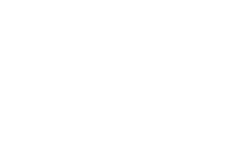
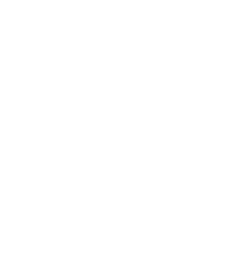
Print from Google Drive folder



Lesson

3



Level

MS

Los Angeles River: Future

## **Theme:** Human Impact on the LA River: Past, Present, and Future



**Think like an Engineer**

**Big Idea:** Human Impact

**Subject:** Physical, Life, and Social Sciences



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| --- | --- | --- |
| **Objective** | Students will be able to design a solution to a current problem in the Los Angeles River. | |
| **Connection to Big Idea** | We are interconnected. A missing link in a system has disastrous consequences. By understanding the past, humans have the ability to change the present and future of their environment. | |
| **Standards**  State, NGSS, CCSS | See ***Standards Connections G.1-5: Human Impact*** document | |
| **Vocabulary** | **Revitalization Biodiversity**  **Web of life Native species**  **Non-native species**  **Invasive species**  **Engineer**  **Habitat** | Making something grow or bring it back to life. Variety of species of plants or animals in a habitat. How living and non-living things are connected.  A species that is naturally found in that habitat.  A species that is ***not*** naturally found in that habitat. Can be brought into the habitat by animals, people, or naturally (wind, scat).  A species that is non-native and harmful to the habitat. It takes resources from native species (space, sunlight, water, food).  A person who designs, builds, or maintains engines, machines or public works.  A place where something or someone lives. |
| **Materials** | Projector & speakers  Internet connection for YouTube  **River Rover** worksheets **Design Your Future**  Copies of **Lesson 3 worksheets**  Lesson 3 PowerPoint  **Lesson 3\_ContentBackground PDF** for reference  Copies of **Post-Assessment** for ***after field trip*** | |
| **Key Points** | **1. Community access (recreation) to the River that is not disruptive to the habitat. Community involvement increases awareness and value for the** | |

|  |  |
| --- | --- |
|  | **River.**  **2. Biodiversity/habitat revitalization through increase of native plants and animals/healthy web of life.**   * Students have studied the past and present of the River. They were introduced to the future plans for the River at a station on the Rover. The city has 1.8 billion dollars to spend on revitalizing 11 miles of soft/natural bottom of the River (Glendale Narrows). * Care for the River needs to start today to protect it for the future. Scientists and engineers are inventing devices to treat pollution in a habitat.   **By Lesson #3, students have learned…**   * + Why a healthy habitat is important (web of life, biodiversity, habitat function) and how to revitalize a habitat.   + How human impact on the River habitat has lead to detrimental consequences: a break down of the web of life, loss of biodiversity, and less habitat.   + The LA River habitat has been disrupted by human use through loss of habitat, addition of concrete, runoff from streets, introduction of non- native/invasive species, chemical contamination, and a business-focused design of infrastructure (buildings, bridges, cities). |
| **Content Background** | See **Lesson 3\_ContentBackground PDF** in Google Drive folder |
| **Lesson Procedure**  Follows 5-Step model | Follow **Powerpoint** instructions and notes |
| **Closing Activity** | 1. ***LA River Promise***   **Closing Activity in Lesson 3 worksheet**   * + Students can participate in the **FoLAR River cleanup in April** in addition to their River Promise, but this promise/action should be something they can do after school *this week*. Check on  **FoLAR.org** for cleanup updates.   + Post the promises on a poster/wall with a title.   + IDEAS: Check back with students periodically to see how they are progressing on their promises.   + **Make it a week-long project:** Ask students to make a list on what they have done to help make the River habitat healthier and share as a class at the end of the week.  Go over field trip expectations in PowerPoint |
| **Assessment** | **Do not give Post-Assessment until after field trip** |
| **Possible Extensions** | **1. Revitalization Plans Video Army Corps Plans for River**  LA River Revitalization Corp. - non-profit organization  **https://**[**www.youtube.com/watch?v=nDnhyt5NqYc**](http://www.youtube.com/watch?v=nDnhyt5NqYc) |

## During video: Instruct students to look for elements of their future

river design in the actual plans of the Army Corps (in video).

* Provide some examples they could look for: bike paths, native trees, native wildlife, clean water, replaced concrete. (Observations)
* TPS (Think, Pair, Share) - After the video, have students turn to a partner and describe what they saw in the plans and identify what was also in their future river designs.

**Designs for the future focus on:**

1. Community access to the River that is not disruptive to the habitat.
2. Biodiversity/habitat revitalization (it will never be what it once was).

# Visit our website

**folar.org/school-programs/curriculum/**

## for more information resources and links to interactive games to extend learning!

1. **Letters to FoLAR**

**We read all of them!**

Students write letter to FoLAR about 1). One important thing they learned about the LA River. 2). How they will help the River. E-mail or snail-mail letters to: Friends of the LA River 570 W. Avenue 26 #250, Los Angeles, CA 90065

