WATCHING OVER TEXAS FROM SPACE

An Earth Observations education resource for grades 4 -12 in support of TEKS covering Earth Science and Environmental Science Standards Developed by TexasView with support from Grant Number G14AP00002 from the Department of the Interior, United States Geological Survey to AmericaView

## 3.1.1 WHICH IS WHICH HANDOUT LESSONS

## 3.1.1.1 WHICH IS WHICH? TPWD

**Instructions:** On the following pages, you will find imagery that covers diverse Texas landscapes surrounding twelve Texas State Parks. Match images to the descriptions in the exercise.

Natural landscape features documented in the imagery include bays, barrier islands, canyons, rivers, lakes, plateaus, mountains, and dune fields.



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#### WHICH IS WHICH IMAGE DESCRIPTIONS TPWD

### LABEL IMAGES A - L USING THE DESCRIPTIONS BELOW

- A north-south trending mountain range divides a city into the "east side" and the "west side". An airport is visible on the southeast side of the image.
- 2. Drought-induced lake-level drop has exposed lakebottom sediments and strand boat docks above water level.
- 3. A broad sand dune field is bordered on its southwest side by an oil field.
- 4. An oval mountain bare of vegetation rises above a sparsely vegetated landscape.
- 5. An east-west trending meandering river has eroded a narrow canyon into a hilly plateau.
- A southeast-trending river with a broad, green floodplain runs through a heavily developed landscape. A large airport is present on the northwest corner of the image, and a large reservoir on the south-central part of the image.
- A muddy stream flows across a lakebed exposed by drought, from the southwest corner of the image into a muddy lake. Agricultural fields occur on the southeast side of the lake.

- 8. A southeast-trending river has eroded a wide, deep canyon into a flat-lying agricultural landscape, which is dotted with small seasonal lakes.
- Three rivers enter an east-west trending bay that joins a north-northeast-trending bay behind a barrier island.
- A barrier Island trends northeast on the southeast side of the image. A large bay behind the barrier island is spanned by a bridge at its northwest end.
- 11. A broad, northwest-trending channel within a heavily developed industrial landscape contains three large islands. White boat wakes appear throughout the channel.
- 12. A muddy, meandering stream enters the landscape on the west side of the image and follows a circuitous route into a dark lake on the southeast side of the image.

All imagery captured from the Texas Watershed Viewer:

https://tpwd.maps.arcgis.com/apps/Viewer/index.ht ml?appid=2b3604bf9ced441a98c500763b8b1048 accessed January 22, 2017.

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# 3.1.1.2 WHICH IS WHICH? NASA EO

**Instructions:** On the following pages, you will find imagery from the NASA Earth Observatory (<u>NASA Earth Observatory - Home</u>) that covers diverse Texas landforms, natural hazards, meteorological events, and human infrastructure. Match images to the descriptions in the exercise.

Natural landscape features documented in the imagery include bays, barrier islands, canyons, rivers, lakes, plateaus, mountains, and dune fields. Meteorological events include snow, flooding, and dust storms.





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### WHICH IS WHICH IMAGE DESCRIPTIONS NASA EO

### LABEL IMAGES A - L USING THE DESCRIPTIONS BELOW

- A coastline where a barrier island and a peninsula enclose a large bay. A large city and cloud formations over the ocean.
- 2. A large hurricane approaches a coastline.
- An industrial site on a channel; numerous round petroleum storage tanks mark the site of refinery facilities. You can also see ships (with wakes) moving in the channel.
- 4. A large dust storm approaches a city. You can also see scattered puffy cloud formations.
- A city is surrounded on all sides by an oil field.
  You can also see center-pivot irrigation agricultural fields.
- A curved coastline showing several rivers delivering sediment into the ocean during a flooding event.
- An airport appears on the northwest edge of a city. You can also see a lake and a meandering river.

- A large reservoir shows exposed shorelines related to severe drought-induced drop in water levels. You can see a smaller reservoir where water levels do not appear to have dropped
- A snow-covered agricultural landscape; snow cover fades towards the southwest. You can also see a major highway cutting across the landscape on the northeast side of the scene.
- 10. Two rivers join and flow into a large channel that contains two large islands.
- 11. A large city is divided in half by a north-trending mountain range. You can see two airports on the east side; one has black runways, and one has gray. A river runs between the northern mountain range and a second city to the south.
- Agricultural fields are surrounded by the burn scar from a drought-induced wildfire. A meandering river flows through the burned area.

All imagery captured from NASA Earth Observatory <u>NASA Earth Observatory - Home</u>