

**ITQ ARTS AND SCIENCE INTEGRATION
GRADE 5
THEATRE AND EARTH SCIENCE**

**Help! I have the vapors, the water vapors!
Earth Science: Water Planet, Investigation 3 and 5
Lesson #1**

CONTENT STANDARDS

Theatre Grade 5

- 2.1** Participate in improvisational activities to explore complex ideas and universal themes in literature and life.
- 5.1** Use theatrical skills to dramatize events and concepts from other curriculum areas, such as reenacting the signing of the Declaration of Independence in history-social science.

Earth Science Grade 5

- I&E6d** Identify the dependent and controlled variables in an investigation.

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

- What is improvisation?
- What do actors and directors do?
- What is a variable?

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

- create character and convey setting through gesture, posture and vocal expression.
- perform a short improvisation with a beginning, middle and end, focused on the effects of weather.
- direct peers in a short improvisation.
- identify a variable and its effect on an improvisation.
- use voice to create mood.

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

- **Feedback for Teacher**
 - Scene Observation
 - Video of Classwork
- **Feedback for Student**
 - Student/Teacher responses
 - Video of Classwork

WORDS TO KNOW

Theatre Grade 5

- **Actor:** A person, male or female, who performs a role in a play or an entertainment.
- **Audience:** People who watch, listen and respond to live theatre.
- **Character:** The personality of part an actor recreates.
- **Characterization:** Portrayal of a personality through thought, action, dialogue, costuming, etc.
- **Director:** The person who oversees the entire process of staging a production.
- **Improvisation:** A spontaneous style of theatre in which scenes are made up on the spot.

Earth Science Grade 5

- **Cloud:** Tiny droplets of water, usually high in the air.
- **Condensation:** The process by which water vapor changes into liquid water, usually on a surface.
- **Evaporate:** To change from liquid to gas.
- **Evaporation:** The process by which a liquid becomes a gas.

- **Fog:** Water droplets that condense from the air close to the ground.
- **Frost:** Frozen condensation.
- **Hurricane:** A severe tropical storm or moving wind system that rotates around an eye or center of low atmospheric pressure.
- **Ice:** The solid form of water.
- **Snow:** Precipitation in the form of ice crystals grouped together as snowflakes.
- **Thunderstorm:** Severe weather that results from cold air flowing under a warm, humid air mass over the land.
- **Tornado:** A rapidly rotating column of air that extends from a thunderstorm to the ground. Wind speeds can reach more than 400 kilometers per hour (250 mph) in a tornado.
- **Variable:** Anything you can change in an experiment that might affect the outcome.
- **Warm Front:** The contact zone where a warm air mass overtakes a cold air mass.
- **Water Cycle:** The global water-recycling system. Water evaporates from Earth's surface, goes into the atmosphere and condenses. It returns to Earth's surface as precipitation in a new location.
- **Water Vapor:** Water in its gas form.
- **Wind:** Air in motion.

MATERIALS

- "Weather Setting Cards" (included)
- Science notebooks (1 per student)

RESOURCES

- VAPA Core Learnings: <http://www.sandi.net/204510720114515653/site/default.asp>
- VAPA Grade 3 and 5 Theatre Lessons: <http://tinyurl.com/theatrelessons>
- *FOSS Kit California Edition Grade 5, "Water Planet,"* Investigations 3 and 5
- Online improvisation lesson videos: http://www.ehow.com/video_4949233_improv-yes-lets.html
- The benefits of improv in addressing multiple intelligences web article. <http://www.improvwarrior.com/benefits.html>
- *Theatre Games for the Classroom*, Viola Spolin (available on Google Books at <http://tinyurl.com/spolinbook>)
- *Unscripted Learning, Using Improv Activities Across the K – 8 Curriculum*, Carrie Lobman and Matthew Lundquist
- *Structuring Drama Work, A Handbook of Available Forms in Theatre and Drama*, Jonathan Neelands and Tony Goode
- *An Usborne Introduction Acting and Theatre*, C. Evans and L. Smith
- Aaron Shepard's Readers Theatre Website: <http://www.aaronshep.com/>
- www.EnchantedLearning.com
- www.RosalindFlynn.com
- Video Camera

PREPARATION

- Make 10 sets of the "Weather Setting Cards." If possible, laminate them.
- Review *FOSS Kit California Edition Grade 5, "Water Planet,"* Investigation 3 and 5.

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

(10 minutes)

- Explain that **actors** have three tools to do their work: voice, body and imagination. Every time an **actor** does his/her work they must warm up using their tools.
- To warm up the voice:
 - With students, hum up and down the musical scale.
 - Have students repeat the following tongue twister: "Whether the weather be cold, or whether the weather be hot, whatever the weather, we'll weather the weather, whether we like it or not."

Repeat tongue twister softly, loudly, quickly, and slowly.

- To warm up the body:
 - Lead students through a physical warm up isolating different parts of the body and stretching. (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)
- Say:
 - *One-way **actors** warm up their imagination is to play improvisation games.*
- To warm up the Imagination:
- Play “So I’ll” which works on accepting a partner’s idea, listening and building a logical story that will eventually transition into making dialogue happen in scenes.
 - Have students sit in a circle or at their desks if space is limited.
 - Tell students that they are going to create an **improvisational** story about weather.
 - The teacher/leader makes a statement about weather. (e.g. “The sun is shining.”)
 - The next player in line says, “WHAT YOU ARE SAYING IS THAT –the sun is shining, SO I WILL – lay out and enjoy the sunshine.”
 - The goal is to say the next most logical thing in the story.
 - The next player would say something like, “WHAT YOU ARE SAYING IS THAT – I will lay out and enjoy the sunshine, SO I WILL – put on my swimsuit.”
 - The story continues until all have played.
- NOTE- If class is very large, divide into two groups after the game has been explained/demonstrated.

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

(20 minutes)

- Introduce vocabulary word **improvisation**.
- Outline “rules” for **improvisation** (always say “yes” to your partner’s idea and build on it, keep subject matter school appropriate, no put down humor, potty language, references to drugs, etc.)
- Explain to students that an **improvisation**, like any piece of literature or theatre, is made up of different parts that form the beginning, middle and end.
 - The beginning introduces the **characters** and the problem.
 - The middle is where the **characters** try different things to solve the problem.
 - The end is where the **characters** are successful or not and wrap up any loose ends.
- Reveal to students that an **improvisation** is very similar to a science experiment.
- Say:
 - *In a controlled experiment there is a set of **variables** or conditions that change. The independent **variable** is changed on purpose and may or may not affect the outcome of the experiment. The dependent variable is the result of the change or independent variable.*
 - *Ask students to recall the experiment with two wet paper towels in plastic cups. Ask students what they changed on purpose in the experiment. [The independent **variable** in their experiment was the covering on the cup. i.e., one cup had the lid on it and the other did not]. The paper towel in the cup without the lid dried out as the liquid turned to **water vapor**. The paper towel in the cup with the lid did not dry out because all of the water stayed in the sealed environment.*
 - *We use **variables** in **improvisation** to affect the outcome of the story being told. In this next **improvisation** we will use an element of **setting** as the independent **variable**.*
- Ask students to give examples of **setting**.
- Project the “Weather **Setting** Cards” for students see. Define each one and have all students at the same time pantomime how they would feel/act in each weather condition/**setting**.
- Explain to students they will work in groups to create an improvisational scene called “Rain or Shine.”
- Inform students that **actors** work in an acting space called the stage and the rest of the class makes up the **audience**.
- Tell students that there will be three **actors** in this **improvisation** and one **director**.
- Ask students what they think a **director** does.
- Introduce vocabulary word “**director**.”

- Tell students that the role of **director** is to guide actors in making the setting of the scene clear to the **audience**.
- Say:
 - As **actors** we need to make sure that the **audience** can see and hear us at all times. To do that we need to face the **audience** and speak in a loud and clear voice. As an **audience** we need to be respectful, not call out and listen and respond appropriately.
- Demonstrate with three student volunteers with the teacher/leader serving as the **director**.
- Select three students to **improv** a very short scene where two students are walking in the park, meet an ice cream vendor, purchase something and continue their walk.
- Assign **characters**/roles to each student in the scene. (e. g. mom, daughter and ice cream seller)
- Keep it very simple and have students use pantomime and **dialogue**. Side coach as necessary.
- Have students replay the scene using weather as the independent **variable**. After students have entered and begun the scene, show the “Weather **Setting Card**” for raining, to **actors** and **audience**, to change the weather independent **variable**.
- Side coach students to use their bodies and voice to show how their character would react and move in the rain. Encourage them to make the **audience** believe it is raining by their actions.
- Say:
 - *What does it feel like?*
 - *What is the temperature?*
 - *How can you try to stay dry?*
 - *What does the water do?*
 - *Show me with your body and voice.*
- At the conclusion of the **improvisation** ask:
 - *What’s going on in this scene?*
 - *What do you see that makes you say that?*
 - *What was the independent **variable** that changed?*
 - *Did changing the independent **variable** change the scene? How?*
- Repeat the scene and this time display the **variable** change only to the **actors** and not the **audience**. Use **foggy**. Side coach the students as necessary.
- At the conclusion of the **improvisation** ask **audience** to guess what the **variable** change was.
- Ask:
 - *What’s going on in this scene?*
 - *What do you see that makes you say that?*
 - *What was the independent variable that changed?*
 - *Did changing the independent variable change the scene? How?*

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

(15 minutes)

- Divide class into groups of four. Each group will have three **actors** and a teacher assigned **director**.
- Distribute the “Weather Setting Cards” to each group’s **director**.
- Give all groups a new simple scene to act out.
 - This scene takes place outside and involves a sport.
 - Two **actors** are players of the sport and one **actor** is the referee.
- Explain to students they will be performing the same scene several times with different independent variables (weather) and they will have 2 minutes per performance.
- All groups perform the first version of the scene at the same time in their own space.
- After the first performance, the **director** selects one of the “Weather Setting Cards,” reads it to the **actors** and has them begin the scene again.
- **Director** side coaches the **actors** to get them to show the change in setting using the prompts on the “Weather Setting Cards.”
- If possible, record scenes for review in the debrief.

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

(5 minutes)

- Bring group back together and have them report out.
- Ask:
 - *What independent **variable** did you change in your scene?*
 - *How did you show the change in your scene with voice and body?*
 - ***Directors**, how did you guide your **actors** to make the setting clear to the **audience**?*
 - *How did the change in weather affect the scenes?*
- If possible, show video of selected performances to support student feedback.
- *Have students respond to the following prompt in their science notebooks:*
 - *How did performing in the improvised scenes help you understand the meaning of independent variable?*

<h1 style="text-align: center;">Cloudy</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Foggy</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Frosty</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>
<h1 style="text-align: center;">Icy</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Sleeting</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Snowing</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>
<h1 style="text-align: center;">Windy</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Hurricane</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Thunderstorm</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>
<h1 style="text-align: center;">Tornado</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Warm Front</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>	<h1 style="text-align: center;">Cold Front</h1> <p>For Director: What does it feel like? What is the temperature? What does the water do? Show me with your voice and body.</p>

