Geology 12 - Volcanic Hazards and Features

Part I – Active volcanoes

1. **Composite Volcanoes (Hazards)**

Label the diagram below and briefly describe the following volcanic hazards common to strato-volcanoes:

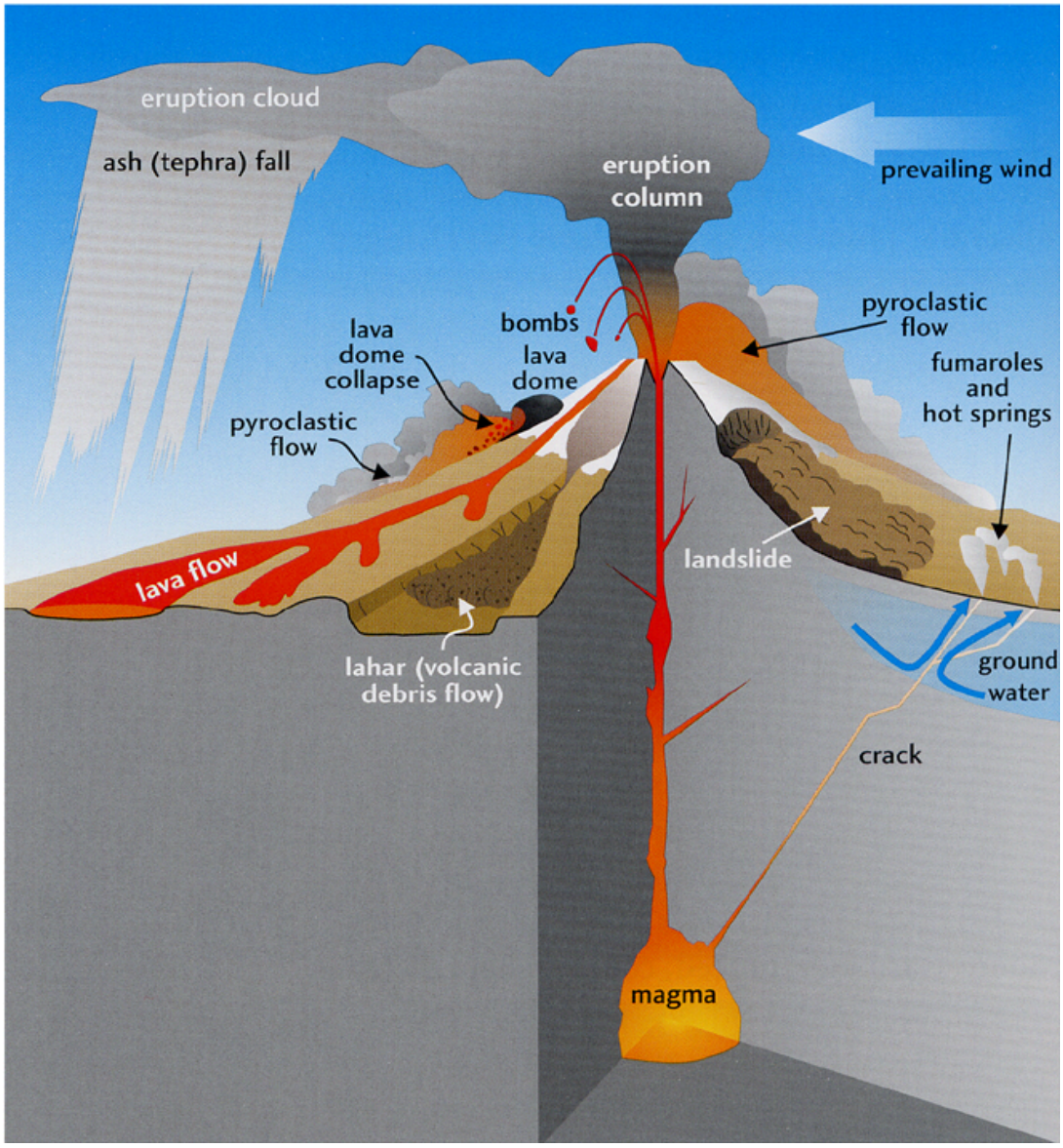
a. Pyroclastic flow _____

b. Lahar _____

c. Ash (Tephra) fall _____

d. Volcanic bombs _____

e. Lava flow _____



2. **Rocks that form from pyro clasts.**

   a. Compare "tuff" and volcanic breccia

   b. Describe Calderas - What and how they are formed

3. **Shield volcanoes – Lava and Hazards**

   a. How does pahoehoe lava differ from A'a lava (include silica content to explain their differences)?

   b. What happens when pahoehoe is extruded under the sea? Include a sketch

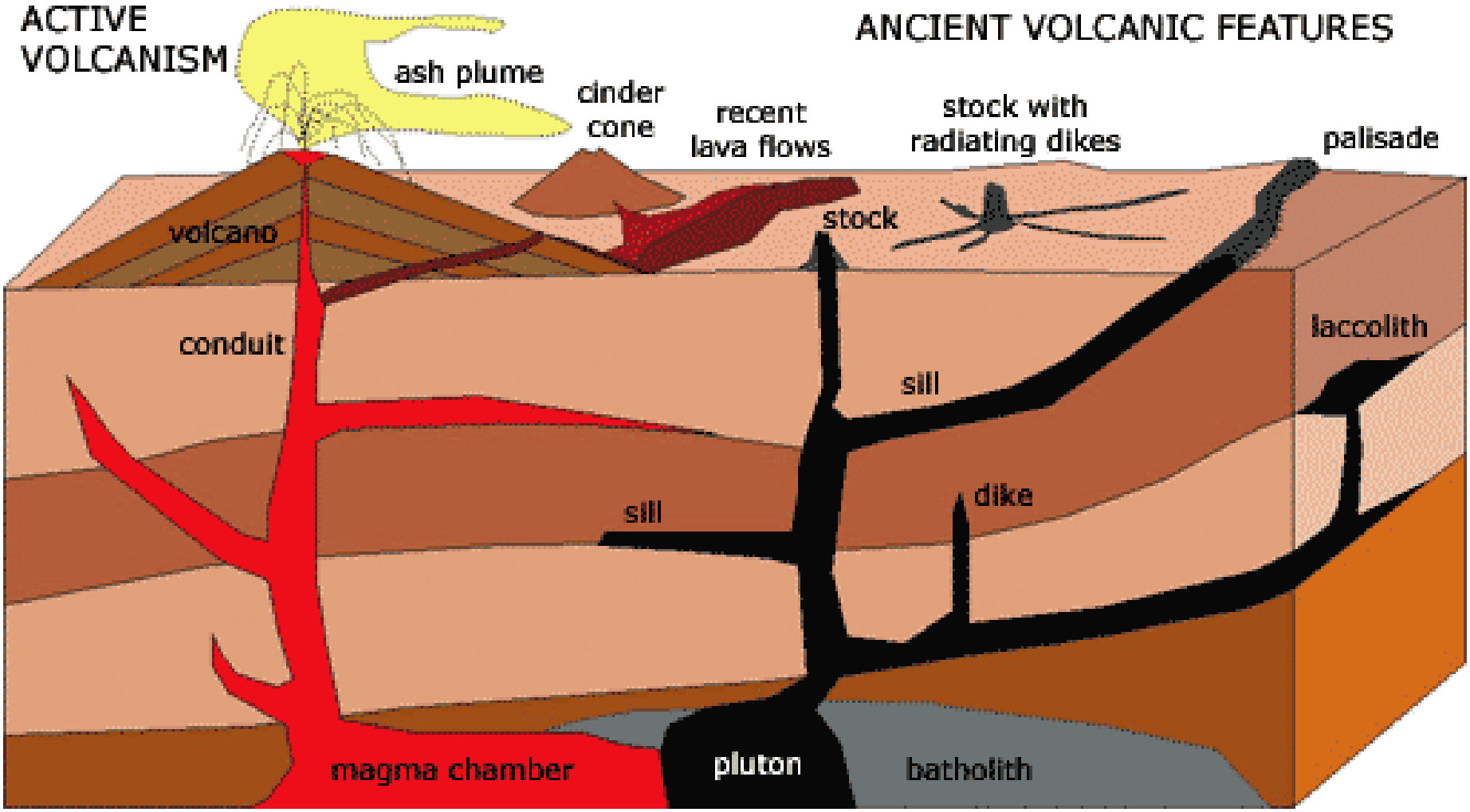
4. **Fissure Eruptions**

   a. What is a fissure eruption and how are floods, or plateau basalts formed? These MASSIVE deposits have had a significant impact on the history of life on earth

   b. Explain columnar jointing (their shape, their origin). Use a sketch

<u>Part II - Ancient</u> Landscapes - Volcanic Features

1. What are intrusions? _____
2. What are inclusions? _____
3. Label the following:
   a. On the **Active volcanism** side:
      i. Type of volcanoes,
      ii. magma chamber,
      iii. types of magma,
      iv. recent lava flows –plateau basalts (from a fissure eruption).
   b. On the Ancient Volcanic features side:
      i. pluton,
      ii. batholith,
      iii. sike,
      iv. sill,
      v. Laccoliths,
      vi. stock with radiating dikes


ACTIVE VOLCANISM
ash plume
cinder cone
recent lava flows
ANCIENT VOLCANIC FEATURES
stock with radiating dikes
palisade
volcano
stock
conduit
laccolith
sill
dike
sill
magma chamber
pluton
batholith