***Italics mean a document in the CMaP Booklet is involved***

***MONDAY***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Day/Time | Activity | | Description | | |
| MON 8:00-9:00 | **Welcome**  CMaP Files and Booklet found at  [http://www.uen.org/cmap/courses/](http://www.uen.org/cmap/courses/CMap/booklet.htm)  [CMap/booklet.htm](http://www.uen.org/cmap/courses/CMap/booklet.htm) | | * Introductions / Logistics/Week Overview   + Parking   + Electronic Resources & Handouts   + Name Tags & Tents for Computer   + Geographic Introduction (Where they were born) * Class Expectations   + Your CMaP Project     - Community Issues     - GIS/GPS project ideas     - Community Partner   + Credit   [Download Credit Request Form](http://www.uen.org/cmap/courses/CMap/CMaPFiles/Admin/CreditRequestForm.doc) | | |
| MON 9:00-9:45 | **Pre-Project Basics:**  Introduction to CMaP and the  *Road Map* | | * Overview of CMaP   + [1cmapoverview.ppt](http://www.uen.org/cmap/courses/CMap/CMaPFiles/PowerPoints/Day%201/1cmapoverview.ppt) * Introduction to GIS   + [Geospatial Revolution Video Clip](http://www.youtube.com/watch?v=ZdQjc30YPOk&feature=player_embedded) * Local CMaP projects   + [2Recycle Project.ppt](http://www.uen.org/cmap/courses/CMap/CMaPFiles/PowerPoints/Day%201/2RecycleProject.ppt) * Introduction to Class Resources   + *Website* [www.uen.org/cmap](http://www.uen.org/cmap)   + Download [CMaP Template](http://www.uen.org/cmap/courses/CMap/CMaPFiles/Admin/Project%20Template.doc) (Create new folder and save the document in the new location.)   + *Wikispace* <cmap-ut.wikispaces.com> | | |
| MON 9:45-10:00 | **Pre-Project Basics:**  Spatial Inquiry – What do kids need to understand about spatial? | | * Asking spatial questions   + Spatial Challenge: [Guess the Locations](http://gmapk12.wikispaces.com/file/view/Guess_the_Location.pdf) | | |
| Break 10:00-10:15 | **Break** | |  | | |
| MON 10:15-12:00 | **Sign for GPS Units:** | | * Distribute GPS Units – Turn off satellites   + Navigate Screens * Earth Cache- Go outside   + Have them mark waypoints * Turn participants loose with GPSs.   + Mark Waypoints and hide object   + Trade GPS unit with someone and have them find the object | | |
| MON 12:00-1:00 | **Lunch - on your own** | |  | | |
| MON 1:00-2:00 | **GPS exploration and discovery inside:** | | * Learn more about GPS * [GPS videos](http://gmapk12.wikispaces.com/Instructional+Videos-GPS) * Show UTM Grid * Map Activity   + [Topo Bingo](http://cmase.uark.edu/teacher/workshops/AIMS-lessons/Topo.Bingo.cards.pdf) * Map Reading Skills   + Utah Maps   + Name Features   + Map Elements | | |
| MON 2:00-3:00 | **GIS exploration and discovery inside:** | | * Intro to GIS   + [Geospatial Revolution](http://geospatialrevolution.psu.edu/) * Getting Started with GIS: ESRI   + [Register at ESRI Virtual Campus](http://training.esri.com/acb2000/showdetl.cfm?DID=6&Product_ID=915)   + File management   + Download data sets for three modules   + Module 1: The Big Picture of GIS   from ESRI Virtual Campus | | |
| MON 3:00-3:15 | **Break** | |  | | |
| MON 3:15- 4:30 | **GIS exploration and discovery inside:** | | * Continue: The Big Picture of GIS   + What project ideas did Module 1 provide? * Self Exploration   + Open ArcMap   + Give participants time to self explore | | |
| MON 4:30- 4:45 | **GIS online data exploration and discovery inside:** | | * Introduce ArcGIS Online   + <http://www.arcgis.com>   + ArcGIS Resource Center   <http://resources.arcgis.com/>   * Wrap-up | | |
| MON 4:45-5:00 | **Take your Pulse** | | * How are you doing? Play with GPSs at home. | | |

***TUESDAY***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TUES 8:00-9:00 | **Welcome to Day 2**  **GPS Exploration & Practice** | | * Have them meet outside. Have them **track** their Initials and Geometric Shapes * Downloading Tracks in Google Earth and ArcMap | | |
| TUES 9:00 – 10:15 | **ArcMap Explore:** | | * Brief Introduction to Utah Data   + GIS Portal site / Play with Data * File/data management: Connect to Folder * Open image and downloaded shape file * Measure & Draw tools * Layout – Export as .jpg * Save Project | | |
| Break 10:15-10:30 | **Break** | |  | | |
| TUES 10:30 – 12:00 | **Building Community Relationships:** | | * 3 to 4 Community partners invited to share how they use GIS/GPS in their jobs. Each takes approximately 20 min. | | |
| TUES 12:00-1:30  LUNCH | **Building Community Relationships:**  Community Introductions | | * Lunch and discussion with community members interested in working with students | | |
| TUES 1:30-2:00 | **Building Community Relationships:** | | * Definition & Compare   + Place-based education   + Project-based learning   + Community-based learning * Definition share * Introduce CMaP project components: * Community Partner Brainstorm * Share ideas learned | | |
| TUES 2:00-3:30 | **Project Planning:**  Project Brainstorm and Feasibility Assessment | | * Project Planning   + Create realisticproject expectations     - *Educator Checklist – 1.6 Feasibility assessment*   + Backward Design     - 3Backward Design\_GIS.ppt     - Rubrics * Project Ideas   + View Past CMaP Project   + Have participants write down their project ideas * Project Brainstorm   + Type up Project ideas and possible partners   + Speed Date Activity | | |
| TUES 3:30-3:45 | **Break** | |  | | |
| TUES 3:45-4:45 | **Project Planning:** | | * Begin Project Planning   + Preview [Sample Community Letters](http://www.uen.org/cmap/courses/CMap/SampleLetters.htm)   + [Template](http://www.uen.org/cmap/courses/CMap/CMaPFiles/Admin/Project%20Template.doc) Introductions   + work time   + *Show a [completed 9 square](http://www.uen.org/cmap/courses/CMap/files/arcgis/nineSquare.xls) –doc 3.2*   *(optional)* | | |
| TUES 4:45-5:00 | **Take your Pulse** | | * How are you doing? * List some of your project ideas * What are we forgetting? | | |

***WEDNESDAY***

|  |  |  |
| --- | --- | --- |
| WED 8:00-8:30 | **Project Planning:**  Define, organize and design a CMaP Project | * Questions & Review |
| WED 8:30-9:30 | **Project Implementation:** Gathering New Data  Fieldwork | * Attribute Tables   + Show data and talk about what is in the attribute table.   + The power behind the GIS is the attribute table   + Discuss who creates the data and reasons for the data   + Metadata (Show in ArcCatalog) * Tree collection project   + Discuss what data needs to be collected.   + Example table ID (Waypoint #) Category (Deciduous or Coniferous), Species (Name) Height (number) * Decide how to gather data   + Surveys/Questionnaires   + Spreadsheets   + GPS   + Observation   + Measurement   + Other |
| WED 9:30-10:30 |  | * Go out, mark waypoints at each tree, and record data on data table. (4-6 trees) * Download Data points into ArcMap   + Add Ariel image * Editing Attribute Table   + Hide Fields   + Add Fields   + Start Editing   + Add data collected * Display data   + Unique Values   + Categories (Graduated Symbols)   + Duplicate data layers   + Query * View Layouts- Making Maps   + Export to JPEG * ArcMap 10 and Site License Discussion |
| Break- 10:15-10:30 | **Break** |  |
| WED 10:30-12:00 | **Project Implementation:** Transferring Field Data to GIS | * Distribute Software & Data CDs * Show DNR-Garmin Install from the CD * Open ArcMap and practice adding Utah shape files from Data CD. |
| WED 12:00-1:00 |  |  |
| WED 1:00-3:15  (USU) | **Project Planning:**  Define, organize and design River Water Quality Project.  Meet our Community Partners  Eric Peterson USU Water Quality Extension (435) 797-3310 [eric.peterson@aggiemail.usu.edu](mailto:eric.peterson@aggiemail.usu.edu) | * Introduce Water Quality Project   + Presentation from USU   + Learn to use measurement tools * Provide map directions for Thursday Field Session collecting. |
| Break 3:15-3:30 | **Break** |  |
| WED 3:30-4:45 | **Work Time:** | * Have them work on:   + Project Template   + Tree projects   + <http://www.arcgis.com>   Online Resources   * + GIS Portal Data Set downloads   + Arc Lessons |
| WED 4:45-5:00 | **Take Your Pulse** | * How are you doing? |



***THURSDAY***

|  |  |  |  |
| --- | --- | --- | --- |
| THURS 8:30-11:45  (USU) | **Project Implementation**:  Water Quality Fieldwork | * Meet at class/carpool to river * Participants gather & record data: GPS   waypoints and water quality readings for *Temperature, Turbidity, pH*, and *Dissolved Oxygen* | |
| THURS 11:45-12:45 | Lunch on your own **OR** | Bring sack lunch to picnic in park | |
| THURS 1:00-3:00 | **Project Implementation:**  Transferring Field Data to GIS  Creating Water Quality Project | * Transfer GPS points * Bring Data in Water Quality project   + Add files from Data CD   -County Aerial Image   * + OR Add files from GIS Portal   -[SGID Image Server](http://gis.utah.gov/sgid-image-server/2009-naip-imagery-available-in-image-server):  -[SGID Database Server](http://gis.utah.gov/sgid_connect)   * Edit Tables of GPS waypoints   + Insert new fields for *Temperature, Turbidity, pH*, and *Dissolved Oxygen* | |
| 3:00-3:15 | **Break** |  | |
| THURS 3:15-4:15 | **Project Implementation:** Advanced GIS Skills | * Join tables * Hot link photos * Review map layout * Export map as jpg (Found in File) | |
| THURS 4:15-4:45 | **Project Management**:  Ongoing Project Evaluation and Assessment | * Project evaluation * Skills assessment * Transferability | |
| THURS 4:45-5:00 | **Take your Pulse** | * How are you doing? | |



***FRIDAY***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FRI 8:00-9:30 | | **Project Implementation**:  Finish Products | | * Create final map products * Discuss skills for presentations * Practice presentations |
| Break 9:30 – 9:45 | |  | |  |
| FRI 9:45-11:30 | | **Project Implementation**:  Project Presentations & Celebrations | | * Celebrations: Participant presentations * Feedback & Response * Where to get help? |
| FRI 11:30-12:30 | |  | |  |
| FRI 12:30-1:00 | | **Project Implementation**:  Begin Evaluations | | * Fieldwork- So What? Share lessons learned * Project Template * Explore ArcGIS Online   + <http://www.arcgis.com>   + ArcGIS Resource Center   <http://resources.arcgis.com/> |
| 1:00-1:45 | | **Project Implementation**:  Fieldwork Debrief  ArcGIS Software & Data CDs  File Management reviewed | | * [CMaP Class Resources](http://www.uen.org/cmap/courses/CMap/resources.htm) * [GIS Mailing List](http://lists.uen.org/mailman/listinfo/gis) * [Join Utah Geographic Alliance](https://www.ngsednet.org/community/register.cfm?community_id=258) * [Join GIS Portal](http://gis.utah.gov/) * [Desk Copies for ESRI – Map book](http://esripress.esri.com/offers/deskcopy/index.cfm) |
| 1:45 -3:00 | | **Project Management:**  Evaluations continued  Closure | | * [Complete workshop evaluation](http://profdev.uen.org/pdms/eval) * Complete ***Credit Forms***   -Collect and send to Jared at UEN   * Send off! * Congratulations! |