Diagnostic Assessment for
Weather Trackers

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Diagnostic Assessment Directions

Duration: 30 minutes per group

Standards Assessed:

S.C.A.1.1.2.2.1 Student knows examples of solids, liquids and gases.

SC.H. 2.1.1.2.1 The student knows how to sort organisms, objects and events based on patterns. (The student knows that natural events occur in patterns).

SC.H.3.1.1.2.1 Student knows ways in which tools are used to scientists to gather information, to analyze, to calculate

MA.E.2.1.2.2.1 Student knows if an event is more likely, least likely or most likely to occur.

MA.E.1.1.1.2.4 The student uses mathematical language to read and interpret data on a simple concrete, pictorial graph or chart.

SC.B.1.1.1.2.1 Student knows that a thermometer measures heat absorbed by an object.

MA.B.1.1.1.2.5 Student demonstrates an understanding of temperatures using a Fahrenheit and Celsius thermometers.

Description of Assessment Activity: Using a worksheet and teacher read instructions, students are asked to sequence the order of the pattern of the seasons, predict weather based on cloud formations and temperature, and identify the jobs of common tools used to gather information about weather, as well as predict common seasonal weather temperatures based on patterns.

Teacher Directions:
Prior to the assessment:

1. Make copies of the assessment directions for yourself and a student answer sheet for each student. Become familiar with the directions you will read to students.
2. Locate pictures of the four different cloud formations and label them A,B,C, and D .
3. Locate pictures of a thermometer, wind vane, and rain gauge. Label them A, B, and C.
4. Prepare two large bulletin board size cut-outs of thermometers using white poster paper and red tape. Label one as Celsius and the other as Fahrenheit. Include the scales in large, clear numbers. Have a parent volunteer make this for you if possible to save time. Set them to read: 80 degrees F and 0 degrees C.

5. Write the words winter, spring, summer, and fall at the top of columns on the board. (Do not discuss activities for each season) Pass out sticky notes to the students. Have them place their sticky notes beside their favorite seasons to make a class graph. Do not explain this graph at all. The graph will be used in the diagnostic assessment.
6. Divide the class into smaller groups in order to administer the diagnostic. Make arrangements for someone to administer the assessment (if not yourself) and make plans for students not taking the test to be occupied.

Day of the assessment:

1. Gather materials.
2. Score the diagnostic and use the results to adjust the unit's lessons.

Directions:

Read each question and answer choices ALOUD to students. Make sure they are on the correct question. You will probably have to read the questions/answer choices more than once for students. Remember the reading level and ability are not being assessed, only the scientific content knowledge about weather. On the teacher copy, the part to read aloud is in BOLD. Be sure to look at the student worksheet so that you will be familiar with what students see.

TEACHER DIAGNOSTIC ASSESSMENT SHEET

1. **Look at number one on your paper. There are three words listed there. They are river, steam, ice. Circle the word that is an example of water in its liquid form.** (REPEAT and then allow time for students to circle a word.)
2. **Look at number two on your paper. There are three words listed there. They are glacier, steam, river. Circle the word that is an example of water in its solid form.** (REPEAT and then allow time for students to circle a word.)
3. **Look at number three on your paper. There are three words listed there. They are river, steam, ice. Circle the word that is an example of water in its gas form.** (REPEAT and then allow time for students to circle a word.)
4. **For numbers 4, 5, 6, and 7, I am going to read a sentence to you. You will decide if it is true or false. Remember, true means correct and false means incorrect. Find number four on your paper. Listen to the sentence and then circle true or false. Here is the sentence: Water is less likely to freeze if the sun is heating it.** (REPEAT and then allow time for students to circle a word.)
5. **Remember, listen to the sentence and decide if it is true or false. Find number 5 on your paper. Here is the sentence. Steam is most likely to rise from water that is being heated rather than water that is being cooled. Circle true or false.** (REPEAT, then allow time for students to circle a word.)
6. **Listen to this sentence and decide if it is true or false. Find number 6 on your paper. Here is the sentence. If you feel bad and your mom puts a thermometer in your mouth, she wants to measure your body's heat. Circle true or false.** (REPEAT and then allow time for students to circle a word.)
7. **Again, listen to the sentence and decide if it is true or false. Find number 7 on your paper. Here is the sentence. The mercury in a thermometer falls if the temperature gets cooler. Circle true or false.** (REPEAT and then allow time for students to circle a word.)
8. **Look at these three pictures. They are tools that scientists use to measure weather happenings.** (Show pictures of a weather vane, a rain gauge, and a thermometer. Do not explain or name them.) **They are labeled A, B, and C. I will read a question. Decide which tool could be used to answer the question and circle the letter on your paper that matches the picture. For instance, if I decide that the picture with the letter A is the right tool, I would circle the letter A beside number 8. Here is the question for number 8: Which picture shows a tool that measures the direction of the wind?** (REPEAT and then allow time for students to circle a letter.)
9. **Decide which tool could be used to answer this question and circle the letter on your paper that matches the picture. Here is the question for number 9: Which picture shows a tool that measures the amount of rain that falls?** (REPEAT and then allow time for students to circle a letter.)
10. **Decide which tool could be used to answer this question and circle the letter on your paper that matches the picture. Here is the question for number 10: Which picture shows a tool that measures the amount of heat absorbed by an object?** (REPEAT and then allow time for students to circle a letter.)
11. **Look at these four cloud pictures. They are labeled A, B, C, D. Each one shows a different type of cloud formation. Find number 11 on your paper. I will read a statement to you. Decide if the cloud I am talking about is the**

picture of A, B, C or D and circle that letter on your paper. For instance, if my sentence describes picture A, then I would circle letter A. Here is the sentence: Stratus clouds look like a gray sheet covering the sky and mean good weather is least likely to happen. (REPEAT and then allow time for students to circle a letter.)

12. **Circle the letter of the picture that shows cirrus clouds that look like feathers in a bright blue sky and predict good weather is likely to happen.** (REPEAT and then allow time for students to circle a letter.)
13. **Circle the letter of the picture that shows cumulonimbus clouds that look like large dark, cotton and generally mean bad weather is most likely to happen.** (REPEAT and then allow time for students to circle a letter.)
14. **Circle the letter of the picture that shows cumulous clouds that generally predict that good weather is most likely to happen.** (REPEAT and then allow time for students to circle a letter.)
15. **Look at the two thermometers I am holding. One is a Celsius thermometer and one is a Fahrenheit thermometer. For number 15, write down the temperature the Celsius thermometer shows.** (REPEAT and then allow time for students to write a number.)
16. **For number 16, write down the temperature the Fahrenheit thermometer shows.** (REPEAT and then allow time for students to write a number.)
17. **Think about the seasons of the year. There are four of them. Right now it is _____**(Fill in the blank with the current season.) **What season comes next? Circle it on your paper. Your choices are winter, summer, fall, spring.** (REPEAT and then allow time for students to circle a word.)
18. **What season comes after summer? Your choices are winter, summer, fall, spring. Circle the season that comes after summer.** (REPEAT and then allow time for students to circle a word.)
19. **Look at the graph we made with our sticky notes. How many sticky notes are under the warmest season? Write the number you count beside 18 on your paper.** (REPEAT and then allow time for students to write a number.)
20. **Look at the graph again. How many sticky notes are under the coolest season? Write the number you count beside 19 on your paper.** (REPEAT and then allow time for student to write a number.)
21. **Think about the different activities we do each season. Look at number 21. In which season would you most likely go swimming? Your choices are summer, fall, winter, spring. Circle the one you choose.** (REPEAT and then allow time for students to circle a word.)
22. **Which season would most likely have snow and ice? Look at number 21. Your choices are summer, fall, winter, spring. Circle the one that would most likely have snow and ice.** (REPEAT and then allow time for students to circle a word.)
23. **Turn your paper over. Draw a picture of how you would dress to go outside to play if the thermometer read 0 degrees Celsius.** (Show the thermometer set at 0 degrees C. Encourage children to add clothing.)

Weather Trackers **Name**_____
Student Diagnostic Assessment Sheet

1. river steam ice

2. glacier steam river

3. river steam ice

4. true false

5. true false

6. true false

7. true false

8. A B C

9. A B C

10. A B C

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. _____ degrees Celsius

16. _____degrees Fahrenheit

17. winter summer fall spring

18. winter summer fall spring

19. _____

20 _____

21. summer fall winter spring

22. summer fall winter spring