

JOINT POLAR SATELLITE SYSTEM







The Joint Polar Satellite System (JPSS) is the nation's advanced series of polar-orbiting environmental satellites, which supports global observations and forecasts, using low-Earth orbit (LEO) satellites to predict and prepare for severe weather events such as hurricanes and blizzards. Each satellite carries at least four state-of-the-art instruments, which are used for severe weather prediction and environmental monitoring. These data are critical to the timeliness and accuracy of forecasts three to seven days in advance of a severe weather event. The NOAA-21 satellite continues the polar-orbiting Earth observations of its predecessor satellites. JPSS is a collaborative effort between NOAA and NASA.

This nature journal is a tool that can be used to explore the outdoors and be more mindful of the environments, habitats, and weather in our own neighborhoods.

Illustrations by Wes Harvey.

Learn more about JPSS at: http://www.nesdis.noaa.gov/about/k-12-education/jpss-education





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The water cycle is a continuous loop that shows the natural process of water moving around Earth's surface, oceans, and atmosphere. Water evaporates from Earth into the atmosphere, is collected as clouds, and returns to the Earth as rain or snow.

> **DRAW** your environment and **LABEL** different parts of the water cycle.





Trees are an important part of life on Earth. We use trees for creating products like wood and paper but also for making food and medicine. Trees are also part of the water cycle and soil creation.



What trees do you see around you? LIST their names or DRAW them.



There are two main categories of water pollution: point source and non-point source.

Point source water pollution comes from one central point

(like a broken pipe or leaking tank) that can be fixed to solve the problem.

Non-point source water pollution comes from a broad source, like when runoff from rain or

melting snow in a parking lot or a fertilized field carries pollutants into waterways.



DRAW or **LIST** things that might be contributing to point source and non-point source water pollution in your area.





Walk around the area. Do you think this would be a good place to build a garden? Why or why not?

MAKE A LIST of the facts that helped you decide.



How would this location look different in other seasons?



DRAW this location in all 4 seasons or **WRITE** about the ways it would change.



Close your eyes and listen for a few minutes. What do you hear?



MAKE A LIST of the natural sounds. Close your eyes again. Can you ADD anything new to your list?



What is the weather like today? Guess the temperature. Do you think it will rain or snow?







DRAW any leaves or flowers you can find.



Soil pollution can be caused by leaking sewer systems, fertilizer, roads, animal waste, construction and other sources. Do you see anything that might contribute to soil pollution in this area?

MAKE A LIST or DRAW what you see.





Do you see any animals or insects



MAKE A LIST or RAW what you see.



Lichens and fungi grow in many places. Walk around and see how many you can find.

Many things in nature have unique smells. Explore your environment and smell the leaves, trees, and soil.

MAKE A LIST of things you smell and describe what they smelled like.

Which thing smelled the best? Which thing smelled the worst? Does the air have a smell today?

The world is a colorful place!

Try to **FIND** *an object from every color of the rainbow and* **SKETCH** *it here.*

Satellites like the Joint Polar Sa "." observe the Earth from above.

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DRAW what this area would look like from above.

