Use the ESRT to identify the types of rocks represented symbolically.

Activity 1A—“De-Construct” the events FROM MOST RECENT TO EARLIEST that created this cross-section.
Activity 1B – Explain how to find the age (geologic period) of the fossil shown.

Activity 1C—In what NYS Landscape region might you be able to collect this fossil?

Comments concerning the “de-construction” activity:

Comments concerning the fossil-landscape activity:
Activity 2 – Here is a link to the Moon Phases during the current month:
http://www.moonconnection.com/moon_phases_calendar.phtml

Activity 2A – Draw the position of the Moon in relation to the Earth and Sun today in the space below:

![Diagram of Earth and Moon]

Activity 2B – Use the globe (Earth), ‘Little Person,’ ‘small ball’ (‘Moon’) and lamp (‘Sun’) provided to create a model of the Earth-Moon-Sun relationship that produces this situation.

Describe what your group did and learned, as completely as possible.
Activity 2C—Draw the shape of the Moon that you would see 22 days from now, and name this phase ____________________________

Activity 2D—If you were in Sao Paulo, Brazil (Lat. 23-1/2° S), 22 days from now, draw the shape of the Moon as you would see it there, and name the phase ____________________________

Activity 2E—Explain how to find the correct answer to the problem below:

Base your answers to questions 39 through 41 on the diagram below, which shows a model of Earth’s orbit around the Sun. Letters A, B, C, and D represent Earth’s position at the beginning of each season.

40 The diagram below shows how Earth is illuminated [lighted] by the Sun as viewed from above the North Pole.

In which orbital position would Earth be illuminated as shown?

(1) A  (2) B  (3) C  (4) D
Activity 3A. Examine the diagram below and explain how to create a hands-on demo to recreate this image.

11 A tree in New York State casts a shadow as shown in the diagram below.

What time of day and season are represented by the diagram?

(1) early morning in winter
(2) early morning in summer
(3) late afternoon in winter
(4) late afternoon in summer

Activity 3B. Examine the item below and explain what spatial skills and content knowledge students must understand to answer it correctly.

What do the images have in common? What are some differences among the images?
Activity 3C. Describe some scaffolding strategies you might use to help students, especially ELLs, correctly answer the question below.

Base your answers to questions 44 through 47 on the maps and the passage below. The maps show differences in trade wind strength, ocean current direction, and water temperature associated with air-pressure changes from normal climate conditions to El Niño conditions.

**Normal Climate Conditions**

**El Niño Conditions**

**El Niño Conditions**

El Niño conditions occur with a buildup of warm water in the equatorial Pacific Ocean off the coast of South America. The immediate cause of this buildup is a change in air pressure that weakens the southern trade winds. These are the planetary winds that move air from 30° S to the equator. Normally, these strong, steady winds, with the help of their counterparts in the Northern Hemisphere, push equatorial water westward away from South America. But, at intervals of two to seven years, these winds weaken, causing the westward water flow to reverse. This results in an accumulation of unusually warm water on the east side of the equatorial Pacific Ocean. This warm water not only changes the characteristics of the air above it, but also is thought to be the cause of weather changes around the world. El Niño conditions may last only a few months, but often last a year or two.

44 The trade winds between 30° S and the equator usually blow from the

(1) northeast  (3) northwest
(2) southeast  (4) southwest