

SAMPLE IPA LESSON PLAN
Standard #4 (Real World Connections)
Grade One

Lesson: #2 of 4

Subject: Science

Topic: Winter Weather Science terms

Introduction:

1. In this lesson the students will learn the terms thermometer, temperature, degrees, and mercury when learning about the thermometer.
2. For this lesson, the teacher must have prior knowledge about all aspects of the thermometer and know how the winter weather causes change in the thermometer. In addition, the teacher must know the students' prior knowledge on this topic. Students must know how to count by 11's, 5's, and 10's and know what a thermometer is used for.
3. This lesson connects to language arts, because students have to fill in terms in sentences by looking at the surrounding context. In addition, the lesson connects to math, because the students are required to count on the thermometer by 5's and 10's.

Prior to this lesson, students will have learned how to count by 5's, and 10's, which was taught in the first math lesson. They were also taught how to count by 1's, 2's, and 5's in a previous lesson. This previously learned knowledge must be applied in this lesson. It will connect to future lessons in winter as well, which will be taught in the next science lesson.

Objectives:

1. Students will be able to recognize the terms: thermometer, temperature, degrees, and mercury.
2. Students will be able to use the terms in proper context.

Standards and Benchmarks

School District of Philadelphia
Science

- 2.1 _ Observe and understand patterns as they relate to weather and seasonal time.
- 6.3 _ Describe how tools are used to do things better or more easily and to do some things that could not otherwise be done.

Math

- 1.4 _ Use mental computation.
- 1.6 _ Relate counting, grouping, and place value concepts to a base ten number system.
- 5.1 _ Collect data by observing, measuring, surveying, and counting. Determine the

- most effective way to organize data for a display.
- 7.6 _ Use the appropriate mathematical vocabulary.

Commonwealth of Pennsylvania

3.5 Earth Science

- Know basic weather elements.

3.7 Technological Devices

- Select appropriate instruments to study materials.

AAAS/Project 2061 Science Benchmarks

4 _ The Earth

- Some events in nature have a repeating pattern. The weather changes some form day to day, but things such as temperature and rain (or snow) tend to be high, low, or medium in the same months every year.

9 _ The Mathematical World

- Sometimes in sharing or measuring there is a need to use numbers between whole numbers

Materials:

- Teacher made thermometer 3.5 feet tall. (Procedure and closure)
- Three winter pictures (Motivation)
- Worksheet # 1 “Labeling the Thermometer” (Activity # 3 in class)
- Worksheet # 2 “Complete the Sentence” (Homework)
- Justin and Mary's Fun Winter Day (Activity # 2 teacher made story on chart paper)
- Pencils
- 5" by 11" laminated Cards (Thermometer, Temperature, Degrees, and Mercury (Used during motivation, procedure, and closure)

Organizational Structure:

The students will be involved in whole group instruction and will do individual work at their seats.

Procedure

Motivation:

1. Begin by showing students 3 colored pictures of the winter season.
2. Ask the students, “What season do you think this is.” (Students will say winter)
3. Ask students, “How do you know it is the winter season? (Students will say I see snow, ice, coats, snow hats, snow suits, sleds, skis, gloves, mittens, and snow boots)
4. Ask students, “What does the winter season feel like.” (Students will say cold or freezing)
5. Tell the students we are going to talk about the winter season and its temperatures.
6. Ask students, “What can tell us the temperature or how cold it is outside?” (Students will say a thermometer)
7. Tell students, “Today we are going to learn the parts of the thermometer and learn some big scientific words.”

8. Tell the students the scientific words (Thermometer, Temperature, Mercury, and Degrees) and have an index card present with the science term written on it. Then, say the first letter of the word to help children associate the verbal term with the written term on the index card.

Activity #1: How a thermometer works.

1. Use a large thermometer as a visual aid.
2. Ask the students, "What is this?" (Students will say a thermometer)
3. Ask the students, "Who wants to volunteer to come up and find the word *thermometer* on the easel."
4. Ask students, "What is this used for?" (Students will say to tell us how hot or cold it is or to tell us the temperature)
5. Tell students that a thermometer is a tool that is used to measure the temperature of the weather. As a class, have students say this out loud.
6. Ask the students, "Who wants to volunteer to come up and find the word *temperature* on the easel?"
7. Ask students, "What is temperature." (Students will say how hot or cold it is outside or how hot we are when we have a fever.)
8. Tell students that temperature is how hot or how cold something is. Have students as a class repeat this with the teacher.
9. Tell students that when it is cold outside, we wear certain clothes, because the temperature tells us how hot or cold it is. For example, today I wore a long sleeve shirt, because the temperature was chilly.
10. Ask several students, "What he or she wore to school today and why. (Students will say long pants, sweater, hat, because it was cold outside.)
11. Ask the students, "Who wants to come up to the easel and find the word *Mercury*?"
12. Ask students, "What is the red stuff in the thermometer called?" Students will say mercury or I don't know)
13. Tell students, "Mercury is the liquid in the thermometer that goes up if it is hot and down if it is cold."
14. Tell students to say this as a class with the teacher.
15. Ask students, "How do we read a thermometer?" (Students will say that we look at the red line and then the number it is next to or I don't know)
16. Ask the students, "If the mercury is high on the thermometer how does the temperature feel?"
17. Ask the students, "If the mercury is low on the thermometer how does the temperature feel?"
18. Ask the students, "Who wants to come up to the easel and find the word, *Degrees*?"
19. Ask students, "What are the numbers called on a thermometer?" (Students will say I don't know or degrees)
20. Tell students that degrees are how we measure temperature or how hot or cold something is and that the numbers on the thermometer are not just numbers, but are the degrees. Have students say this out loud as a class with the teacher.

Activity #2: Reading the story

1. Say to students, "Now I'm going to read you a story. There are some places in the story

- where the words are missing. It is your job to figure out what the missing word could be.
2. Read the story, pointing to the words on the chart paper copy as it is read.
 3. At each blank, ask students, "What word belongs here?"
 4. Read the sentence with the student's response. Ask the other students if it is correct. If it is not, and they don't realize it. Review the term.
 5. Continue to the end of the story, filling in the blank with the correct word

Activity #3: Thermometer Work Sheet

1. Hold up the thermometer worksheet. Tell the students that this sheet has some blank lines just like the story. It is their job to write the correct word on each line.
2. Distribute the work sheets.
3. Show them the word bank at the top of the page and ask them to find it on their own paper.
4. Tell them, "Let's read the words in the word bank together." Read each word with them using the initial sound to cue them.
5. Read together each line on the page leaving the missing word blank so all students are familiar with the words.
6. Ask the students to write the correct word from the word bank on each line.
7. Circulate to assist students who are having difficulty.
8. When students have completed the work sheet, read each sentence asking students to say the missing word together.

Activity #4: Using the words in sentences (introduce homework)

1. Distribute the work sheets.
2. Tell the students to write their name and the date to the top of the paper.
3. Tell them to find the directions near the top of the paper (show on paper) and ask them to follow the words as I read.
4. Read the word bank word together.
5. Read together each line on the page leaving the missing word blank so all students are familiar with the words.

Assessment

Worksheets, story. To assess student understanding I will look for students to be able to identify each written, word, say each word and use them properly in each activity.

Assignment

Sentence Worksheet

Mary and Justin's Fun Winter Day

It was a cold winter morning in January and Justin and Mary wanted to go outside to play. It snowed overnight and they knew that it was cold, but they didn't know how cold. They didn't know what to wear, so they needed to find out how cold it was outside. They needed to know what the temperature was. So, they needed a special tool to measure the temperature. They looked all over the house and then Mary yelled, "I found it. Justin, I found the thermometer." Mary and Justin took the thermometer outside and put it on the porch. Then, they went back in the house to have some delicious hot chocolate, while they waited for the thermometer to measure the temperature. A little while later, they went to look at the thermometer. Justin and Mary knew that they had to look at the red liquid in the thermometer, which is called mercury to figure out what the temperature was. Justin put his finger on the thermometer and followed the mercury up until it stopped, then he moved his finger towards the numbers. As he did that,, Mary yelled, "Oh, it is 30 degrees, that is cold!" Justin said, "We better bundle up to keep warm." Mary and Justin ran upstairs and put on sweaters, long pants, socks, boots, mittens, scarves, hats, and their winter coats. They were ready to go outside to play now. The two children had so much fun. They went ice skating and built a snowman. Then, they went sledding. As it started to get dark, Mary and Justin headed home. As they were walking, Mary turned to Justin and said, "It is a really good thing that we measured the temperature before we left this morning, because if we didn't wear the right clothes, we might have had to come home. We would have been too cold." Justin replied, "I am glad that we did too, because we really had a lot of fun today."

Name Ashley

Date 10/20/23

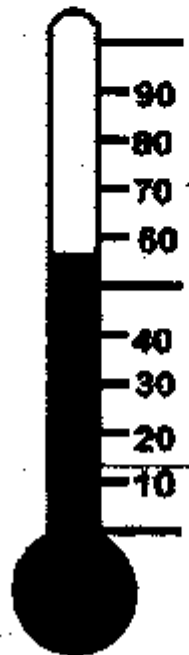
Fill in the blanks with the words in the box.

thermometer	degrees
mercury	temperature

This is a thermometer

It tells us the temperature

I'm proud of you!!



The numbers are called degrees

The red liquid inside is called mercury

Name AngelicaDate 10-22-03

Complete the sentences by filling in the blanks with the words from the box.

temperature

mercury

degrees

thermometer

Awesome!!

1. Mary wore her winter coat outside, because it was only 35 degrees.
2. Tommy used a thermometer to see how cold the water was.
3. The boys and girls looked at the red liquid in the thermometer called mercury.
4. The temperature is how hot or cold something is.