

Project-Based Learning with FDLRS, WFSU & POPIN

Building Houses with Bob the Builder

September 2017



Curriculum Links:

- ✓ Science-Engineering: Building Structures
- ✓ Science-Engineering: Cause and Effect
- ✓ Literacy-vocabulary

Goals/Objective(s):

- ✓ Explore the process of cause and effect related to building materials
- ✓ Learn the meaning of the words “set” and “bond”

Vocabulary:

- set (as in the concrete hardening process)
- bond (as in the drying process for glue or paint)

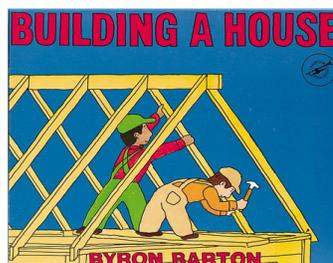
Episode:

Bob the Builder (UK) [Saffi's Treehouse](#)



Book:

Building a House by Byron Barton



Materials:

- Pre-made popsicle stick house
- single popsicle stick
- glue
- small Chinese take-out boxes
- door and window stickers or precut construction paper doors and windows
- clothespins
- paper chimney

- paper roof
- mini-drinking cups
- large craft sticks
- small post-it notes
- name label stickers
- permanent markers
- plastic hard hats
- 4-5 photographs of hand tools (wrench, saw, drill...)
- 4-5 photographs of other items not associated with building (hair brush, grocery cart, television...)

Activating Learning (Building excitement for the topic):

- Show children a simple pre-assembled Popsicle stick house. You can say something like: “My friend built this house and I want to try building one of my own!” Using glue and the single sticks, begin the building process. Try holding the house up to display it for the kids (the sticks will separate and fall apart). “Oh no!” Ask the kids what you must do for the house to stay together. (Wait for the glue to dry so it will bond to the sticks). Explain that materials like glue and paint must dry properly so they can *bond* to the surface of the wood.

Screening:

- **Introduce the video:** Talk about the sidewalks at the school and explain they were once mushy concrete as they were being made. Now the concrete has *set*; it is hard and dry. If concrete has set, we can walk, skip, play basketball and ride a bike on it! Explain that in this Bob the Builder video, Saffi wants Wendy to build her a tree house, but she doesn’t understand that she must wait for paint to dry and for concrete to set before she can enjoy it.
- **Stop the video** at 6:29 to point out the cement truck. Ask the children to explain what they think is happening. (Cement is being poured into holes around the support beams)
- **Stop the video** at 6:43 and ask children what they think might happen next. (Has Saffi waited long enough for the concrete to set)?
- **Talk together** about what Saffi learned. Use the words *bond* and *set* in your discussion.

Activities:

- **Read *Building a House*** interactively. On the page where concrete is poured, make a connection to the video.
- **Play a game-** Have children put on their hard hats and tell them they are going to be builders! In order to get a job done well, builders must use the correct tools. Display various photographs of tools and other non-tool items. If the photo depicts a tool, children form a roof with their hands/arms over their heads. If it is not a building tool, they use their arms to make an “X.” At each non-tool photo, ask children what would happen if they tried to use that item as a building tool. (Cause-Effect)

- **Build a house and neighborhood**- Provide each child with a take-out box and materials for the chimney (clothespin, chimney cut-out) and pre-cut roof. Show children how to assemble the roof and chimney. Next, using the stickers or construction paper shapes, they can add a door



and window sticker to their house. Finally, they can build connecting sidewalks with the post-it notes and community fences with the cups and craft sticks.

- **Challenge** children to come up with different fence designs. Is it easy to build a tall fence? What happens someone bumps it or the wind blows? Is the fence stronger if the cups are upside down or right side up? (Cause-Effect)

Closing

Reread the *Building a House* book again and ask for more help from the children as you read.

Extension or Optional Activities:

Use cardboard boxes to build kid-size houses. Try different design ideas.