**GRADE LEVEL**
1st and 2nd grade

**TIME**
One 1-hour-and-15-minute session. The session will require an additional 10 minutes for set-up and clean-up. Ahead of time, this lesson requires about 1 1/2 hours of preparation time for teachers (parents, volunteers).

**PROJECT DESCRIPTION**
In connection with a Noah's Ark lesson, students design and build an ark to house animals, according to architectural dimensions specified in the Bible (Genesis 6:14-15). The arks are made from a shoebox, light cardboard, magazine pictures of animals, plastic and foam animals, pebbles and sticks.

**NOTE**
A 10-minute PowerPoint presentation precedes the hands-on activity, discussing how buildings, boats, planes, etc, are designed and built, and what roles various people play in the design-build process.

**LESSONS**

**CULTURAL**
Students gain a familiarity with Biblical stories and the lessons they are meant to teach us. They are introduced to the concept of “myths or fables” as stories that may not be literal truth but impart important lessons.

**DESIGN**
Students are provided an introduction to the architectural process. They are shown the importance of project planning.

**CONNECTION TO JEWISH VALUES**
The project reinforces the need to care for all of God’s creatures.

**SKILLS UTILIZED**
Project planning, architectural design, space planning, engineering, building.

**MATERIALS**
- **SHOEBOX** (standard size 15-1/2" x 7" wide x 4-1/2")
- **SMALL PLASTIC ANIMALS**
  1-2 inches in scale (5-6 per student)
- **MAGAZINES**
  with pictures of animals (National Geographic, Nature, National Wildlife Foundation magazines for kids like Ranger Rick, Ranger Rick Jr.)
- **FOAM STICKERS OF ANIMALS**
- **ROLL OF WHITE PAPER** to cover outside of boxes
- **THIN WHITE CARDBOARD** (easy for children to cut)
- **SCISSORS**
- **SCOTCH TAPE** (several rolls)
- **GLUE STICKS**
- **X-ACTO BLADE OR UTILITY KNIFE**
  (for teacher preparation only)

**HOMEWORK**
2-3 weeks prior to the session, ask students to bring a shoebox from home. Also ask them to gather nature magazines with pictures of animals. They might ask their parents for magazines like National Geographic or Nature. They might subscribe to kids’ publications from the National Wildlife Federation like Ranger Rick. They can also print photos of animals from online sites like the National Wildlife Federation’s kid’s site: http://www.nwf.org/Kids.aspx. Students should bring 8-10 pictures of animals to class. The pictures should be NO LARGER than 2x4 inches, but also some smaller ones will be useful. Teachers, volunteers should bring in extras.

**Download files at:**
www.bethsingerdesign.com/curriculum
- Lesson plans in PDF format
- Classroom presentation in PPT (editable) and PDF formats
PROCESS:

TEACHER PREPARATION

1. Prior to the session, the teacher (parent, volunteer) should take the top off the box and wrap (like a present) each shoebox in white craft paper.

2. Using an X-ACTO/utility knife, cut out the paper on the open side of the shoebox, leaving the inside of the box accessible and about ½ inch of paper to fold all the way around, on the inside of the box. Fold the edges of the paper inside the box on all four sides, and tape them to the inside of the box.

3. Teacher or other adult should cut cardboard strips to use as decks, rooms and staircases in the ark. Each strip should be 2-2 ½ inches wide. Vary the length of strips from 8 to 11 inches. Fold some strips in accordion style for staircases. Strips for decks can be made by folding a strip into five sections, the middle one being the horizontal deck, while sections on either side become the walls, and the smaller sections on the outsides get taped to the floor or ceiling. While some folds will be too complex for students, leave some strips flat for students to make simple folds.
4. Prepare a few piles of magazine pages with animal photos for easy access; students will cut out their own photos. The cut-outs should be no larger than 2x4 inches.

5. Teacher prepares work stations by spreading newspapers on tables to prevent glue smudges, and putting piles of animal photos, cardboard strips, glue sticks and tape on the tables.

THE SESSION

1. At the start of the session, students should be familiar with the Noah’s Ark story from previous classes. If not, the teacher should familiarize students with the story, highlighting the saving of the animals in pairs and introducing the idea that the ark was a work of architecture.

2. Teachers should show students that the Bible text actually specifies the dimensions of the Ark in Genesis 6:14-15:

“So make yourself an ark of cypress wood; make rooms in it and coat it with pitch inside and out. This is how you are to build it: The ark is to be 300 cubits long, 50 cubits wide and 30 cubits high. Make a roof for it, leaving below the roof an opening one cubit high all around. Put a door in the side of the ark and make lower, middle and upper decks.”

Print it out large and hang up the passage.

Note that, by our measurements, the ark would roughly be 540 feet long, 37.5 feet high and 75 feet wide.

3. Show the PowerPoint

4. Students should decide which animals will go in their ark and glue the cut-out pictures of animals along the inside back wall of the shoebox.

5. Ask students to plan the architecture and design of their ark. Ask them to decide how to arrange the decks, staircase, etc, before taping them to the inside of the shoebox, using the Biblical directions as their guide. Show them examples of how to use the prefolded strips or how they can use the flat ones to create their own architectural features.
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6 Have students TAPE (not glue) the strips to the box to designate decks, rooms and staircases. (May need teachers’ help.)

7 Suggest enhancing their arks with other art options: “feeding tray” of rocks, small sticks, grass, habitats for the animals.

8 Pass out foam animals and plastic animals and ask students to populate their arks. Foam animals may be glued onto the decks and walls.

9 The top of the shoebox can be used as the base and as a holder/carrier for their creations.

SUGGESTED DISCUSSION TOPICS
• The Noah’s Ark story stresses the importance of caring for God’s creatures. Talk about ways that we can help God’s creatures in our everyday lives (i.e., don’t hunt animals; take care of pets; support or work at animal shelters; don’t pollute).

• The Noah’s Ark story may or may not be true. The literal truth of the story isn’t as important as the message of the story itself. What other stories do they know that teach a lesson and may or may not be true (from the Bible? from other sources)?

Questions? Call or email Beth Singer/Howard Smith
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