

Aerial photographs

Aerial photographs are taken from specially equipped aircraft and form an essential part of accurate map-making. Vertical aerial photos are taken with the camera lens aimed directly down at the ground. Oblique aerial photos are taken with the camera lens aimed at an angle to the ground giving a side-on view. In oblique aerial pictures, objects in the foreground seem larger than those in the background because of the optical illusion surrounding perspective. That's why no one scale is correct for all parts of an oblique aerial photo giving them limited technical value. Cartographers use vertical aerial photographs to help them create maps as these correspond to the true sizes of shapes and patterns on the ground and features cannot be hidden by bigger objects closer to the camera. Geographers may use these images to show how places have changed over time and even plan roads or towns.

When viewing a vertical aerial photograph it may be difficult at first to recognise some of the features. This is because we're not used to looking down upon such objects. To help, we should consider:

Shape: There are some common shapes found in aerial photos like squares, rectangles, circles, ovals and lines. Shapes indicate what the objects are; for example, sporting fields are oval, buildings are rectangular, and roads appear as connecting lines.

Size: This refers to the amount of space a feature takes up in a photo. Shopping centres and schools are bigger than houses and golf courses are bigger than most public gardens.

Tone: This refers to light and dark areas in a picture. In a black and white photo, tone will vary from black to dark grey to light grey to white. Tone may help us interpret objects in an aerial photograph, as generally speaking: beaches will have a lighter tone, forests and bare soil will have a darker tone, deep water may have a dark tone and roads may be grey.

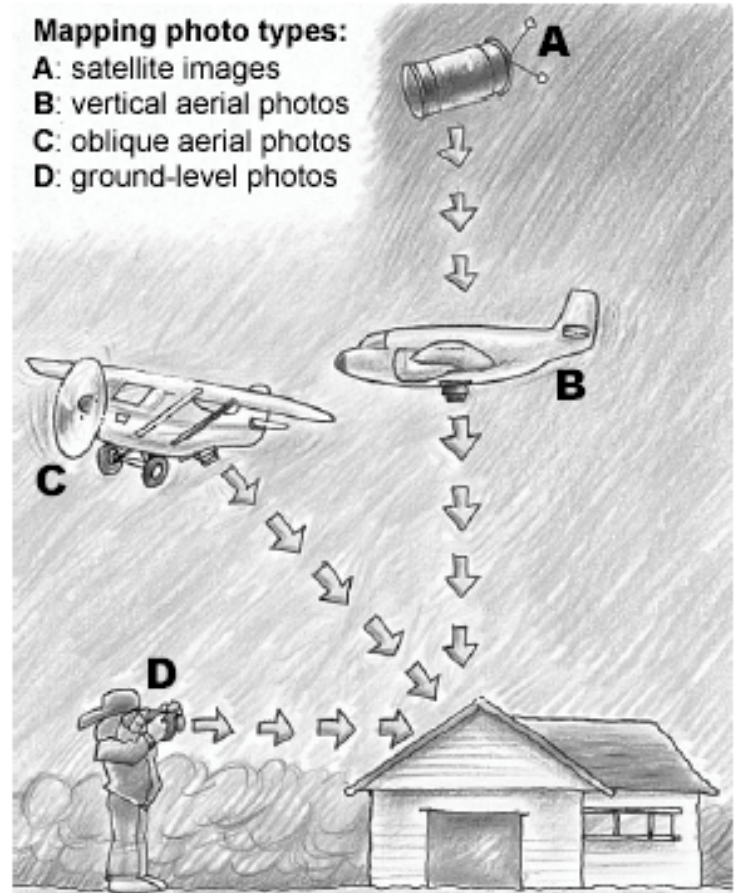
Shadows: Aerial photos also reveal shadows cast by houses, trees, cliffs and other objects. Long shadows mean tall features while short shadows indicate low features. However, shadows may be difficult to interpret depending on the time of the day and whether the sun was high or low in the sky.

Other hints: A creek will generally look like a winding black line and could have trees along its edges; a settlement with numerous houses will show up as a group of white blocks and a farm will show up as a patchwork of regular shapes.

Go to the aerial photograph of Sydney that appears on the first page of the reference listed below.

1. Use the map to locate the following features on the aerial photograph:

- Government House
- Sydney Harbour Bridge
- the ferry wharves in Sydney Cove
- the Cahill Expressway



2. How do you know the area around Sydney Cove is mall or public space?

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3. In which direction are all the moving ferries in the aerial photograph of Sydney Cove moving? How do you know?

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4. Use the map key to decide from which directions the two ferries currently entering the cove have come?

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5. What is the name of the green area on the aerial photograph to the west of the Bradfield Highway? What built structure does it contain?

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