



THE NILE EXPLORER BUS
STEM COMPONENT: ENGINEERING

DEMONSTRATION OF BUILDING BRIDGES



Young learners building and connecting bridges as guided in the STEM training on The Nile Explorer Bus

In this activity, young learners will experiment with different resources to test their physics skills in coming up with bridge structures so that they are prepared to learn insight into the civil engineering world.

Category: STEM	Mode of Learning: Hands-on group activity	Age Group: 13-19 years old	Number of Learners Required:2-6
Goals:	<ul style="list-style-type: none"> • Learners will be able to construct several types of bridges • Learners will be able to name the types of forces applied to the bridge and • Learners will be able to explain how engineers reduce the negative effects of those forces in bridge construction 		
Materials Needed:	<ul style="list-style-type: none"> • Engine structures: bridges and bridges • Knex Education; real bridge-building • Manual 		
Time Duration: 2 Hours			
Duration: 10 minutes	Duration: 20 minutes	Duration: 60 minutes	Duration: 30 minutes
Instructor's activity: Group the learners in their working teams. Explain the activity	Instructor's activity: Distribute the manuals to the students Distribute the kits to the students	Instructor's activity: Guide learners who need help interpreting the instructions	Instructor's activity: Hold a discussion with learners about the activity.
Learners' Activity: Learners get in their groups. Learners listen to the instructor.	Learners' Activity: Learners receive instruction manuals and kits	Learners' Activity: Learners follow to construct and test their bridge models	Learners' Activity: Learners participate in the discussion.

Explanation	Learners will be expected to build working models such as a house, a pyramid, and various types of bridges: beam, arch, truss, cable-stayed, and suspension.
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