Module 1 - Basic introduction to using GIS software

Unit 02 - Working with Views and themes

1 Learning outcomes
Enable students to load, symbolize and navigate basic geographic data within ArcView. Develop familiarity with ArcView user interface.

2 Activities and exercises

2.1 GIS concepts introduced
- Composition of GIS maps
- Composition of themes of geographic data (also referred to as layers, coverages)
- Distinctions between basic geographic data types – points, lines and polygons
- Cartesian coordinate systems
- Map scale

2.2 GIS functions taught
- ArcView projects and their component parts
- ArcView views (map windows) and their properties
- ArcView themes and changing their display properties
- Turning themes on and off
- Navigating between ArcView windows
- Zooming panning and re-sizing maps
- Measuring distances
- Changing point, line and polygon symbols, sizes and colors

2.3 Teaching activities
- Demonstration of how to use specific buttons and menu items related to function detailed above using video projector
- Repetition of the ArcView functions by students using Lao national geographic data sets
- Conducting exercises specified below

3 Exercises

Exercise 1 Mapping the world
- Students are asked to load data for exercise 1, re-arrange the layers for display.
- View properties are then set to (distance units KM, view name = world)
- Zoom to specified area – Lao PDR
- Students are then asked to measure specific distances e.g. distance from ArcView project file is saved and closed

Exercise 2 Creating a basic map of Lao
- Students are asked to open project files saved in exercise 1
- Additional data for the exercise (Lao national data are loaded)
- Layers are re-arranged to facilitate display
- Students are asked to zoom to different areas using a variety of zoom and pan tools and report on specific distance e.g. Vientiane to Luang Prabang by road., East West extent of Xieng Khouang Province
ArcView project file is saved and closed

**Exercise 3 Changing theme display properties**
- Students are asked to open project files saved in exercise 2
- Roads, rivers, district and province themes properties are edited to create a topographic style map
- Project is saved and closed

**4 Q and A**
- Specific questions are posed in the context of exercises 1-3 above.
- Answers are provided orally or written down on a piece of paper for later verification.
- A period of question and answer is provided during at the conclusion of the instructor lead demonstration and at the end of the

**5 Summary and review of concepts and s/w functions**
- Review of morning session at the start of the afternoon session
- Review of the days session including problems/issues identified in the afternoon session at the end of the afternoon

**6 Materials and data**

**Materials**
- Video projector
- White board
- Student handout – Unit 1 Module 02 Working with views and themes

**Data for exercise 1**
C:\0training\0world\  
    country.shp
    wcitiescountry.shp
    wlakes.shp
    rivers.shp

**Data for exercise 2**
C:\0training\0lao\WGS84\  
    Province.shp
    District.shp
    Rivers.shp
    Roads.sdhp

**Data for exercise 3**
As for exercise 2

**7 Sequence and timings**
- To be delivered after the introduction to arcview
- 3 hours of class time for instructor lead teacher
- 3-4 hours of students to complete exercise and explore arcview and review morning instruction in the afternoon

- Morning session used for instructor led teaching of functions and student practice of taught functions and command.
- Afternoons session are used to provided:
  • time to review morning session functions
to cover material not covered during the morning session
  • independent student practice to complete exercise – supervised by two instructor
offering one on one tuition