



## LESSON 7: JESUS CALLS DISCIPLES

### OBJECT LESSON: MAKE IT ZIPPY

#### SUPPLIES

- "Make It Zippy Instructions" handout (attached below)
- disposable cups\* (1 for every 3 kids)
- hole punches (1 for every 3 kids)
- chenille wires (pipe cleaners) (1 for every 3 kids)
- small rocks or similar small objects with some weight (about 5 for every 3 kids)
- yarn\*
- scissors\*
- painter's tape\*
- empty water bottles (1 for every 3 kids)



#### Make a Zip Line to Experiment With Gravity and Momentum

Today we're learning that being Jesus' friends means we are followers of Jesus. Since Jesus is a friend we can't see right here in front of us, it can be hard to know **how** to follow Jesus. Let's dig in to this more with a cool experiment!

- Have group of kids set up an empty water bottle across the room and then bowl a rock toward it, trying to knock it over.

Hmm, that's hard to do. I think our rocks need something to follow! Have kids follow the directions on the "Make It Zippy Instructions" handout to make their own buckets.

- Cut a length of yarn.
- Give the other two members of each group a disposable cup, a hole punch, and a chenille wire.
- Then those two members of each group can begin working on preparing a miniature "bucket seat" for the zip line by punching holes on opposite sides of the cup's mouth about  $\frac{1}{4}$  inch down from the rim.
- After the holes are punched, thread one end of the chenille wire through one of the punched holes and twist the wire around itself to attach that end of the wire to the cup.
- Repeat with the other end of the chenille wire in the opposite punched hole to create and secure a chenille wire handle for the cup.

- When groups are ready with a trimmed length of yarn and miniature bucket seat, invite groups to thread the yarn through the handle of the bucket seat.
- Two group members can each hold an end of the yarn, and then groups can experiment with angling the yarn so the bucket moves along it. The steeper the slope, the quicker and easier the bucket will move.
- Allow a minute, and then give each group about five rocks. Allow groups to experiment with sloping the yarn and adding weight to the bucket with the rocks. Have them note what changes they notice about how the buckets move when they add weight.
- When groups have played with angles and speed, have one person hold the top end of the yarn and another hold the other end of the yarn so it's just an inch or so above the bottle. The third group member can send the bucket down to knock over the bottle.

### Talk About It

What did you do that made the bucket move along the yarn best? Why do you think the angle of the yarn and the weight in the bucket made a difference?

Your group made little versions of something called a **zip line**. Zip lines work because of gravity and momentum. **Gravity** is a force our planet has that pulls everything on earth to the earth's surface—so we don't float away!

When you held your yarn at an angle, a slope, it allowed gravity to pull the bucket along the yarn. Then when you added weight to the bucket, it gave gravity more weight to pull on, and that increased the **momentum**—how fast and easily the bucket moved along the yarn. So you found ways to use gravity and momentum to make it easiest for the bucket to follow the path of the yarn. And that all made it possible for the rock to easily knock over the bottle. What else helped the bucket follow the zip line?

One thing we needed is the handle! Without that handle, the bucket wouldn't have been able to stay connected to the line to follow it. It's important for us to stay connected to Jesus to be able to follow him, too. What are ways we can stay connected to Jesus?

Staying connected to Jesus is how we show that we are followers of Jesus. We have to be connected to Jesus to follow him, and the longer we're connected to Jesus, the easier it is to follow him and do what he has called us to do—fish for people!

# Make It Zippy Instructions

Invite one person from each trio to cut a length of yarn from the rubber band contraption they made in Core Bible Discovery.

Give the other two members of each group a disposable cup, a hole punch, and a chenille wire.

Then those two members of each group can begin working on preparing a miniature “bucket seat” for the zip line by punching holes on opposite sides of the cup’s mouth about ¼ inch down from the rim.



After the holes are punched, thread one end of the chenille wire through one of the punched holes and twist the wire around itself to attach that end of the wire to the cup.



Repeat with the other end of the chenille wire in the opposite punched hole to create and secure a chenille wire handle for the cup.



When groups are ready with a trimmed length of yarn and miniature bucket seat, invite groups to thread the yarn through the handle of the bucket seat.

