Grades Middle School and Up
Journey to a Green Future

3-D Map of New York State

While looking at a large-scale map of New York State, we will use various objects to mirror the topography and discuss how each region differs from the other.

What Will You Learn?
- What is topography?
- The topography of New York State
- How topographic maps represent areas
- How the different biomes in the state relate to each other

Materials:
- New York State template worksheet
- Model Magic modeling clay
- Cotton Balls
- Paper
- Boba straws
- Blue beads
- Cardboard
- Pipe cleaners
Instructions:
1. Research major landforms of NYS. These will be your reference materials.
2. Glue the state of NY template onto the piece of cardboard.
3. Cut out the NYS outline. This will serve as the base for your 3-D topographic map (a map that shows physical features of an area).
4. Draw out where you’re going to put things like mountains, lakes, rivers, and other topographic elements, before you start adding 3D materials. Refer to your reference materials to accurately depict the elevation contours.
5. Use the remaining items, like the cotton balls, to sculpt the topographic features of New York State onto the cardboard base.
6. Start building from the bottom (the flat stuff) and work your way up to the taller things!
7. Use your creativity! (Examples: You can use cotton balls to represent clouds or snow-capped mountains. You can use blue beads to represent lakes.)
8. Create a key. Draw or use your creative supplies to make symbols / icons that represent the different landforms on your map.

Reflection Questions:
- What are the tallest/lowest points in the state?
- What features surprised you about the natural regions of the state?
- What symbols/icons from your key did you use the most/least?

Explanation:
- Topographic maps are maps that represent the physical features and elevation of the Earth's surface. Contour lines depict the shape and form of
the land. The spaces between contour lines on the map indicate the vertical distance between contour lines, telling us how tall something is.

- Topographic maps also include other geographic features such as rivers, streams, lakes, roads, railroads, boundaries, and place names.
- Topographic maps are used for engineering, urban planning, environmental management, outdoor activities like hiking and camping, mining, emergency management, and establishing legal boundaries and land ownership. These maps provide valuable information for understanding and interacting with the physical environment.

**Further Reading Recommendations:**

- The Maps Book
- North American Maps for Curious Minds
- The Boy Who Loved Maps

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