

Head in the Clouds Journal

Estimated Time: Completed over the course of 1-2 weeks

SUMMARY

Clouds significantly influence Earth's climate and serve as a useful predictive tool for scientists including meteorologists, ecologists, astrophysicists, and more. This activity teaches students how to describe clouds and associate weather conditions with the types of clouds observed.

WHAT YOU'LL LEARN

- Four general types of clouds
- The relationship between weather conditions and cloud formation
- Describe trends using qualitative observations

Materials Used	Resources Used
<ul style="list-style-type: none"> • STEM Center's Cloud Journal (see below) • Coloring utensils 	<ul style="list-style-type: none"> • Weather 101: A Tutorial on Cloud Types https://www.youtube.com/watch?v=FMagDRCpJ14 • NASA Cloud Chart https://gewa.gsfc.nasa.gov/clubs/sailing/IMAGES/MISCELLANEOUS/CloudChart.pdf

WHAT TO DO

1. Watch the video on cloud types above and review the chart. Encourage the student to better understand the cloud types by describing each type in their own words: where does this cloud type form?, what shape is this cloud type?, what weather patterns are associated with these clouds?, etc.
2. The Cloud Journal should be completed over the course of 1 week or more, depending on how long the student maintains interest! The journal can be printed off from this document, or the student can design a journal with their own artistic touches.
3. Follow the clouds in your area throughout the week, possibly recording clouds more than once a day. Practice identifying the cloud types and predicting the weather for the upcoming day based on the clouds. Will these clouds produce rain or thunderstorms? Will it be a clear, sunny day? When the weather gets colder, perhaps the clouds indicate snow?
4. As the week progresses and more information is recorded, begin analyzing the data. What trends did the student find? Perhaps it was a boring week for cloud formation and the student did not observe much variety; how does this relate to the weather experienced throughout the past week? Can the student predict the weather associated with a cloud type after a week?

TIPS

- The STEM Center is located in southern Illinois by St. Louis where the land is flat, nestled on the banks of the Mississippi River, and landlocked. How do these geographical conditions compare to your location? What clouds would you anticipate finding in our area? Are they different from the ones you experience at home?
- If you have discovered the STEM at Home resources and you are not located in the southern area of Illinois, we'd like to give you a warm welcome! Geographical conditions of your region are likely different from ours. We know, however, that cloud formation and

geographical features are related. Do you live near a large body of water? At a high altitude? Or below sea-level? This is a great opportunity to stimulate comparison between geographical regions and weather conditions.

		Drawing	Shape	Height	Color	Temperature	Precipitation	Cloud Coverage	Other Notes
1	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	
2	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	
3	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	
4	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	
5	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	
6	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	
7	Date: Time:		€ Cumulus € Cirrus € Stratus € Nimbus	€ High € Middle € Low				€ Complete € Partial € Clear	