

Aurora Effects Vocabulary

Overview

Students review vocabulary associated with Unit 9: Aurora Effects.

Objectives:

Students will match the following terms to the definitions: radio wave, ionosphere, voltage, transformer, trans-Alaska pipeline, cause, effect, electromagnet, Geophysical Institute, corrosion, low-altitude satellite, high-altitude satellite, and space shuttle.

Materials:

- *Aurora Alive* multimedia video playlist
- STUDENT WORKSHEET: “Code-Word”

Activity Procedure:

Hand out the STUDENT WORKSHEET: “Code-Word” and ask students to decode each word using the code key. Allow students to review the playlist to find the terms and their definitions, if needed.



Answers to Student Worksheet:

- | | |
|--------------------------|-------------------|
| 1. radio wave | 7. effect |
| 2. ionosphere | 8. electromagnet |
| 3. electricity | 9. corrosion |
| 4. transformer | 10. low |
| 5. trans-Alaska pipeline | 11. high |
| 6. cause | 12. space shuttle |

Code-Word

Directions: Decode each word using the code key.

Code Key

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

1.

18	1	4	9	15

23	1	22	5	

 These are beamed from one place on Earth to another and become scrambled during an aurora display.

2.

9	15	14	15	19	16	8	5	18	5

 A layer of Earth's atmosphere off of which radio waves bounce.

3.

5	12	5	3	20	18	9	3	9	20	25

 A change in the magnetic field can generate this.

4.

20	18	1	14	19	6	15	18	13	5	18

 The aurora can cause a different kind of electric current that can heat up this station that reduces the voltage of electricity, and cause it to fail.

5.

20	18	1	14	19						

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1	12	1	19	11	1					

16	9	16	5	12	9	14	5			

 The aurora can create electric current underground that can corrode this large metal object.

6.

3	1	21	19	5	

 The reason something happens.

7.

5	6	6	5	3	20

 This is the result of an action.

8.

5	12	5	3	20	18	15	13	1	7	14	5	20		

 A temporary magnet that is created when electricity flows through a coil of wire wrapped around an iron core.

9.

3	15	18	18	15	19	9	15	14		

 This destructive process occurs when electricity zips through openings in the metal of the pipeline, eating up some of the pipe as it goes.

10.

12	15	23	

 Satellites orbiting at this altitude are used by researchers to study Earth's atmosphere and by the military to get a close look at manmade features on Earth. They can be destroyed when electrical energy from the aurora expands Earth's atmosphere.

11.

8	9	7	8

 Satellites orbiting at this altitude can help people communicate by phone, help pilots navigate, and help scientists predict the weather. A large aurora display can destroy the signals these satellites send.

12.

19	16	1	3	5	19	8	21	20	20	12	5

 This carries astronauts about 200 miles above Earth, where the aurora occurs.