

Estimating Fahrenheit from Celsius

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Discipline: Subject: Mathematics

Topic: Converting Celsius temperatures to Fahrenheit

Grade Level: 5 – 8 Middle school

Resources / References / Materials Teacher Needs:

Formula for Celsius to Fahrenheit conversion

Lesson Summary: In many places, students who are familiar with the Fahrenheit temperature scale will see Celsius temperature readings. To quickly convert Celsius temperatures to a meaningful Fahrenheit number the students will estimate the temperature using this formula $2C + 30$.

Standard's Addressed: (Local, State, or National)

1. Wisconsin Model Academic Standard – Mathematics (D.8.1)

Learning objectives:

1. Students will be able to estimate Fahrenheit temperatures from Celsius readings.

Assessment:

Method of assessment for learning
Students will estimate 8 of 10 temperatures correctly on a worksheet with 10 problems

Procedural Activities

1. Students will be given the formula for converting Celsius temperatures to Fahrenheit along with a page of 10 problems to solve. Formula: $(9/5 \times C) + 32$
2. Realizing that this takes time and probably a calculator, ask the students to develop a quicker way to estimate the Fahrenheit Temperature.
3. Students will realize that $9/5$ is nearly 2 and substitute 2 for $9/5$ in the formula.
4. Students will realize that it will be necessary compensate for the degrees gained when using 2 instead of $9/5$, and adjust 32 to 30.

Materials Students Need:

Work sheet prepared by teacher and calculator.

Technology Utilized to Enhance Learning:

Students could use internet search to find formula for conversion.

Other Information

Students could perform conversions from Fahrenheit to Celsius.

Modifications for special learners/ Enrichment Opportunities

Tables could be provided for conversions and students who have mastered the conversions could be asked to explain the calculation to students who haven't completed 8 of 10 computations correctly.

Notes: Teachers might go to sites such as www.weather.com to find temperature readings on the Iditarod Trail for students to convert. Students might also create a conversion table and compare it to a thermometer to check the accuracy of estimating compared to the exact formula.