

Structural Engineer: Earning Income

Adventure Description:

In this adventure, you will think like structural engineers and design a bridge to earn income!

Activity

Step 1: Background on Structural Engineers and Income (5 minutes)

- Show [Video: Earning Income](#).
- Discuss the job of a structural engineer. Explain to students that structural engineers design buildings (like schools, hospitals, apartments) and structures (like tunnels and bridges). Structural engineers decide what a structure will look like and what materials should be used to build the structure so it doesn't fall apart. For example, it wouldn't be a good idea to build a bridge out of glass or pool noodles. The bridge would break the minute a car would drive across!
- If time permits, brainstorm a list of materials that a structural engineer would use and not use to build a bridge.
- Next, explain to students that when structural engineers and other adults have a job, they get paid for the work that they do. When adults get paid for the work that they do, the money is called income!
- Optional: If time permits, discuss how income can be used. Discuss how money can be saved, spent, or invested.

Step 2: Activity Set Up (5-10 minutes)

- Explain to students that they will be structural engineers and will design a new bridge for cars to drive over. Students will earn income for the work that they will do.
- Explain to students that they will first set up a bank account. A bank account is a place that adults put money in that they earn from their jobs. When you get a bank account, you get a special number. This number tells the bank that the bank account belongs to you and that other people cannot take money out of your account!
- Provide each student with [Handout: Setting Up my Bank Account](#). Have students each fill out the paperwork needed to get their bank account set up. Explain to students that you (the teacher) will be the bank. When students finish filling out their paperwork, they should bring it to you. Then, their bank account will be set up.
- Explain to students that now that they have their bank account set up, they are ready to get a job as a structural engineer and earn income! Provide each student with [Handout: Steps to Build a Bridge and Earn Income](#). As a class, read through the steps.

Please contact Allison Bischoff, Director of Customer Service, at allison@rozzylearningcompany.com or 314-272-2560 with questions.

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- Divide students into small groups of 3-4 students. Provide each group with the following materials:
 - Assortment of art supplies and building materials (e.g., popsicle sticks, tinfoil, pieces of cardboard, applesauce containers, tape, scissors)
 - 8 toy cars or other small items, like rocks

Step 3: Building a Bridge (15 minutes)

- Have students build a bridge that can go over the bin of water. The bridge will need to be built using strong materials so it can hold 8 toy cars or other items.
- Have students spend 15 minutes working in groups to build their bridge.
- When students finish building their bridge, they should place their 8 cars or items on top of it to see if it can hold them.

Step 4: Earning Income (10+minutes)

- Explain to students that they will now earn income for completing their job as a structural engineer and building a bridge. Explain that students will not get bills or coins. Instead, the money will automatically go into their bank account through direct deposit!
- Show [Handout: How Direct Deposit Works](#).
- Explain to students that every student now has 100 Rozzy dollars in their bank account. For the next 5-10 days (you can pick), let students cash in their Rozzy money for "prizes." Print out Rozzy dollars from [Handout: Rozzy Dollars](#) and give one to each student.
- Explain to students that they can use their Rozzy dollars to buy the prizes. Students may have to pay for some prizes together!
- Show [Handout: Prizes](#). Have students discuss which prizes they would want to buy.
- Teacher notes:
 - These prizes are all free. You can make a copy for each student and have them decide which prizes they will buy with their income. Cross out any options that do not apply to your classroom before showing the handout or make your own handout.
 - Some of the prizes listed are more expensive than \$100. This was on purpose! This allows the class to discuss what students can do when they want to buy a prize that they cannot afford.
- If students want to buy a prize that is more expensive than they can afford, ask students what their options are (e.g., borrow money from a friend or "bank" (teacher), save more money and buy the prize later, ask if there will be a sale soon).

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Materials List

Provided online:

- Video: Earning Income
- Handout: Setting Up a Bank Account
- Handout: Steps to Build a Bridge and Earn Income
- Handout: How Direct Deposit Works
- Handout: Rozzy Dollars
- Handout: Prizes

Not Provided online (each student or group needs):

- Assortment of art supplies and building materials (e.g., popsicle sticks, tinfoil, pieces of cardboard, applesauce containers, tape, scissors)
- 8 toy cars or other small items, like rocks

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