



Ted Alejandre, County Superintendent

San Bernardino County  
Superintendent of Schools  
*Transforming lives through educ*



**Thursday, June 11**  
**1:30pm**

**Curiosity Quest, "How to Make a Bus"**  
**4<sup>th</sup> – 8<sup>th</sup> grades.**

CURIOSITY QUEST is an upbeat family program that explores what you are curious about. In each episode, host Joel Greene, takes viewers on an unscripted hands-on exploration to answer letters of curiosity. CURIOSITY QUEST strives to provide entertaining and educational programming for the entire family to enjoy. City folk probably see these every day. But have you ever wondered how buses are made? The Curiosity Quest crew and host Joel Greene visit a bus manufacturer to explore how they design and create these enormous vehicles.

**After watching this episode, choose from the following questions and/or tasks to extend your learning**

**Question Box 1**

- What does BYD mean?
- What considerations need to be in place when building a bus and why?
- What makes BYD buses different from other buses?
- How many buses does BYD make a year?
- What is the sequence of building a bus?
- Why is it important to make a bus air and watertight?
- What material are the sides of the bus made from?

**Question Box 2**

- What is your BYD?
- How would you build a bus...? what seems like a first step, second, and so on?
- Why do you think some buses bend in the middle?
- What did/do you enjoy about this program?
- What is the one thing you particularly want people to notice when they watch this TV program?
- Now that it's over, what are my first thoughts about this overall project? Are they mostly positive or negative? If positive, what comes to mind specifically? If negative, what comes to mind specifically?
- How did the girls work together as a team to accomplish their task?
- Reflect on a time where you worked in a group either in person or virtually. How did it go?
- Do you prefer to work independently or collaboratively with others? Why?

***Continued on the next page...***

### **Box 3 (Tasks)**

- There is no engine in an electric bus. Research and describe how an electric vehicle works. How does it produce energy to make it go?
  1. draw a diagram
  2. label
  3. write a description

### **Box 4 (Enrichment)**

- Make a timeline of the evolution of buses through time starting with a horse-drawn bus to a hover bus. Include:
  - a. when it was invented?
  - b. why it evolved?
  - c. defining characteristics
- Draw a futuristic bus of your own. Tell what is unique about your bus and why it is the “wave of the future”.

### **Box 5 (Extend/Real-Life)**

- Build a bus from Legos or other toys and/or materials (cardboard box or paper). A bus is approximately 60 ft long. Using this measurement build your bus to scale. (ex: 1” = 1’)
- Check out the bus routes in a major city - like Los Angeles.  
<https://www.metro.net/riding/schedules/> Plan a trip. How would you get from one point to the next? for example: How would you get from Santa Monica to Disneyland? How long will it take, what bus/busses will you be riding? What are the scheduled departures and arrivals from both ends of the trip? How much does it cost? How long will you be able to stay at Disneyland? Is it worth the bus trip?