### Stepwise Instructional Activity Worksheet

**Activities: How Earth’s Surface Formed – Dirt, Rocks & Weather.** Using a computer (attached to an LCD projector if possible) the class watches the “Dynamic Earth” PowerPoint about the Earth’s surface. Students discuss/answer questions (written/verbally/using pictures) about various geological features (rivers, mountains, trees) and about physical processes (volcanoes, erosion) or weather elements (earthquakes/hurricanes). Students participate in the “Scoop on Dirt – Building a Soil” activity (see attached) to collect elements of soil composition and create soil. Students watch the “Rocks” PowerPoint (individually or as a group) then collect and classify rocks according to various traits (size, color, shape, texture) and organize data into tables and charts. **Level 1:** Students participate in activities verbally, or through use of AAC devices, sign language, and/or picture symbols. Computer activities are completed using a mouse or adapted computer access if needed. Students use “Sort Rocks by Color”; “Sort Rocks by Texture” worksheets to sort rocks/pictures of rocks and chart results. **Level 2:** Students participate through use of verbalizations/AAC devices/gestures. Computer activities are completed using switch access, touch window, Intellikeys, or other adapted access. Sorting activities are done into baskets marked clearly with picture/tactile labels. Students can match to sample the items needed in the “Building a Soil” activity. **Level 3:** Students answer questions by making choice between two answers, utilizing AAC devices/switches. Computer activities are completed using a switch adapted computer that students activate upon request or independently. For “Building a Soil” and rock sorting activities, students make choices between two answers through pointing/touching, eye gaze, AAC device. When physically able, students work on grasp and release skills to pick up and place items (rocks/soil elements) in appropriate baskets/places, using required level of prompting.

### GPS Content Area: ELA M(6S) SS

#### Standard(s): S6E5: Students will investigate the scientific view of how the Earth’s surface is formed.
- Describe the effects of physical processes on the Earth’s surface
- Erosion is mainly caused by water, but can also occur due to wind
- Changes in Earth’s surface can be abrupt (volcano) or slow (erosion)
- Soil forms as rock, breaks down by weathering, mixes w/ other materials
- Identify types of rocks

#### S6C56: Students will communicate scientific ideas and activities clearly.

#### Outcomes:
- General (for all students):
  - Describe the effects of physical processes on the Earth’s surface
  - Erosion is mainly caused by water, but can also occur due to wind
  - Changes in Earth’s surface can be abrupt (volcano) or slow (erosion)
  - Soil forms as rock, breaks down by weathering, mixes w/ other materials
  - Identify types of rocks

#### Supports Needed:
- Assistive Technology:
  - AAC devices
  - Computer switch interface/switches
  - Computer access adaptations (e.g., touch window, joy stick, Intellikeys keyboard)

#### Student Objectives:
- Standards based objectives:
  - Sort/classify items by form SHAPE (rock, leaf, sticks)
  - Sort by color/SIZE/TEXTURE (rocks)
  - Increase vocabulary
  - Give description/describe
  - Identify weather concepts

#### Element(s):
- S6E5:
  - b. Classify rocks by their process of formation.
  - c. Describe processes that change rocks and the surface of the Earth.
  - e. Explain the effects of physical processes on geological features.
  - g. Describe soil consisting of weathered rocks and decomposed organic material.
- S6C56:
  - c. Organize scientific information using tables, charts, and graphs and identify relationships.

#### Specific (for students with special needs):
- b. Describe processes that change rocks and the surface of the Earth.
- c. Explain the effects of physical processes on geological features.
- g. Describe soil consisting of weathered rocks and decomposed organic materials.

#### Adapted Materials:
- “Dynamic Earth” (earth_changes.ppt) PowerPoint on the earth’s surfaces from the Nebo website
- “Rocks” (rocks.ppt) PowerPoint on the classification of rocks from the Nebo website
- Plastic baskets with picture/tactile labels for sorting
- Soft Velcro® board for graphing
- Color pictures of rocks
- Assorted rocks of various colors, sizes, textures, types

### Nebo website:
http://www.nebo.edu/misc/learning_resources/ppt/

#### Other (academic/not aligned or functional):
- Write sentences related to a topic
- Improve computer skills
- Match objects/pictures
- Follow directions
- Activate switch
- Identify numbers
- Write numbers
- Count from 1 - 10
- Identify colors
- Size concepts
- Fine motor: stirring
- Grasp and release