

Weather & Storms unit study

A homeschool curriculum built around weather — meteorology, data collection, climate and forecasting across science, math and geography.

GRADE BANDS K-2 · 3-5 · 6-8 · 9-12

FULL GUIDE <https://handsdowneducation.com/homeschool/weather>

How to use this planner

The six weeks below are sequenced from the guide's sample week: five weeks that each take one core subject through the topic, then a showcase week that turns the portfolio into a final product. Run each activity at the level your child is at (the grade band notes tell you how), keep the output, and by week six you have a portfolio that shows the unit end to end.

Pace is yours. A week here is three to five working sessions; a topic that is going well can take two calendar weeks, and one that has run dry can be closed early. Tick the box when a week's output is in the portfolio.

Six-week scope and sequence

Wk	Focus	Key activity	Portfolio output	Done
1	Reading & Writing through weather & storms	Read a first-hand account of a historic storm, then write a forecast bulletin for it as it would have been issued the day before — with the uncertainty stated honestly.	Portfolio entry: the week's reading & writing piece, dated, with one line from your child on what they found out.	☐
2	Math through weather & storms	Record daily high, low and rainfall for a week, then graph it and calculate the mean and range — real data your child generated.	Portfolio entry: the week's math piece, dated, with one line from your child on what they found out.	☐
3	Science through weather & storms	Build a barometer from a jar and balloon, log its readings against incoming weather, and test whether falling pressure really predicts rain.	Portfolio entry: the week's science piece, dated, with one line from your child on what they found out.	☐
4	Social Studies through weather & storms	Map where hurricanes, monsoons and tornado alleys occur and explain what geography puts them there — and how those places build differently as a result.	Portfolio entry: the week's social studies piece, dated, with one line from your child on what they found out.	☐
5	Art through weather & storms	Study cloud types by sketching the actual sky for five days, labeling each formation like a naturalist would.	Portfolio entry: the week's art piece, dated, with one line from your child on what they found out.	☐
6	Showcase and review	Choose one final product that pulls the unit together — a presentation, an exhibit, a field guide or a short documentary — and give the week to making it. Finish with a portfolio review: lay every week's output on the table and let your child narrate what changed in what they know about weather & storms.	The final product plus a one-page unit summary in your child's words, filed with the portfolio.	☐

Running it at your child's level

K-2 learners chart daily weather with symbols, learn cloud names, and connect clothing choices to observation — early data literacy disguised as getting dressed.

Older students can work with live radar and model data, study climate versus weather rigorously, and analyze forecast accuracy statistically — an excellent introduction to probability.

A sample week, subject by subject

Reading & Writing

Read a first-hand account of a historic storm, then write a forecast bulletin for it as it would have been issued the day before — with the uncertainty stated honestly.

Math

Record daily high, low and rainfall for a week, then graph it and calculate the mean and range — real data your child generated.

Science

Build a barometer from a jar and balloon, log its readings against incoming weather, and test whether falling pressure really predicts rain.

Social Studies

Map where hurricanes, monsoons and tornado alleys occur and explain what geography puts them there — and how those places build differently as a result.

Art

Study cloud types by sketching the actual sky for five days, labeling each formation like a naturalist would.

Common questions

What equipment do we need?

A thermometer and a rain gauge (or a marked jar) are enough for a full year. Homemade barometers and anemometers are projects in themselves rather than purchases.

How is this different from a science unit we'd do anyway?

Duration and ownership. Weather rewards continuous logging over months, which builds the habit of longitudinal data collection almost nothing else at this age does.

My child is scared of storms — will this help or hurt?

Usually helps considerably. Understanding what causes a storm, and what the actual risks are, tends to convert fear into fascination — but follow your child's pace.

Turn this into a full, standards-aligned curriculum

Generate a complete plan around weather & storms for your child's grade and pace — free to try, no account required.
<https://handsdowneducation.com/curriculum/generate>