Weather Science Kit- Kindergarten (2011)

***Teachers please use this as a guide, when preparing the science kit lessons. Please be sure you are using focus questions with each lesson and are having the children use some type of science notebook. The purpose of the notebook is to help students develop, practice, and refine their science understanding, while enhancing reading, writing, mathematics and communications. Below you will find a link to additional teacher materials. In addition, we have provided you with a description of lessons and special things to consider. If you are in need of further assistance, please contact your CTC. ***

Website to obtain teacher materials and video lessons

http://www.carolinacurriculum.com/premium_content/Premium+Gateway+Login+Failed.asp

Username northcarolina.nsrci3@carolina.com **Password** nsrci3

Teacher Materials include (but are not limited to)

- **Inquiry Masters -English/Spanish**
  - **Lessons 2,4-12,14-16**
- **Teacher's Guide**
- **Concept Storyline**
- **Goals**
- **Safety Contract**
  - **English/Spanish**
- **Assessments**
- **Glossary**
  - **English/Spanish**

Videos

- **Lesson 1**
  - **Sharing What We Know about Weather**
    - On chart paper-
      - "Our Favorite Weather"
        - Kids draw pics of their favorite weather (hot, warm, cold) Cut out and place on chart paper creating a vertical bar graph *(see video)*
      - "How do you decide what to wear to school each day?"
      - "What is the weather like today?"

- *Purpose is for the kids to understand how the weather affects their daily lives*

- **Lesson 2**
  - **Observing the Weather**
    - Kids use sight, hearing, smell, and touch to observe the weather on indiv. Record sheets (blackline master)
    - Create class chart from kids info
    - Kids ask ques and you record
    - Intro kids to story-*Observing the Weather with a Meteorologist*

- **Lesson 3**
  - **Recording the Weather- focus cloud coverage and precipitation**
    - Kids record weather on a calendar
    - 3 calendars in kit
    - Kids observe 4 weather features (cloud cover, precipitation, wind, and temperature)
      - Stamps are used to indicate weather on calendar (see video)
    - Kids observe the day's cloud coverage and precipitation; indicate on post-it note, then add to weather calendar
- **Lesson 4**
  - **Estimating Wind Speed**
    - Kids make wind flags to estimate the speed of the wind "Beaufort Scale" *(See video)*
      - 0 =No wind
      - 2= Strong Wind
    - Kids go outside to observe wind's effect on the flag; use class wind scale # to describe speed of wind
    - Use post it note to add to calendar describing wind speed (this will become part of the daily recording)
- **Lesson5**
  - **Reading a Thermometer**
    - Kids will be counting by 2's
    - Blackline Master to create large model thermometer *(See video)*
    - Kids use real thermometers to examine temperature
    - SAFETY ISSUE: Thermometers are real glass-can break; liquid in tubes are non-toxic

- **Lesson 6**
  - **Making a Model Thermometer *(See video)***

- **Lesson 7**
  - **Comparing Inside and Outside Temperatures**
    - Begin today- Measuring and recording each day daily temperatures
    - Chart paper-large class temperature graph *(see video)*
      - Kids add to the graph each day
- **Lesson 8**
  - **Measuring Water Temperature**
    - Comparing water of different temperatures
    - Create a class chart-"Water Mixing Experiment" (see Video)
      - Kids work in groups of 3
      - Each group need hot (100-120 degrees F) and cold water
      - Each group decides how to mix the water *(See video)*
      - Group results are recorded on the class chart
    - Messy water lesson-need sponges or paper towels for clean up

- **Lesson 9**
  - **Experimenting with Color and Temperature**
    - Kids investigate the affect color will have on temperature
      - Kids put thermometers in thermometers bags (black or white) and place in sun or under a hot lamp *(see video)*
      - Kids predict bags with higher temperatures
      - Kids conduct experiment, record results on class chart paper, and discuss how results would influence clothes kids wear on hot sunny day or cool sunny day
- **Lesson 10**
  - **Making a Rain Gauge**
    - Need copies of blackline master *rain gauge scales* (cut out), record of rainfall chart, and a way to simulate rainfall *(See video)*
    - Each kids make their own rain gauge *(See video)*
    - Class goes outside to practice reading the scale with simulated rainfall

- **Lesson 11**
  - **Exploring Puddles**
    - Kids draw conclusions about what happens to puddles after it rains
      - This leads them to the idea of evaporation-but they are not expected to know how evaporation fits into the water cycle
    - Need 2 pails of water, pie plates, "My Puddle Book" blackline masters
    - Groups of 4- pour one small cup of water intone pie plate
      - During next few days, kids record observations in "My Puddle Book"

- **Lesson 12**
  - **Testing Rainy Day Fabrics**
    - Kids decide which fabrics will keep them drier on a rainy day (cotton, cotton-polyester blend, wool, nylon)
    - Decision is based upon: how much water has passed through the fabric into the cup and how wet the fabric feels
    - RECOMMENDATION: wash the fabrics in a mild detergent BEFORE doing the experiment
    - Kids work in groups of 4 – See video for set up and procedures

- **Lesson 13**
  - **Observing Clouds**
    - Focus on individual clouds
    - Webbing activity
      - Write "Clouds" on chart paper (creating a class bubble map)
      - Kids generate ideas about clouds
    - Take kids outside to observe clouds-recommended to lay down in grass and take some time to really observe
    - Kids come back inside and create cotton ball pics of clouds they observed (include scenery)…(See video)

- **Lesson 14**
  - **Classifying Clouds**
    - Kids are introduced to the scientific types of clouds (Stratus, Cumulus, and Cirrus)
    - *(See video)* for pics and info about each

- **Lesson 15**
  - **Comparing Forecasts to Today's Weather**
    - Kids compare their weather observations to a meteorologists
    - Need weather forecast from local newspaper from day before you plan on teaching the lesson, make chart "The Forecast and the Weather" (See video)
    - Read kids forecast from newspaper
      - On chart kids record data from forecast and data from weather calendar and temperature graph
      - Discuss similarities and differences
        - The meteorologist and you both observed the same features of weather