Example final projects
Example final projects

Accessibility of Parks to Schools

Comparison Of Income Areas
Example final projects
Example final projects

Suitable Habitat Protection Areas for Blue-Spotted Salamanders
What shapes do you see?
What shapes do you see?
Red-green color blindness

The colors of the rainbow as viewed by a person with no color vision deficiencies.

The colors of the rainbow as viewed by a person with protanopia.
Cartography revisited
Tip of the Day:
*Layer Files*
Typical ArcMap opening screen
Typical ArcMap opening screen
I worked hard to make this color scheme – I want to save it.
Save as a Layer file
Save as a Layer file
Layer files (.lyr) behave similarly to ArcMap documents (.mxd)

- Both *point to* spatial data
- Neither actually contain spatial data
- Both tell ArcMap how to display the data
- Layer files work well for single spatial datasets that you use a lot and want displayed in a particular way
Vector data analysis
Vector (Feature) Data

- Point
- Line
- Polygon
Vector (Feature) Data

• Point
  – A specific geographic location
  – Each point may have a specific value depending on the attribute table

• Line

• Polygon
Vector (Feature) Data

- **Point**
- **Line**
  - A segment or arc with a specific geographic location
  - Each line may have a specific value depending on the attribute table
  - Lines have direction and length
- **Polygon**
Vector (Feature) Data

• Point
• Line
• Polygon
  – An enclosed areas with a specific geographic location
  – Has a geographically defined shape
  – Edges are straight lines with vertices
Vector (Feature) Data

- Polygon
How do you choose?

- Point
- Polygon
- or Line?
All Vector Files Have Attributes

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We know that we can select features based on attributes

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You can also select by location
Advantages of Vector Data

• Looks the same at any scale
Advantages of Vector Data

• Looks the same at any scale
• Easy to reproject (change coordinate system)
Advantages of Vector Data

• Looks the same at any scale
• Easy to reproject (change coordinate system)
• Looks good on a map (easy to read/interpret output with nice smooth lines or points)
Disadvantages of Vector Data

- It can be a memory hog! (Detailed shapefiles will take a long time to load and manipulate)
Disadvantages of Vector Data

• It can be a memory hog! (Detailed shapefiles will take a long time to load and manipulate)

• Data may not be continuous spatially
Vector data analysis: Build a school in Framingham
Far from Hazmat sites (buffer tool)
Not in open space or Hazmat buffer
Suitability based on attributes

Combined Criteria:
- Median Household Income
- Average Age
- Percent of Condominiums
- Percent of Professionals
- Annual Spending on Pets
Suitability based on location

Combined Criteria
- Distance to competition
- Distance to Parks
- Distance to Arterials
- Proximity to Central Business District

Suitability Score
40 Points Possible

- 9 - 17
- 18 - 21
- 22 - 25
- 26 - 29
- 30 - 37
Combined attribute and location

After combining Customer Suitability, Distance Suitability and parcel criteria, you end up with a map of potential properties that meet all of your requirements.
Interesting map of the day
Interesting map of the day
Map Exercise

What is the purpose of your map? Who do you think is the target audience?

Identify at least two pieces of vector data on your map. What question(s) could you answer with these data?