

Collaborative Project

Presented by:
Lychak & Petrella

ED 527
Summer 2007
DID Unit Designer

STEP 1: KNOW THE LEARNERS

The students are fourth grade middle-class students with an ethnic mix of 12 white, 5 Hispanic, 6 African American. Five are ESL students with good command of English but who occasionally need an assist with spelling. The majority of the class is kinesthetic learners, while a few prefer auditory and visual learning. The classroom needs enough space for students to move about effectively during instruction. The students are generally well behaved and cooperative. They enjoy working with partners and in teams. Prerequisite skills needed for this unit of study are general knowledge of wind and weather.

STEP 2: ARTICULATE OBJECTIVES

Observe, measure, and record the basic elements of weather in a lab journal with 90% accuracy.

Evaluate weather predictions based upon observational data using a checklist and lab journal with 90% accuracy.

Interpret recorded weather data for simple patterns on a quiz with 95% accuracy.

STEP 3: ESTABLISH THE LEARNING ENVIRONMENT

During this unit, the students will be placed into cooperative groups. Desks will be placed in a table like format for group discussion. There will be several weather “stations” setup around the perimeter of the classroom. These centers will include all necessary materials and directions for students to complete the tasks with group members.

This unit will include a variety of activities to keep the teams motivated including individual and group tasks.

The students will be given job assignments within the group to keep the team on task.

STEP 4: IDENTIFY TEACHING AND LEARNING STRATEGIES

This lesson targets design Objective 2.

Preorganizer: Display the lab journal.

Bridge to prior knowledge: Review basic forms of weather.

Share objective: Write the objective on the board and discuss why the material is important.

Introduce new knowledge: Display and show students how to use their lab journals. Invite a local meteorologist to speak with students. Take a teacher invented web quest investigating weather. Discuss different sources of weather forecasting.

Reinforce knowledge: Analyze the components that make up a weather forecast while viewing pre-recorded weather forecasts.

Provide practice: After viewing several forecasts, have students work in their teams to produce a mock weather forecast presentation for a given state.

Culminating review: Periodically check accuracy in students' lab journals. Have peers evaluate the presentations, and conduct a class discussion on the elements of a forecast.

STEP 5: IDENTIFY AND SELECT TECHNOLOGIES

Strategies for Objective 2 of this unit will require the use of:

Computer, printer and copier to create lab journals

Computer center connected to the Internet

LCD display for large group presentation given by guest speaker

Overhead projector to be used intermittently throughout unit

STEP 6: MAKE A SUMMATIVE EVALUATION

Evaluation will be completed through objective measures (tests and quizzes) and through performance-assessments (peer evaluation and teacher observation). A checklist will be given to students to share their feedback on the unit and to self-evaluate their presentations.

The lesson planner

STEP 1: READY THE LEARNERS

Student characteristics have not changed.

The class will create a K-W-L chart with teams placing notes under the appropriate column on the chart (using a post-it note system). A class discussion will follow and teacher will gauge entry skills based on responses and observations.

STEP 2: TARGET SPECIFIC OBJECTIVES

This lesson targets design Objective 2:

Evaluate weather predictions based upon observational data using a checklist with 90% accuracy.

STEP 3: PREPARE THE LESSON

Classroom Preparation

During this unit, the students will be placed into cooperative groups. Desks will be placed in a table like format for group discussion. There will be several weather “stations” setup around the perimeter of the classroom. These centers will include all necessary materials and directions for students to complete the tasks with group members.

Lesson Preparation

Preorganizer: Prepare a bulletin board by gathering posters illustrating weather patterns. Display the lab journal. Identify the purpose of the journal and model a sample response. Distribute the lab journals.

Bridge to prior knowledge: Discuss how the types of weather affect our daily lives. Use a K-W-L chart to help facilitate the discussion.

Introduce new knowledge: Display and show students how to use their lab journals. Take a teacher invented web quest investigating weather. Discuss different sources of weather forecasting

Reinforce knowledge: Have teams keep a running record of information in their lab journal as they view and analyze the components that make up a weather forecast.

Provide practice: After viewing several forecasts, have students work in their teams to produce a mock weather forecast presentation for a given state.

Culminating review: Have peers evaluate the presentations and conduct a class discussion on the elements of a forecast.

Technology/Media Preparation

We need to create, print and make copies of the lab journals.

Prepare weather forecast samples.

Prepare transparencies for note taking.

Locate overhead projector and LCD display for large group presentations.

Ready the computer stations.

Assessment Preparation

Prepare a peer evaluation checklist and administer it to students before presentations occur. Students will fill out a checklist for each team presentation.

ACTION PLANNER

TO-DO #1: IDENTIFY LEARNER PREPARATION ACTIVITIES

Learner Checklist

- ___ Create lab journal, K-W-L chart, and peer evaluation checklist.
- ___ Review vocabulary with ELL students.

TO-DO #2: READY THE CLASSROOM

Classroom Checklist

- ___ Record weather forecasts
- ___ Move desks into a group formation
- ___ Prepare weather stations around the perimeter of the room

TO-DO #3: LIST TEACHING AND LEARNING ACTIVITIES

Materials Checklist

- ___ Forecast recordings
- ___ K-W-L Chart
- ___ Post-it notes
- ___ Weather element transparencies
- ___ Lab journals
- ___ Peer evaluation checklists
- ___ Teacher-made presentation rubric

Task Checklist

- ___ Contact local meteorologist
- ___ Produce and copy lab journal
- ___ Bookmark weather websites
- ___ Record forecasts

Activity Backup Plan

If the meteorologist cancels or the Internet is not accessible, have students work in their teams to complete activities at the weather centers.

TO-DO #4: CREATE PERSONAL PROMPTS

Talking Points

- What is weather?
- How does weather differ from region to region?
- What kind of weather pattern does our area have?
- Why do we watch the weather on a daily basis?
- What are the elements of a good forecast?

Don't Forget To

- Make sure the presentation highlights the elements of an accurate forecast.
- Make sure to find appropriate weather links prior to the presentation.

TO-DO #5: LIST SUPPORT TECHNOLOGIES

Technology Checklist

- ___ We need create, print and make copies of the lab journals.
- ___ Prepare weather forecast samples.
- ___ Prepare transparencies for note taking.
- ___ Locate overhead projector and LCD display for large group presentations.
- ___ Ready the computer stations.

TO-DO #6: LIST FEEDBACK INSTRUMENTS

Feedback Checklist

- ___ K-W-L chart
- ___ Lab journals
- ___ Peer evaluation checklist
- ___ Teacher-made presentation rubric

TO-DO #7: DETAIL FOLLOW-UP ACTIVITIES

Remediation: Teacher-made self-paced PowerPoint review on the kinds of weather as well as the important elements of a good forecast.

Reinforcement: Give students extra time to work at a weather station of their choice and supply positive teacher feedback.