

NAME \_\_\_\_\_ DATE \_\_\_\_\_

INSTRUCTOR \_\_\_\_\_ PERIOD \_\_\_\_\_ PARTNER \_\_\_\_\_

## UNIT 3: Surface Processes and Landscapes

### LAB 3-9: LANDSCAPES OF NEW YORK STATE

**INTRODUCTION:** Landscape forms result from the interaction of erosional and uplifting forces upon various types of bedrock. These rocks differ in their resistance under existing climatic conditions.

The great variety of landscape regions in New York is due to the diversity in structure, age and resistance of bedrock found throughout the state.

**OBJECTIVE:** By interpreting maps you will identify the environmental factors (patterns of drainage and bedrock) which influence the development of landscape features within New York State.

#### VOCABULARY:

landscape:

mountain:

plain:

plateau:

dissected plateau:

stream drainage patterns:

#### PROCEDURE A: AREA ELEVATION

Compare Map 1 to the relief maps provided and the "Generalized Landscape Regions of New York State" map in the Appendix. Letters A through F on the map identify selected landscape regions. On Map 1 some of the landscape regions have been labeled with letters for reference.

1. On Map 1, label each landscape region as either high elevation, middle elevation, or low elevation. Lightly shade each area using the following color key:

High Elevation = red

Middle Elevation = yellow

Low Elevation = green

2. On Map 1 write in the name of each landscape region in the correct location.

**PROCEDURE B: SURFACE DRAINAGE SYSTEMS**

In addition to elevation, the patterns of water drainage on a land surface play an important role in landscape formation. Map 2 shows some of the rivers, streams, and lakes in New York State.

1. Referring to the "Generalized Bedrock Geology of New York State" map in the Appendix, find the following water features on Map 2. Next to each feature label its name and use a blue pencil to trace over and highlight it.
  - Susquehanna River (It flows out of the state midway between longitude 76° West and 77° West at the southern border.)
  - Hudson River
  - St. Lawrence River
  - Lake Ontario
  - Niagara River
  - Lake Erie
  - Finger Lakes
  - Long Island Sound
  - Atlantic Ocean
  - Lake Champlain
2. What major river system is in watershed A? \_\_\_\_\_
3. What major river system is in watershed B? \_\_\_\_\_
4. Watershed C drains into what body of water? \_\_\_\_\_
5. Watershed D drains into what body of water? \_\_\_\_\_
6. Watershed E drains into what body of water? \_\_\_\_\_
7. Watershed F drains into what body of water? \_\_\_\_\_

**PROCEDURE C: GEOGRAPHIC AREAS AND BEDROCK GEOLOGY**

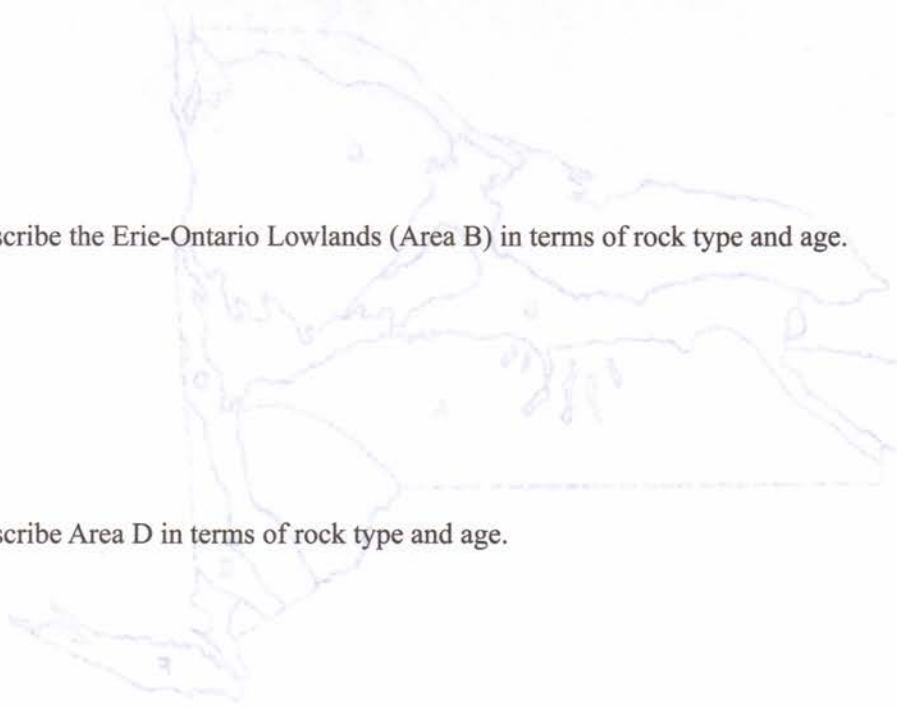
Compare the "Generalized Bedrock Geology of New York State" map in the Appendix with your completed Map 1 and answer the following questions.

1. In the area of high elevation (C), what is the bedrock type and age? (By age we mean the geologic period in which it was formed.)
2. In the low coastal plain region (Area F) describe the bedrock in terms of type and age.

3. Area A includes the Catskill Mountains (a plateau, dissected by streams, which gives the appearance of being mountains). Describe the bedrock in terms of type and age.

MAP 1: AREA ELEVATION

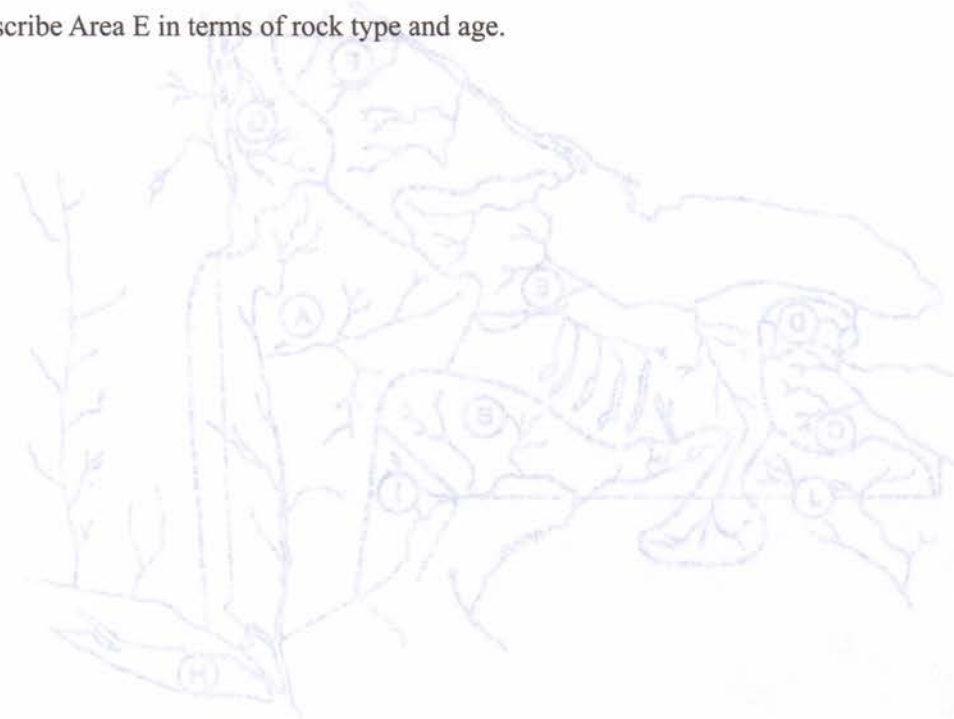
4. Describe the Erie-Ontario Lowlands (Area B) in terms of rock type and age.



5. Describe Area D in terms of rock type and age.

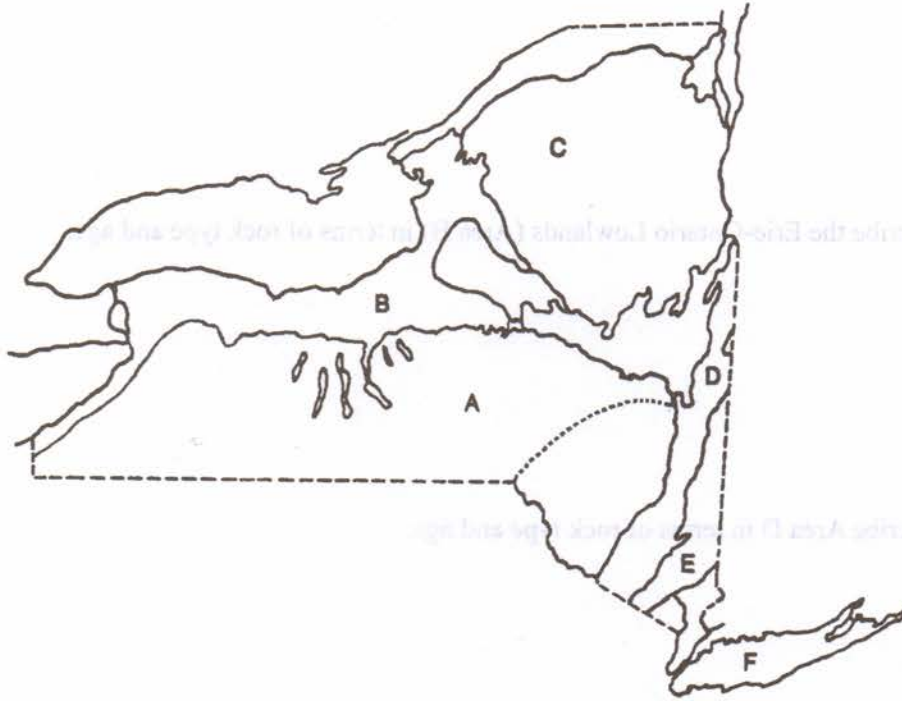
MAP 2: WATERSHEDS

6. Describe Area E in terms of rock type and age.

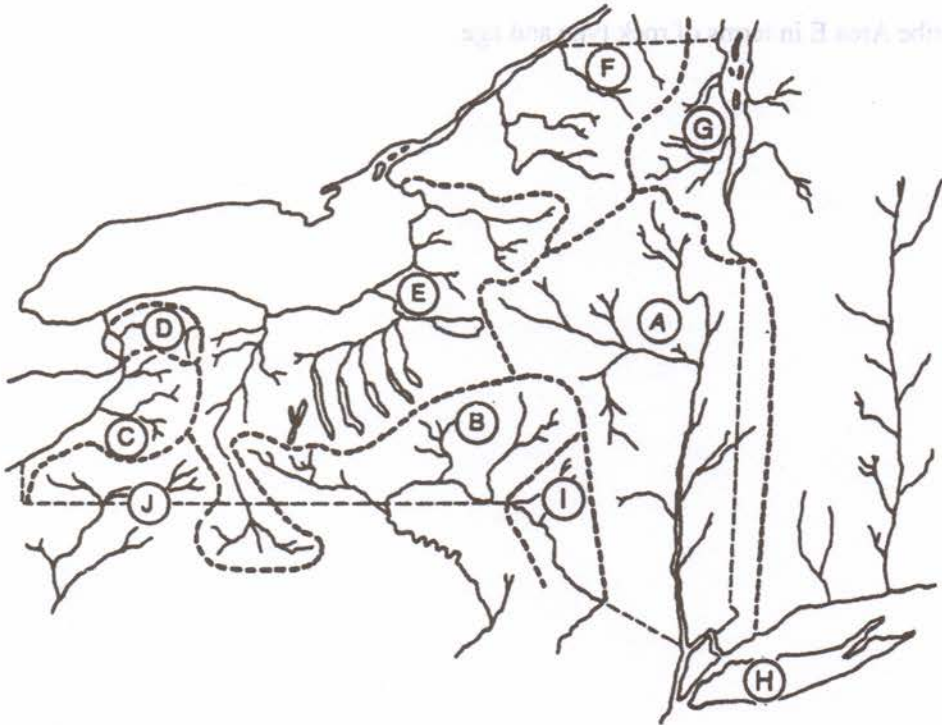




### MAP 1: AREA ELEVATION



### MAP 2: WATERSHEDS



**DISCUSSION QUESTIONS:** (*Answer in Complete Sentences*)

1. Name the landscape regions of high, medium, and low elevation in New York State.
2. Which regions show evidence that crustal uplift was dominant over erosional forces in the past?
3. How many major drainage systems are there in New York State?
4. What caused the development of the different drainage systems in New York State?
5. In which landscape region of New York State is the most resistant bedrock found?
6. What physical characteristics of the bedrock are responsible for the oldest rock remaining at the highest elevation?

**CONCLUSION:** What factors result in the formation of landscapes?