

**Overview:** The Fire Ecology Learning Lab (FELL) unit was written for middle school students and teachers by the Southwest Fire Science Consortium (SWFSC). SWFSC gets emerging science on the ground by connecting scientists, land managers, and the public. By facilitating these connections, the SWFSC helps to assure that scientists are addressing the most pressing questions and managers are applying cutting-edge science and diverse knowledge in their efforts to protect communities and critical natural resources. This ten lesson was created to help the public understand the biotic communities of New Mexico and Arizona, how these biotic communities are adapted (or not) to fire, and the ways that wildland fires are managed.

**Language and Culture:** The student materials are available in English and Spanish. These are all available on the SWFSC website: [swfireconsortium.org](http://swfireconsortium.org). Indigenous communities are referred to by their Federally recognized names, except when discussing ancestral lands.

**Abbreviated Unit:** There are ten lessons in the unit, but some teachers might not have the time to complete all of the activities. If a shorter option is needed, the SWFSC recommends doing the following lessons:

- Lesson 1: Provides a foundation that covers the biotic communities of New Mexico and Arizona. The teacher could select the local biotic communities that are most relevant to their students.
- Lesson 4: This is a high-engagement activity that helps students understand the fuel properties that relate to wildland fires.
- Lesson 5: Students explore how biotic communities burn and how they recover from fire. The teacher could select the local biotic communities that are most relevant to their students.
- Lesson 7: Students apply what they have learned and try to determine the fire regime of the biotic community they studied. The teacher could select the local biotic communities that are most relevant to their students.

**Grade Level:** This unit was created for middle school students. The student reading materials are available at a sixth to seventh grade reading level or at a high school reading level. The lower reading level materials are marked with an LR in the corner. Many high school teachers and some elementary school teachers are using these materials in their classrooms. To adapt for younger students, consider selecting just one or two biotic communities to investigate as a whole class. Skip Lessons 2, 3, and 8 to simplify the unit. High school teachers could expand the climate research, asking students to find and graph their own data sets that correspond with different biotic communities. The students could also do Lessons 4 and 6 more independently, allowing them to construct their own fuel property experiments.

**Updates:** These materials are up to date as of August 2024. Some scientific names may have changed after this date. If you find any errors in the materials, please contact the Southwest Fire Science Consortium at [swfireconsortium@gmail.com](mailto:swfireconsortium@gmail.com). The materials will be updated as needed. This is the third version of the unit we have shared with teachers. We hope it meets the needs of you and your students.

