: In this brief introduction into thinking about how professors view the world of geography and how professors view the K-12 world of geography, we all agree that geography focuses on spaces and place, and how to think spatially; that you as a teacher should understand that if you push students towards a gift in geography, it’s a field with exploding with opportunities in employment, and that geographers think in terms of a structure of their academic units, of physical geography, human geography and techniques, as opposed to the particular standards and five themes that you end up dealing with, but we all still focus on regions. The world is a region, North America is a region, Arizona is a region, and even downtown Phoenix is a region.