

Clouds Project

You will spend the next few days investigating clouds. Once you have collected your research, you will select an extension which will present your findings and demonstrate your understanding of clouds.

Part 1: Research

You will use the Internet to research the following topics. Use complete sentences to answer **AND** write your responses in your own words. Record your findings and cite your sources.

Background Information		Source (Name of Website and Link)
1.	What is a cloud?	Name: Link:
2.	How are clouds formed?	Name: Link:
3.	What role do clouds have in the water cycle?	Name: Link:
4.	How do clouds affect daily temperatures?	Name: Link:
5.	Find a 'folklore' saying about clouds and explain how it was used to predict weather before modern computers and radars.	Name: Link:
6.	Find two examples of technology that meteorologists use to monitor clouds.	Name: Link:

Cloud Types			Source (Name of Website and Link)
7.	Explain the meaning of the following prefixes:	<ul style="list-style-type: none"> • Alto - • Strato - • Cirro - • Cumulo - • Nimbo - 	Name: Link:
8.	What are at least three ways clouds can be different from one another?		Name: Link:
9.	For the following clouds, identify the most important characteristics, the weather associated with that type of cloud, and take a digital picture of the cloud.		Name: Link:
	Type	Characteristics	Weather
	Stratus	• • •	
	Cumulus	• • •	
	Stratocumulus	• • •	
	Nimbostratus	• • •	
	Cumulonimbus	• • •	
	Alto cumulus	• • •	
	Altostratus	• • •	
	Cirrus	• • •	
	Cirrocumulus	• • •	
10.	Pick one of the following 'special clouds' to identify. <i>lenticular, contrail, fog, or noctilucent</i>		Name: Link:
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Part II: Extension

Using your understanding of clouds, you will produce an original product that demonstrates your comprehension of cloud types, characteristics of clouds, and the weather produced by clouds. Select one of the following.

Option 1	Option 2	Option 3	Option 4
<p>Diorama - Create a 3-D visual of the <u>9</u> different cloud types. Make sure you show the levels of the troposphere where the clouds can be found (low, middle, high). Your clouds should have the correct appearance and be labeled. Don't forget to include the types of weather each cloud type brings.</p>	<p>Letter - You have been to 'Cloud Camp' and are now considered a cloud expert. Write a letter home to your parents or a friend describing <u>5</u> types of clouds and their characteristics. Your letter can take the form of a mystery, daily diary, 'homesick' plea, etc. Don't forget to explain the types of weather each cloud can produce. You can either write your letter on notebook paper or type.</p>	<p>Dichotomous Key - You will create a dichotomous key that helps observers identify and classify clouds. Your key must work for <u>all</u> cloud types AND include the weather produced. Include an activity sheet with 3 examples and an answer key. Think about the Jelly Belly activity we've done in the past.</p>	<p>Skit - Write a skit for a movie about clouds. Your skit must identify at least <u>5</u> types of clouds and their characteristics including associated weather. Your skit can take the form of a newscast, drama, comedy, etc.</p> <p>* You can film your skit if you like but it is not required and will not earn extra points.</p>

Rubric:

Category	Great work (25 points)	Meets Expectations (20 points)	Needs improvement (15 points)	Below Expectations (10 points)
Cloud Types	Five cloud types are correctly identified	Four cloud types are correctly identified	Two to three cloud types are correctly identified	One cloud type correctly identified
Cloud Characteristics	Characteristics of five cloud types are correctly described	Characteristics of four cloud types are correctly described	Characteristics of two to three cloud types are correctly described	Characteristics of one cloud type are correctly described
Weather	Weather associated with five cloud types is correctly described	Weather associated with four cloud types is correctly described	Weather associated with two to three cloud types is correctly described	Weather associated with one cloud type is correctly described
Neatness and Organization	The assignment is neatly done and well organized. The teacher can use it as a class example.	The assignment is mostly neat and organized. One or two small errors found.	The assignment is fairly neat and organized. Some improvement is needed; more than two errors found.	The assignment is incomplete or is not done neatly. Lack of organization prevents understanding.

Understandings:

___ I understand that I am working on this assignment individually.

___ I understand that the work I complete will be in my own words and reflect my own ideas.

___ I understand that if I do not use my time wisely, I will lose computer privileges.

___ I understand that I am only to use the websites provided unless I get permission from the teacher to use another source.

Due Date: _____

Sources:

CK12 (<http://www.ck12.org/concept/Clouds/>) - definition, effects on weather, types of clouds, pictures

Weather Wiz Kids (<http://www.weatherwizkids.com/weather-clouds.htm>) - definition, types of clouds

Web Weather for Kids (<http://eo.ucar.edu/webweather/cloud3.html>) - types of clouds, matching game

SciJinks (<http://scijinks.jpl.nasa.gov/rain>) - formation, technology, pictures

Wild Weather (<http://wildwildweather.com/clouds.htm>) - definition, formation, types of clouds, technology

Weather Wiz Kids (<http://www.weatherwizkids.com/weather-folklore.htm>) - folklore

American Folklore (http://americanfolklore.net/folklore/2010/07/rain_proverbs_sayings.html) - folklore

Plymouth State (<http://vortex.plymouth.edu/clouds.html/>) - types of clouds