

'LATITUDE & LONGITUDE' SKYGRID ADVENTURES

MASTERING LATITUDE & LONGITUDE IN
UAV EXPLORATION





SNAPSHOT

01

Objective

- Students will create their own sectional charts using knowledge of latitude and longitude, demonstrating a comprehensive understanding of geographic coordinates and their practical application in navigation.

Materials Needed

- **Computer/laptop/internet/projector**
- **Sectional Charts**
- **Pencils/Markers/Rulers**
- **Blank Paper**

Resources:

- 1: [Introduction to Latitude and Longitude \(Presentation\)](#)
- 2: Pin the Tail on the Latitude (Page 2)
- 3: Charting the Skies (Page 3)

Lesson Steps:

1. Use Resource 1: Introduction to Latitude and Longitude (Go through this as a class)
2. Complete Resource 2 as a class
3. Complete Resource 3 Individually
4. The students will create their own sectional charts to place on display around the room. A gallery walk may be incorporated so that all students can see and compare their creations.

45 MIN
LESSON

45 MIN
LESSON

Questions to ask:

- What is the difference between lines of latitude and lines of longitude?
- How would you locate a specific point on a map given its latitude and longitude coordinates?
- How would the navigation process differ if we did not have a standardized system like latitude and longitude?

Objective:

Players must pin a "tail" (a marker or sticker) on a sectional chart and identify the correct location of the tail by reciting the corresponding values for the coordinates of latitude and longitude.

Materials Needed:

- Sectional Charts on Projector (or printed versions)
- Tails (these can be stickers or cut-out paper tails)
- Blindfold
- Adhesive (if using paper tails)
- Prizes (optional)

Setup:

1. **Map Placement:** Project the sectional charts on screen or hang paper copies on a wall at a height accessible to all players.
2. **Prepare Tails:** Ensure each tail is ready to be pinned.

How to Play:

1. **First Player:** Blindfold the first player, spin them gently a couple of times, and hand them a tail.
2. **Pin the Tail:** The player walks up to the map and places the tail anywhere on the sectional chart.
3. **Player 1** will then identify the coordinates of latitude and longitude in degrees and minutes. The rest of the class may attempt from their seat. If player 1 is correct, they get a point!
4. **Next Players:** Repeat steps 2 and 3 for each player.
5. **Scoring:** After all players have had their turn, check who got the most correct. If there is a tie, you can go through steps 2 and 3 again to time the responses. Fastest time wins.

Tips for Success: Before starting, give a brief explanation or refresher on what latitude lines are and how they work. Also, consider a practice round with visible eyes to let players get a feel for the map.

RESOURCE 3 (CHARTING THE SKIES: YOUR GUIDE TO CREATING A SECTIONAL CHART)

03

Objective: Students will apply their understanding of latitude and longitude in the Northern and Western Hemisphere to create an accurate and creative sectional chart, incorporating real and fictional geographical locations.

Step-by-Step Guide to Creating Your Sectional Chart:

1. Setting Up Your Chart:

- Start with a blank map template.
- Choose an area that you would like to represent.
- Identify the center point for your chart.

2. Drawing Latitude Lines (Horizontal):

- Mark lines parallel to the Equator.
- Label key latitude lines (Remember we are in the Northern Hemisphere!)

3. Drawing Longitude Lines (Vertical):

- Mark lines running from top to bottom.
- Label key longitude lines (Remember we are in the Western Hemisphere!)

4. Marking Locations:

- Choose and mark at least five locations using their latitude and longitude.
- Use accurate measurements for placement.

5. Adding Creative Elements:

- Invent a new landmark, city, or airport.
- Assign it coordinates and mark it on your chart.

6. Finalizing Your Chart:

- Add a title, a compass rose, and a scale.
- Use colors for clarity and visual appeal.

Tips for a Great Chart: Ensure accuracy in your latitude and longitude measurements. Be creative but informative with your additional elements. Keep your chart neat and readable.