

Crashing Particles Scavenger Hunt (*modified for ADEED*)

Overview:

Students navigate the Crashing Particles unit of the *Aurora Alive* multimedia, to find the answers to questions on the STUDENT WORKSHEET: “Crashing Particles Scavenger Hunt.”



Objectives:

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

GLEs Addressed:

Science

[9] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

[9] SD3.2 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth’s position and motion in our solar system by explaining the phenomena of the aurora.

Materials:

- MULTIMEDIA: *Aurora Alive* “Crashing Particles” (<http://www.auroraalive.com>)
- STUDENT WORKSHEET: “Crashing Particles Scavenger Hunt”

Activity Procedure:

Have students access the *Aurora Alive* multimedia “Crashing Particles” on the *Aurora Alive* website (<http://www.auroraalive.com>). Ask students to complete the worksheet while navigating the multimedia on the website to learn the answers to the questions.

Answers to Student Worksheet:

1. gas
2. Anders Jonas Angstrom
3. rainbow
4. prism
5. atmosphere
6. oxygen; nitrogen
7. true
8. purple
9. dense
10. 60 (could be between 60 and 600 miles)

Crashing Particles Scavenger Hunt



Directions: Use “Crashing Particles” on the Aurora Alive website (<http://www.auroraalive.com/multimedia.html>) to help you answer the questions below.

1. The aurora is created when solar particles crash into _____ particles in Earth’s atmosphere.
2. Who proved that the aurora was not created in the same way as a rainbow?

3. A _____, not the aurora, is created by refracted rays of sunlight passing through water or ice particles in the sky.
4. What instrument was used to compare the spectrum of light produced by an aurora with that of sunlight? _____
5. Earth’s _____ stops the sun’s particles from reaching the surface of our planet.
6. When the sun’s particles crash into _____ and _____, particles very high in the atmosphere, they produce a reddish glow.
7. True or False: When the sun’s particles crash into oxygen, they produce a green glow.
8. When the sun’s particles crash into nitrogen, they produce a _____ glow.
9. The aurora appears to glow brightest toward its lower edge because that is where particles in Earth’s atmosphere are the most _____.
10. The sun’s particles crash into different gases in Earth’s atmosphere to create the aurora about _____ miles above Earth.