

***The Reef***  
Theme: **Adventures of Paul**  
April-May, 2013  
**Power Lab**

**Scripture** Acts 27:27-44

<sup>27</sup> On the 14th night we were still being driven across the Sea of Adria. About midnight the sailors had a feeling that they were approaching land. <sup>28</sup> They measured how deep the water was. They found that it was 120 feet deep. A short time later they measured the water again. This time it was 90 feet deep. <sup>29</sup> They were afraid we would crash against the rocks. So they dropped four anchors from the back of the ship. They prayed that daylight would come.

<sup>30</sup> The sailors wanted to escape from the ship. So they let the lifeboat down into the sea. They pretended they were going to lower some anchors from the front of the ship. <sup>31</sup> But Paul spoke to the commander and the soldiers. "These men must stay with the ship," he said. "If they don't, you can't be saved." <sup>32</sup> So the soldiers cut the ropes that held the lifeboat. They let it drift away.

<sup>33</sup> Just before dawn Paul tried to get them all to eat. "For the last 14 days," he said, "you have wondered what would happen. You have gone without food. You haven't eaten anything. <sup>34</sup> Now I am asking you to eat some food. You need it to live. Not one of you will lose a single hair from your head."

<sup>35</sup> After Paul said this, he took some bread and gave thanks to God. He did this where they all could see him. Then he broke it and began to eat. <sup>36</sup> All of them were filled with hope. So they ate some food. <sup>37</sup> There were 276 of us on board. <sup>38</sup> They ate as much as they wanted. They needed to make the ship lighter. So they threw the rest of the grain into the sea.

<sup>39</sup> When daylight came, they saw a bay with a sandy beach. They didn't recognize the place. But they decided to run the ship onto the beach if they could. <sup>40</sup> So they cut the anchors loose and left them in the sea. At the same time, they untied the ropes that held the rudders. They lifted the sail at the front of the ship to the wind. Then they headed for the beach. <sup>41</sup> But the ship hit a sandbar. So the front of it got stuck and wouldn't move. The back of the ship was broken to pieces by the pounding of the waves.

<sup>42</sup> The soldiers planned to kill the prisoners. They wanted to keep them from swimming away and escaping. <sup>43</sup> But the commander wanted to save Paul's life. So he kept the soldiers from carrying out their plan. He ordered those who could swim to jump overboard first and swim to land. <sup>44</sup> The rest were supposed to get there on boards or other pieces of the ship. That is how everyone reached land safely.

**Memory Verse:** Acts 17:3b

"This Jesus I am proclaiming to you is the Messiah," Paul said.

## Opening

### Ask:

- How many of you have ever been in a boat?
- Have you ever been in a boat in a storm?
- What did it feel like?

### Say:

Today's Bible story talks about a time when Paul was a prisoner on a boat and it shipwrecked by the island of Malta. (Show the class where Malta is on the map.)

## Scripture Lesson

*As you turn to the passage, review the organization of the Bible: The Bible is divided into two big parts, the Old and New Testaments. Each part is made up of books, which are divided into chapters and verses. Have them figure out whether Acts is in the Old or New Testament (happened after Jesus so it's in NEW Testament). Show them that if you open your Bible in the middle, you will usually land in the book of Psalms in the OT. Point out that the book name is at the top of each page.*

*After finding Psalms, take the pages on the right side and divide them in half, they'll open somewhere near the beginning of the New Testament. Tell them that Acts is the fifth book of the NT, right after the four Gospels. Show them that chapter numbers are the big ones, and also are at the top of every page. Verse numbers are the small numbers.*

*Explain that Acts is short for Acts of the Apostles. The stories here tell about what happened to Jesus' followers after his death and resurrection. It tells the story of the early church. Acts is a book of history -- the only history book in the New Testament.*

Grades K-2 – find Acts and the teacher reads the passage out loud

Grades 3-4 – find Acts Acts 27:27-44 and have several students read the passage out loud 2 verses at a time.

### Ask:

- Why do you think Paul didn't want the prisoners to escape?
- What did Paul do that was the same as what Jesus did? (broke bread and gave thanks to God)
- What was the result of this action? (filled with hope)
- Why do you think the prisoners in the boat chose not to escape?
- Who was in control of this event – soldiers, Paul, prisoners or God? Why?
- Can you think of another time in Paul's life when prisoners had the opportunity to escape but didn't? (story of Paul and Silas in prison – earthquake – everyone stayed – jailer was converted)
- Something good usually comes out of difficult times. What good came out of this shipwreck experience?

### Say:

It may look easy to construct a seaworthy vessel. Let's find out. There are a couple of things you need to think about when you build a boat.

#### **Activity #1 Sink or Swim (Density)**

- Ask students which will float - a can of diet soda or a can of regular soda.
- Put one of each in a bowl of water.
- Have them explain why that happened and why.

Density equals mass divided by volume. There are three components to the unit, the can, air and the soda itself. The area (volume) of all of the aluminum cans is the same. The aluminum will sink by itself, if you fill it with water and drop it in water, it will go to the bottom.

There is air/gas in the can. Since the cans are virtually identical the quantity in them is also the same. The air is enough to offset the mass of the aluminum and a bit more.

The mass of the regular soda is greater because of the weight of the sugar, about 3 grams, in the soda. Diet soda uses a very small amount of artificial sweetener. That means that the density of the regular soda will be higher. If the density is less than 1 gram per cubic centimeter, the can will float, as is the case with the diet soda. The density of the regular soda is greater than 1 gram per cubic centimeter, so it sinks.

#### **Activity #2 Clay Boats (Buoyancy)**

- Take a piece of clay and split it into 2 identically sized pieces. Take one of the pieces and roll it into a ball. Take the other piece and fashion it into a flat boat shaped object
- Now place both pieces into a sink full of water. Which one floats and which one sinks? Both? Neither?

If the total area of the object that makes contact with the water is large enough, the object floats. The object must make room for its own volume by pushing aside, or *displacing*, an equivalent (or equal) volume of *liquid*. The object is exerting a downward force on the water and the water is therefore exerting an upward force on the object. Of course the floating object's weight comes into play also. The solid body floats when it has displaced just enough water to equal its own original weight.

This principle is called *buoyancy* or the ability to stay up.

#### **Activity #3 BYOB – Build Your Own Boat**

Taking into consideration the principles of density and buoyancy, build a boat.

- Divide class into groups.
- Let each group select a material to build a boat.
- The group with the most sea worthy boat is the winner. Seaworthiness is determined by

The boat that can hold the most number of pennies while withstanding a hurricane without sinking. (A hurricane is when 5 people stand around the bowl of water and blow in straws.)

**Closing Prayer**

Thank you, God, for Paul. He was an amazing witness for God during the most difficult times. Help me to depend on you in tough times just like Paul did.