Predicting Treeline Teacher Key

Directions

- The attached topographic map shows the **High Divide**, which separates the Hoh River valley to the south from the Sol Duc River basin to the north.
- A general rule of thumb is the treeline in the Olympic Mountains ranges from 4,500 feet on north-facing slopes, 5,000 on east-facing slopes, and 5,250 feet on south-facing slopes.
- Glaciers generally begin around 6,500 on north facing slopes, but much higher on south-facing slopes.
- Using this information, draw the treeline and the alpine meadow areas on the topographic maps.
- Then, take a look at the actual satellite image and compare how close your predictions were to actual location of the meadows.
- Added challenge: Predict where the glaciers are located and then compare to the satellite image.

Appleton Pass
High Divide
Cat Peak
Mt Fitzhenry
Fairchild Glacier
Mt Fairchild
Mt Carrie
Carrie Glacier
Olympic Mountains
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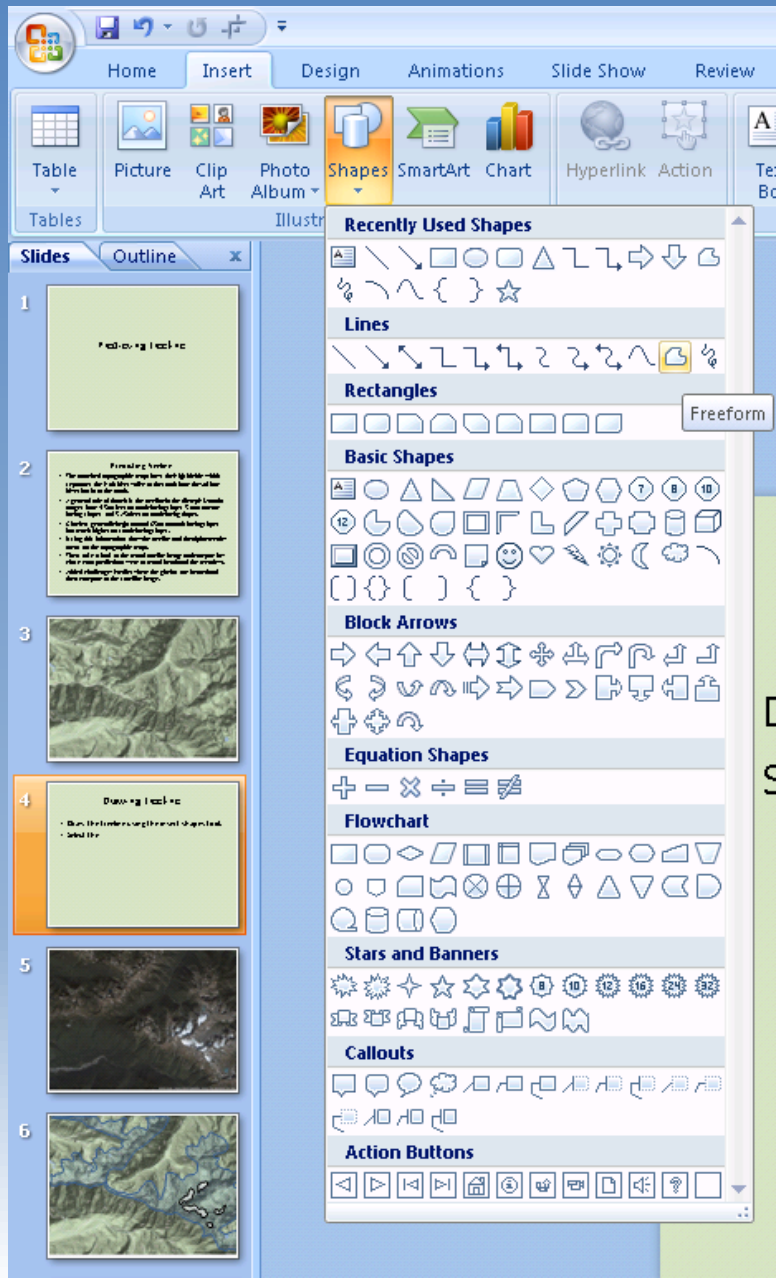
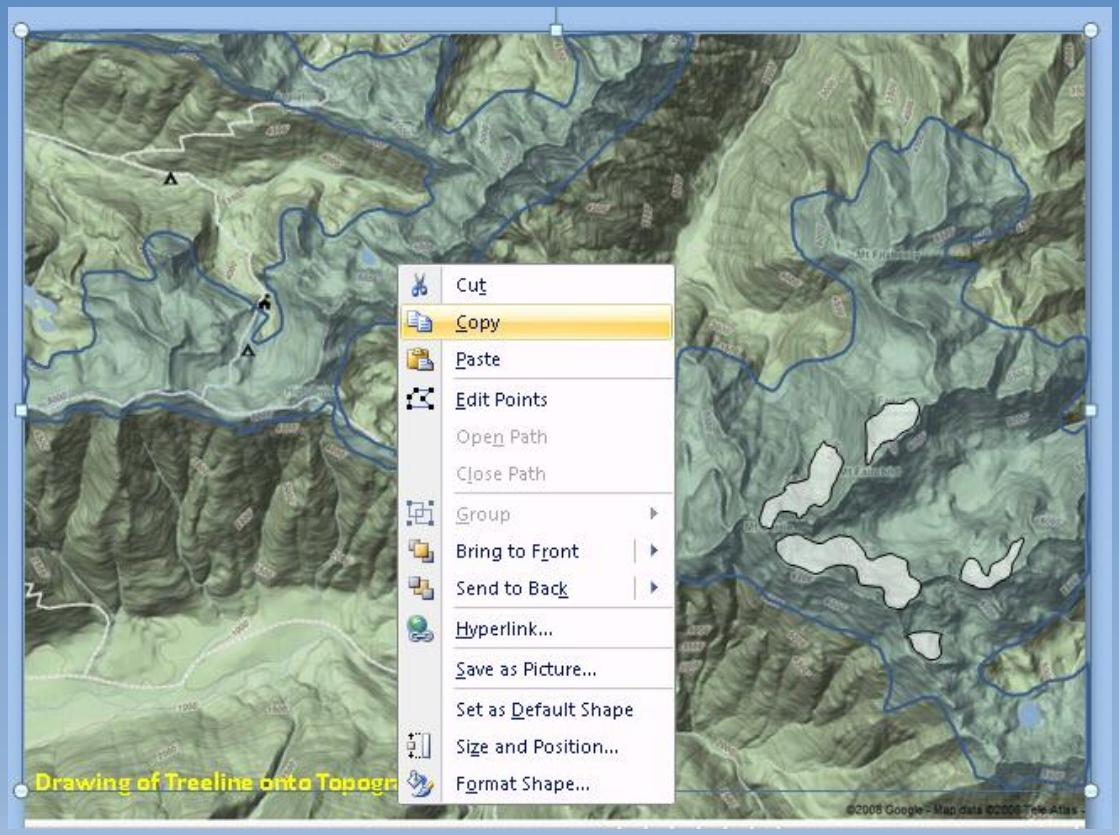
Drawing Treeline

- Draw the treeline using the insert shapes tool.
- Select the freeform shape, that allows you to draw the shape and then fill in the closed shape with a color.



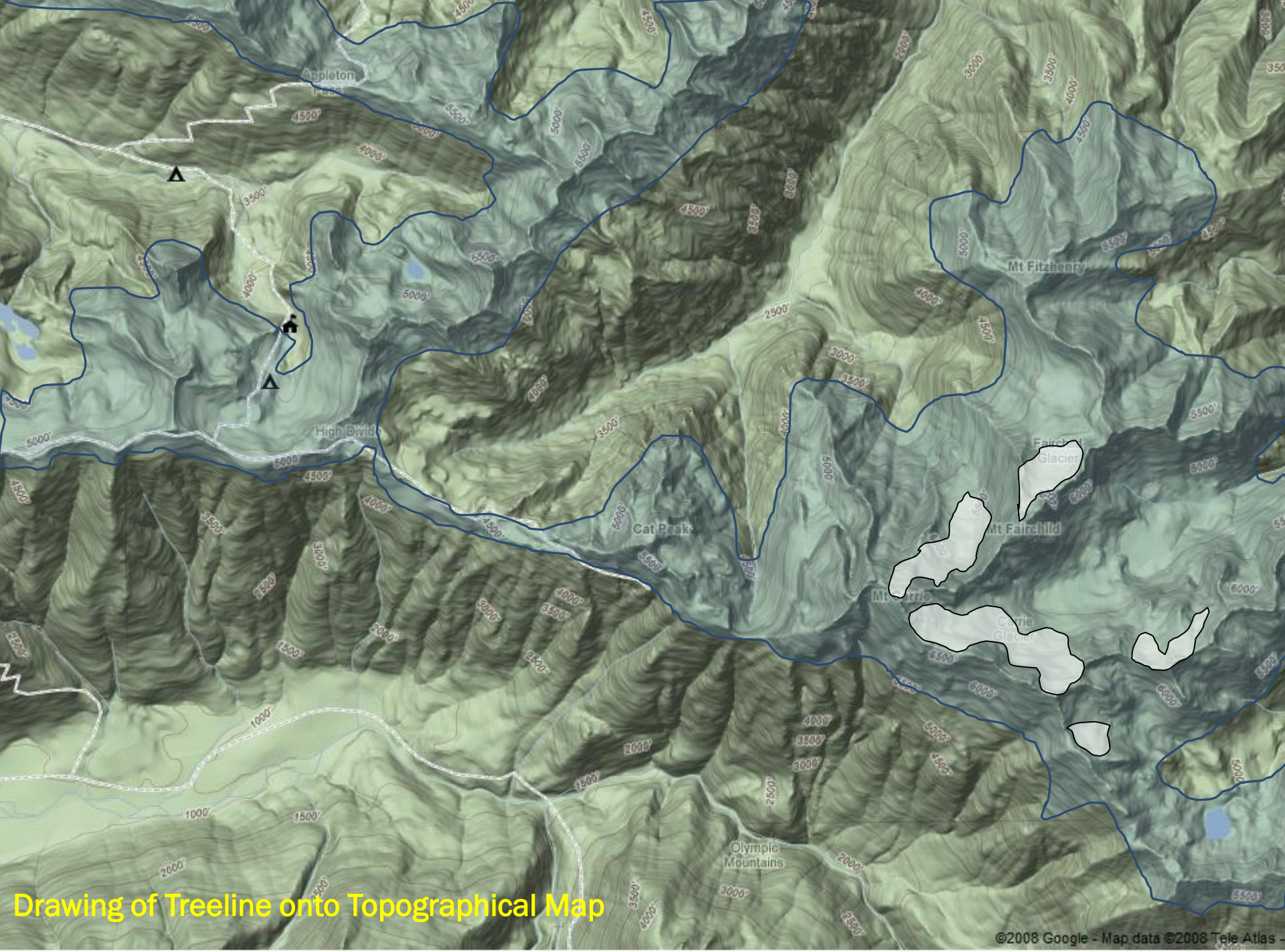
Comparing the Drawing to the Satellite Image

- Students should not look at the satellite image that follows until they have drawn their treelines on the topographical map.
- Once the image is drawn, they should copy the layer and then paste it onto the satellite image to see how well they match up.



Example Key

- The first slide below is an example of the drawing that could be make by following the topographical lines.
- It is important that students match the lines with the elevations for the north and south facing slopes!
- The second slide shows the actual satellite image.
- The third slide overlays the drawing from the topographical map onto the satellite image to check for how accurate they were.



Drawing of Treeline onto Topographical Map

The Actual Satellite Image
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Drawing of Treeline Overlaid onto Satellite Image
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