

Measuring the Aurora Scavenger Hunt

Overview:

Students navigate the Measuring the Aurora unit of the *Aurora Alive* multimedia video playlist to find the answers to questions on the STUDENT WORKSHEET: “Measuring the Aurora Scavenger Hunt.”

Objectives:

The student will research information by interacting with the *Aurora Alive* multimedia video playlist.

Materials:

- *Aurora Alive* multimedia video playlist
- STUDENT WORKSHEET: “Measuring the Aurora Scavenger Hunt”



Activity Procedure:

Distribute the *Aurora Alive* multimedia video playlist and the STUDENT WORKSHEET: “Measuring the Aurora Scavenger Hunt.” Ask students to complete the worksheet by navigating the DVD to learn the answers to the questions.

Answers to Student Worksheet:

1. *Dr. Tom Hallinan*
2. *nuclear submarines*
3. *spectrometers; photometers*
4. *true*
5. *true*
6. *induction*
7. *all-sky or aurora TV camera*
8. *narrow-field*
9. *magnetic field*
10. *satellites*

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Directions: Use Unit 7 of the *Aurora Alive* multimedia video playlist to help you answer the questions below.

1. In the early 1970s, _____ and others at the University of Alaska developed a television camera sensitive enough to capture aurora light.
2. The idea of a television camera sensitive enough to capture aurora light was borrowed from cameras used on _____.
3. Scientists use what two instruments to study the brightness of the aurora?
_____ and _____
4. True or False: A grating mirror inside the spectrometer separates aurora light into red, green and blue wavelengths.
5. True or False: A meridian-scanning photometer uses six light meters with optical filters to select aurora colors.
6. What kind of magnetometer is needed to hear signals created by the aurora?

7. What kind of camera lets researchers see an aurora covering the whole sky?

8. What kind of camera lets researchers see a part of the aurora in detail?

9. A magnetometer measures changes in Earth's _____.
10. What kind of space vehicles orbit Earth and carry instruments that help study the aurora?
