ITQ ARTS AND SCIENCE INTEGRATION
GRADE 4
THEATRE AND EARTH SCIENCE

Live to Rock! Bringing the Rock Cycle to Life
Earth Science: Solid Earth, Investigation 1 – 3
LESSON #3

CONTENT STANDARDS

Theatre Grade 4

1.2 Identify a character's objectives and motivations to explain that character's behavior.
2.1 Demonstrates the emotional traits of a character through gesture and action.
4.1 Develop and apply appropriate criteria or rubrics for critiquing performances as to characterization, diction, pacing, gesture, and movement.
5.2 Use improvisation and dramatization to explore concepts in other content areas.
5.3 Exhibit team identity and commitment to purpose when participating in theatrical experiences.

Earth Science Grade 4

ES4a Students know how to differentiate among igneous, sedimentary, and metamorphic rocks by referring to their properties and methods of formation (the rock cycle).

ESSENTIAL QUESTIONS *(Questions students might ask about the topic)*

- What does it look like when a rock changes?
- Can rocks change in more than one way?
- How can I perform a monologue in an interesting way to help the audience understand the rock cycle?
- What makes a "good" performance?
- How has the staging of the monologue helped you to understand the ways rocks change in the rock cycle?

OBJECTIVES & STUDENT OUTCOMES *(Students will be able to…..)*

- create a staged reading as part of a creative team.
- develop a checklist of criteria for an effective theatrical performance.
- evaluate peer performances for appropriate vocal techniques, facial expressions, gestures and movement.
- articulate the changes a rock can go through in the rock cycle.

ASSESSMENT(*Various strategies to evaluate effectiveness of instruction and student learning)*

- **Feedback for Teacher**
  - Scene observation
  - Class developed checklist
  - Student responses
- **Feedback for Student**
  - Class developed checklist
  - Student/Teacher responses

WORDS TO KNOW

Theatre Grade 4

- **Actor's position:** The orientation of the actor to the audience (e.g., full back, full front, right profile, left profile).
- **Articulation:** The clear and precise pronunciation of words.
- **Blocking:** The planning and working out of the movements of the actors on stage.

- **Collaboration:** The act of working together in a joint intellectual effort.
- **Critique:** Opinions and comments based on predetermined criteria that may be used for self-evaluation or the evaluation of the actors or the production itself.
- **Director:** The person who oversees the entire process of staging a production.
- **Projection:** The placement and delivery of volume, clarity, and distinctness of voice for communicating to an audience.
- **Gesture:** An expressive movement of the body or limbs.
- **Playwright:** A person who writes plays.

Earth Science Grade 4

- **Calcite:** A mineral that contains carbon and oxygen.
- **Feldspar:** A common rock-forming mineral in Earth's crust.
- **Granite:** An igneous rock that forms underground.
- **Hematite:** An ore mineral containing the metal iron.
- **Limestone:** A sedimentary rock made mostly of calcite.
- **Marble:** A metamorphic rock formed when limestone is subjected to heat and pressure.
- **Mineral:** An ingredient in a rock.
- **Properties**: A characteristic that describes an object, such as size, shape, and texture.
- **Quartz:** A common metamorphic rock.
- **Rock:** A solid earth material usually made of two or more minerals.
- **Sandstone:** A sedimentary rock made of sand particles cemented together.
- **Geologist**: A scientist who studies Earth, its materials, and its history.

MATERIALS

- Monologues from previous lesson
- "Scene Evaluation Checklist (Sample)", Included
- Science notebooks (1/student)

RESOURCES

- For actor's positions: http://redbirdstudio.com/AWOL/bodypositions.html

PREPARATION

- Lead actor's warm up.
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    - Review with students that **actors** have three tools/instruments to do their work: voice, body and imagination.
    - Each time an **actor** works they must "tune up" their instrument.
    - Arrange students in a circle, each one having personal space.
    - Lead students through a physical warm up isolating different parts of the body and stretching (e.g., rotate hands at wrist, roll shoulders backwards and forwards, rotate head at neck, gently swing hips from side to side, knee bends, rotate foot at ankle, lunges, stretching on tippy toes, hanging like a rag doll, slowly rolling up, shake each limb vigorously 8 times, then 4 times, then 2 times, then once)
    - Lead students through some basic pantomimes, such as, brushing their teeth, combing a dog, going to the beach, etc.
    - Lead students through a vocal warm up with yawning, humming up and down the scale, breath exercises (expelling air with force from the diaphragm), loud and soft voice, and tongue twisters. ("Round and round the rugged **rock**, the ragged rascal ran.")

- Make sure students have their monologues from the previous lesson.
- Assemble students into groups of five or six prior to lesson starting.

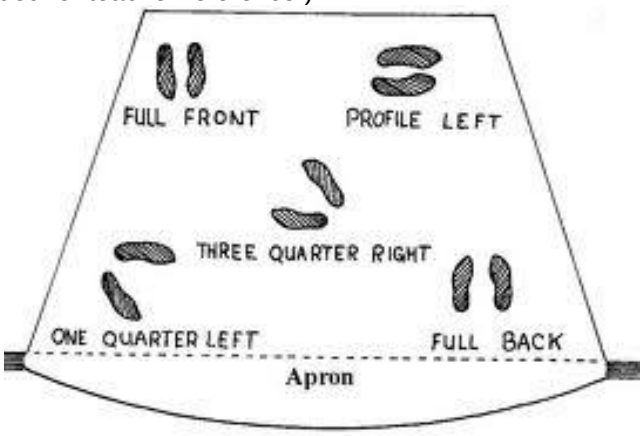
WARM UP *(Engage students, access prior learning, review, hook or activity to focus the student for*

learning)
(10 minutes)

- To help create an atmosphere of ensemble and collaboration, play "Give and Take Movement."
- Below are the directions on how to play the game.
- Have students stand in a circle so that everyone can see each other; all students should stand relaxed and motionless.
- Any student may "take" (makes a repetitive movement) by clearly moving any part of his or her body.
- Whoever "takes," (makes a repetitive movement) continues moving until another student moves.
- When **B** "takes" the movement, **A** must "give" the movement by freezing their movement.
- Any student can "take" (makes a repetitive movement) at any time, but only one student at a time should be moving.
- It is very important only one student move at at time and that they focus on "taking' (makes a repetitive movement) and "giving" (freezes movement) of movement.
- The movement continues passing randomly amongst the group.
- No gesturing, motioning, or trying to control which student moves next is allowed.
- For greater challenge, move students outside of the circle onto the entire stage area (broadens awareness).

MODELING *(Presentation of new material, demonstration of the process, direct instruction)*
(20 minutes)

- Divide students into groups of five or six.
- Tell students that today they are going to **collaborate** to create a staged reading from the monologues that were written in the previous lesson.
- Write **collaborate** on the board. Have students define collaboration.
- A staged reading is where the script is read aloud to an audience but there will be movement or **blocking** as well.
- Write **blocking** on the board. Define **blocking** for students.
- Remind students that as an actor it is their job to make sure that the audience can see and hear them. When they do this, the audience can follow the story. The **blocking** is part of the story telling.
- Ask students how **blocking** can help with **gesture**, **articulation** and **projection**.
- Have a student volunteer come to the front of the class. Review **actor's position** having student demonstrate each position to the audience. (RELATION TO AUDIENCE - Full Front - Body/Feet facing the audience, parallel to front of stage. Full Back - Body/Feet facing face back of stage. Profile - Body/Feet facing the left or right, perpendicular to front of stage. This is actually the weakest of all positions. 3/4 turned - Body/Feet Angled away from audience – between profile and full back. 1/4 turned - Body/Feet Angled towards audience – between Profile and full front. A larger version of this image has been included for teacher reference.)



- Write **gesture** on the board. Define it. Perform examples. Tell students they will need to use their bodies and **gestures** to show the audience character and emotion.
- Write **articulation** on the board. Define it. Perform examples of good **articulation** and poor

articulation.

- Write **projection** on the board. Define it as it relates to speech. Perform examples of good **projection** and poor **projection**.
- Tell students that they are going to create a checklist for what makes a well-done performance (an evaluation tool). They are going to come up with a statement about **blocking**, **gesture, articulation** and **projection**. (e.g., The **blocking** in a well-done scene should let the audience see the actors and their faces. Actors in a well-done scene should show character and emotion with **gesture**. Actors in a well-done scene should have strong **articulation** so the audience can understand the words. Actors in a well-done scene should use strong **projection** so the audience can hear them.)
- Translate these statements into questions for the checklist. (e.g., Was the **blocking** done so that the audience could see the actors and their faces? Did the actors use **gestures** to show character and emotion? Did the actors **articulate** so that the audience could understand the words? Did the actors use strong **projection** so the audience could hear them?) See attached "Scene Evaluation Check List Sample."
- Ask students what question they might ask about whether or not the science ideas have been clearly conveyed to an audience. [Did the scene have the right vocabulary words? Will the audience learn something about rocks and the rock cycle from the scene?] Add these to the checklist.
- Tell students that these are the questions they should have in mind when creating their staged readings.
- Tell students that one person from each group will need to be chosen to read/perform.
- Another student from the group will be the **director** and help create the **blocking**. The **director** will also make sure the group meets the criteria on the checklist created above. The **director** will not act in the scene.
- The actors not reading the monologue will use their bodies to create the setting for each stage of the rock cycle. As the actor reading the monologue acts out his/her part, the rest of the actors create a stage picture/actions around the first actor. This can be in tableau or pantomime. Sound effects may be added as appropriate.
- Have a student volunteer to enter the acting space and read the first part of a monologue. Keep it really short! Model with additional students how action/**gesture** might be added.

GUIDED PRACTICE *(Application of knowledge, problem solving, corrective feedback)*
(15 minutes)

- Students assemble in their groups and come up with a creative way to stage the monologue. There is really no "right" or "wrong" way to do it, as long as the science is accurate. The focus is on creating **blocking**, making sure character is conveyed with **gesture**, and that an audience can hear and understand the speaking actor.
- Allow students two minutes to confirm who will read the monologue and assign a **director**.
- Students rehearse for the remainder of the time. They may only get a couple of the phases staged. Focus on quality rather than quality.
- Side coach as necessary during rehearsal to encourage students to use their bodies to tell a story.

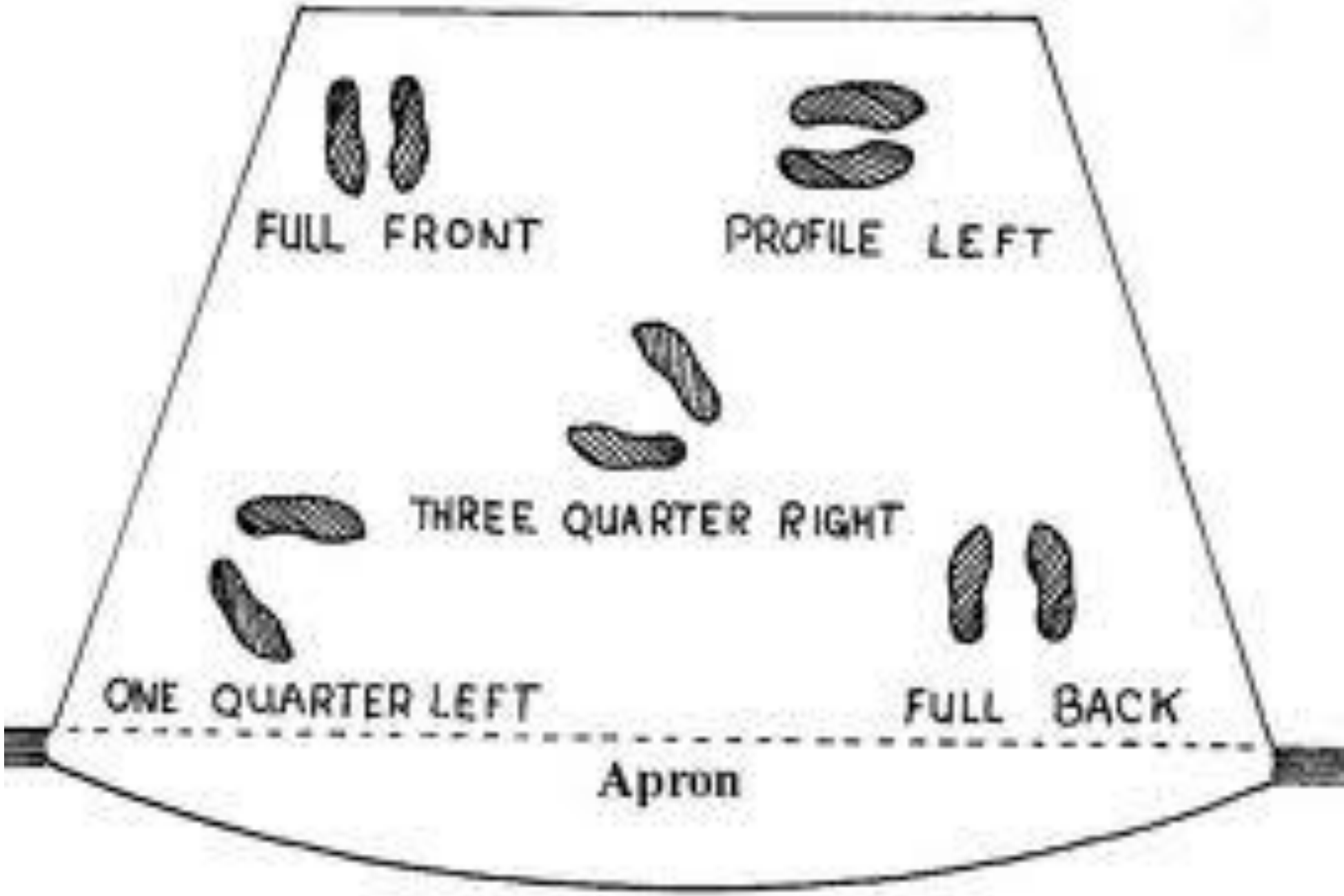
DEBRIEF & REFLECT *(Identify problems encountered, ask and answer questions, discuss solutions and learning that took place. Did students meet outcomes?)*
(5 minutes)

- Bring students in together as an audience.
- Have one group perform as much of the staged reading as they were able to complete.
- Use the Creative Questions Visual Thinking Routine. Have students brainstorm a list of questions about the performance. Transform those questions into questions that challenge the imagination.
  - What would it be like if…?
  - What would change if…?
  - How would it look differently if…?
- After the reading have audience perform a **critique** using the checklist developed earlier in the lesson.
- As a group have students recite the different phases of the rock cycle that were present in this

performance.
- As time allows have additional groups perform and go through the same reflective process.
- Have students think about how the staging of the monologue helped them to understand the ways rocks change in the rock cycle. Have students record their thoughts in their science notebook.

EXTENSION *(Expectations created by the teacher that encourage students to participate in further research, make connections, and apply understanding and skills previously learned to personal experiences.)*

- Allow all groups to perform the pieces. Videotape them for playback and reflection.
- Encourage students to create simple costume pieces and props for a final performance.
- Using the same technique, have students create simply staged performances from other curriculum areas.
- Have students explore a different path the same rock may take through the rock cycle.


FULL FRONT
PROFILE LEFT
THREE QUARTER RIGHT
ONE QUARTER LEFT
FULL BACK
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Scene Evaluation Checklist (Sample)

Theatre Skills

Was the **blocking** done so that they audience could see the actors and their faces?	Y	N
Did the actors use **gestures** to show character and emotion?	Y	N
Did the actors **articulate** so that the audience could understand the words?	Y	N
Did the actors use strong **projection** so the audience could hear them?	Y	N

Science Skills

Did the actors/**playwright** use the correct science vocabulary?	Y	N
Did the scene make the science concept clear to the audience?	Y	N