

Lesson Plan K-12 Grade: State Landsat Mosaic Puzzle

Remote Sensing Puzzle

Landsat State Mosaic - An aerial mosaic, photo mosaic is an assembly of aerial photographs taken by the Landsat Satellite matched in such a way as to show a continuous photographic representation of an area mosaic map.

Remote Sensing – remote sensing can be defined as the scientific and technical discipline that involves acquiring information of various Earth features from a distance. Sometime the distance is great, such as satellite-based remote sensing where the satellites are in orbit high above the Earth; other times the distance is much less, such as aircraft-based remote sensing where the airplane is much closer to Earth.

Learning Objectives:

Upon successful completion of this learning game, students will be:

- Familiar with the state Landsat mosaic.
- Able to identify conspicuous features, pattern recognition and other spatial thinking skills.

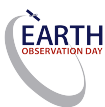
Teacher Prep Time: 30 minutes to become familiar with the state map and the puzzle rules.

Class Time Requirement: 40 minutes

Materials needed:

- Full size State Landsat Mosaic poster
- Reduced size mosaic handouts printed on card stock paper
- Scissors
- Rulers

Teacher Prep Instruction: Download student copies of the California State Mosaic map from the <http://www.earthobservationday.com/> website and print one copy per student. Place hardcopy poster of the State Mosaic into classroom. Gather other materials (scissors and rulers).



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Classroom Instructions: Hand out all materials and provide instruction.

Suggested classroom questions for students to answer:

- What State is this?
- What is the capital of our state and where is it located?
- If we divide the state into 4 equal pieces, within which quadrant is our school located? 'Upper right, Lower right, Upper left, Lower left'. This can lead up to a discussion about map properties. 'Cardinal directions, scale, distance, bearing'.

Have the students create the puzzle. Therefore the students need to cut the image up into as many random, individually identified puzzle pieces as guided by the teacher. Now the students can mix the pieces and then assemble their own puzzle

Suggested classroom questions for students to answer:

What features did you use to assemble the puzzle? 'Color, pattern, texture'.

This lesson plan can be modified for all Grades as follows:

Suggested classroom questions for students to answer and discuss:

- How large is the image? Use the ruler and the scale bar to estimate the area of your state.
- Identify 5 distinct natural features of your state. 'Forest, Mountains, Lakes and Rivers, etc.'
- Identify 2 or 3 human made features. 'Dams/reservoirs, cities, transportation corridors, agricultural land, etc.'

