

# Plate tectonics and associated landforms using satellite images

## Student instructions

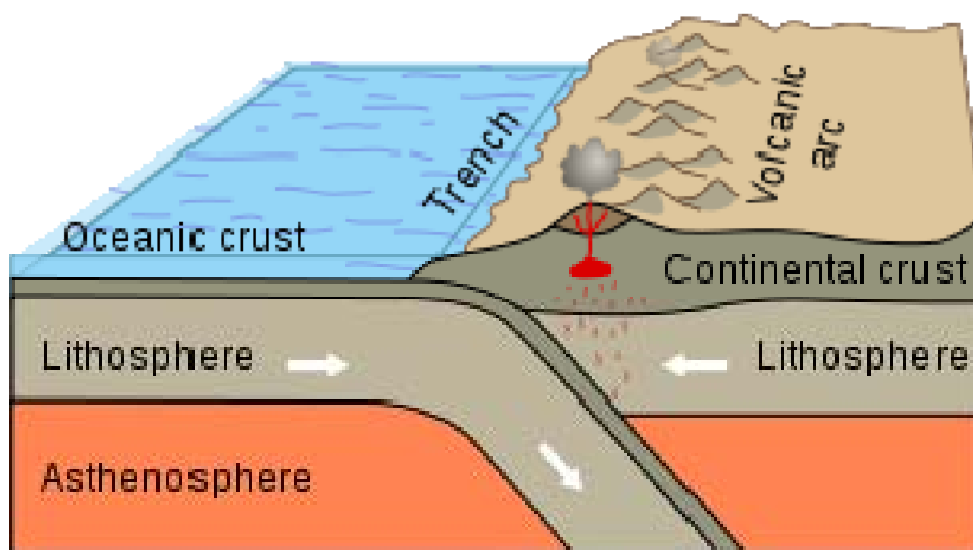
You will be given five satellite images to study in groups. For each satellite image, identify:

1. the type of plate boundary
2. the plates involved in creating the plate boundary
3. the visible features
4. the hidden features
5. the processes involved.

Make notes in the table provided.

You get bonus points if you can indicate on a map where the feature is located.

You will need to use your knowledge gained from the different types of plate boundaries and the landforms they have created.



[http://commons.wikimedia.org/wiki/File:Oceanic-oceanic\\_convergence\\_Fig21oceanoocean.gif](http://commons.wikimedia.org/wiki/File:Oceanic-oceanic_convergence_Fig21oceanoocean.gif), from USGS

## Plate tectonics and associated landforms using satellite images

| Satellite image | Type of plate boundary | Name of plates | Visible features | Hidden features | Processes |
|-----------------|------------------------|----------------|------------------|-----------------|-----------|
| 1               |                        |                |                  |                 |           |
| 2               |                        |                |                  |                 |           |
| 3               |                        |                |                  |                 |           |
| 4               |                        |                |                  |                 |           |
| 5               |                        |                |                  |                 |           |

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### Teaching notes

- Students work in groups of two to four (dependent on class size).
- Display the PowerPoint of the satellite images on a data projector or electronic whiteboard. Alternatively, they could be colour printed, laminated and distributed as a series of A4 sheets to each group one at a time.
- Allow students five minutes on each image.
- Students record their answers on the table provided (p.7).
- A list of key words/phrases (p.9) could be made available to the students.
- Finish with whole class discussion and check the answers.

| Satellite image | Type of plate boundary | Name of plates                                 | Visible features                        | Hidden features           | Processes           |
|-----------------|------------------------|--|---|---------------------------|---------------------|
| 1               | destructive            | Pacific / North American                       | island arcs<br>ocean trench             | volcanoes and earthquakes | subduction          |
| 2               | constructive           | Arabian/African                                | ridge                                   | transform faults          | convection currents |
| 3               | constructive           | African  | Great African Rift Valley               | volcanoes and earthquakes | convection currents |
| 4               | constructive           | American/Eurasian and South American / African | Mid Atlantic Ridge and transform faults | earthquakes               | convection currents |
| 5               | destructive            | Nazca / South American                         | ocean trench and fold mountains         | volcanoes and earthquakes | subduction          |

### Word and phrase bank

- African
- American/Eurasian and South American / African
- Arabian/African
- constructive
- convection currents
- destructive
- earthquakes
- fold mountains
- Great African Rift Valley
- island arcs
- Mid Atlantic Ridge
- Nazca / South American
- Ocean trench
- Pacific / North American
- ridge
- subduction
- transform faults
- volcanoes