



“Ingenious Inventions” at BLDG 92

OUR DRY DOCK FLIPBOOK



This activity was designed as a post-visit activity to complement the “Ingenious Inventions” tour at the Brooklyn Navy Yard Center at BLDG 92. All education programs and materials for the 2011-2012 school year are offered in partnership with Brooklyn Historical Society.

ACTIVITY SUMMARY: The following 9 worksheets each represent a different step in the operation of **Dry Dock 1** at the Brooklyn Navy Yard. When cut out and stacked in order, the images will create one flipbook that illustrates the whole process.

BACKGROUND: Dry docks have been used for centuries to construct, maintain, and repair ships. Built in 1851, **Dry Dock 1** is the oldest functioning dry dock at the Brooklyn Navy Yard. Its construction relied on innovation – using a steam-powered pile driver for the first time in the United States.

GRADES (*Recommended*): 4-6

STEPS:

1. Break the class into nine groups.
2. Distribute one photo worksheet to each group.
3. Students should take note of what step their photos represent (titled at the top) and notice small changes in each photo from the first to the last.
4. Small groups will work together to cut out each picture (and the adjacent white rectangle) along the dotted lines. We recommend preserving the box at the top of each sheet as well to help students remember what step their photos represent.

IMPORTANT: Students should **NOT** cut off the white box on the side of the picture. That’s how you will attach all the pages of the flipbook.

5. Each group should stack their photos in number order with the lowest number on top.
6. Once each group has their step “stacked,” they should work with the other groups to put all the steps in order. This can be a class discussion or a chance to physically move around the room, depending on how you would like to structure the activity. The numbers on each photo will also help put them in order.

The steps, in order, are: 1. Laying the keel blocks

2. Filling the Dry Dock with water

3. Opening the Door

4. The boat enters (and the door closes – there are no photos for this step)

5. The water drains until the boat rests on the keel blocks

6. Workers make repairs, repaint the boat, etc.

7. The Dry Dock fills with water

8. (The door opens and) The boat leaves

9. The door closes

7. Once the class has identified the correct order of the steps, stack the photos in order with the first step on top.
8. Use a rubber band or binder clip to bind the stack of photos (add the cover page below if desired).

HINT: It helps to bind the photos on an angle to facilitate smooth “flipping.”

9. Take turns flipping through the pages to watch your Dry Dock work!

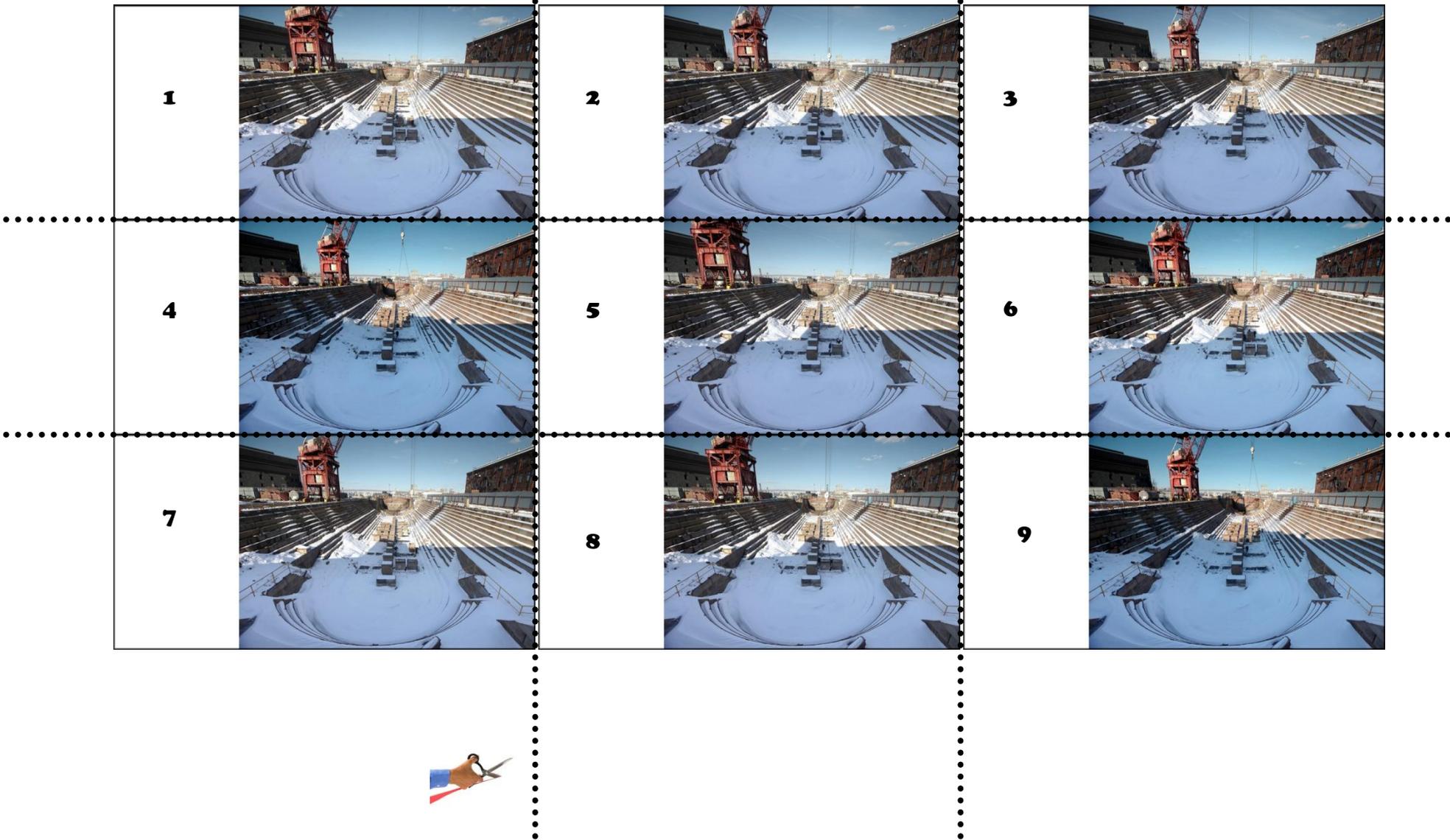
OUR DRY DOCK FLIPBOOK

SCHOOL: _____

CLASS: _____

Our Dry Dock Flipbook
Step # _____: Laying the Keel Blocks

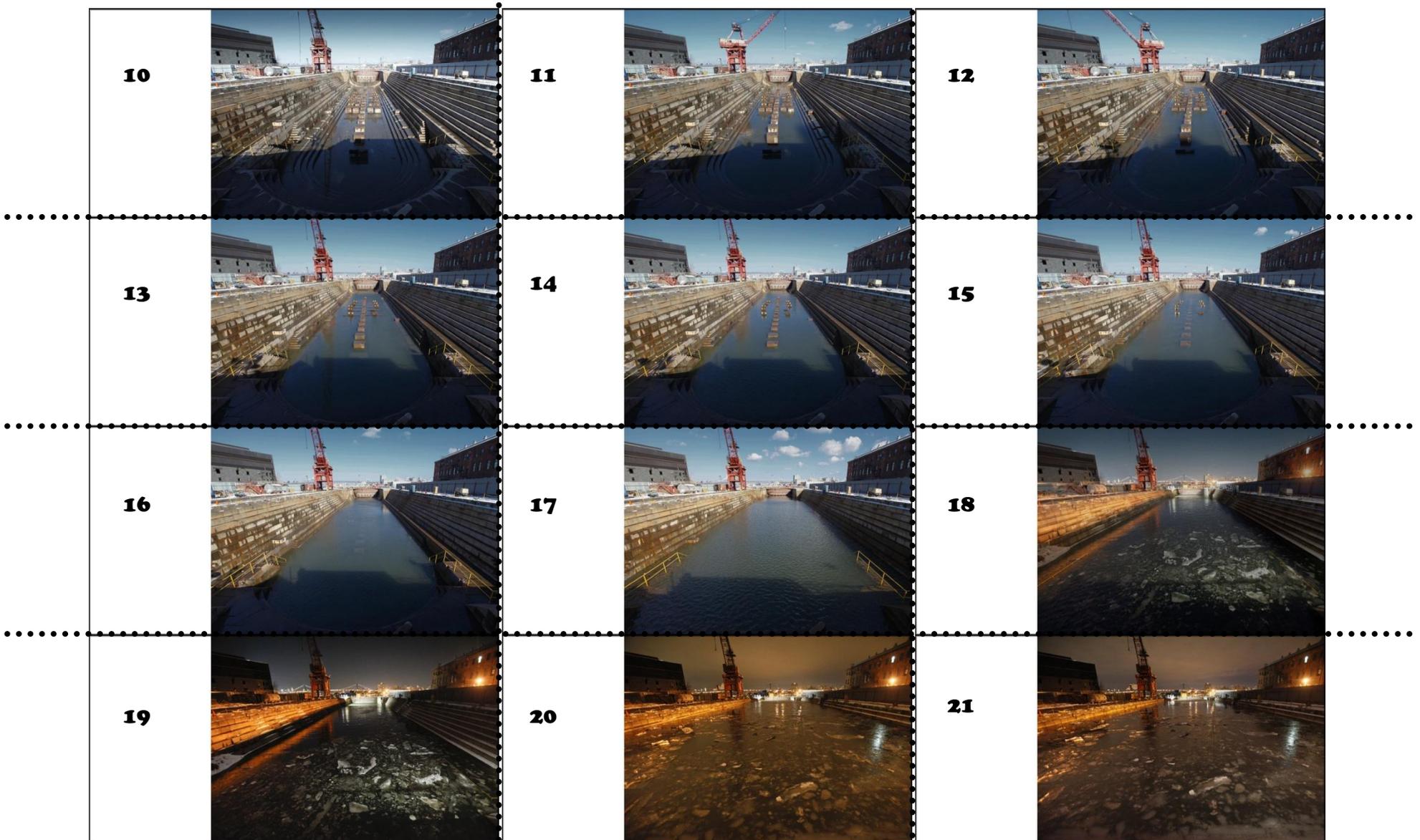
Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



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Step # _____: Filling the Dry Dock with Water

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



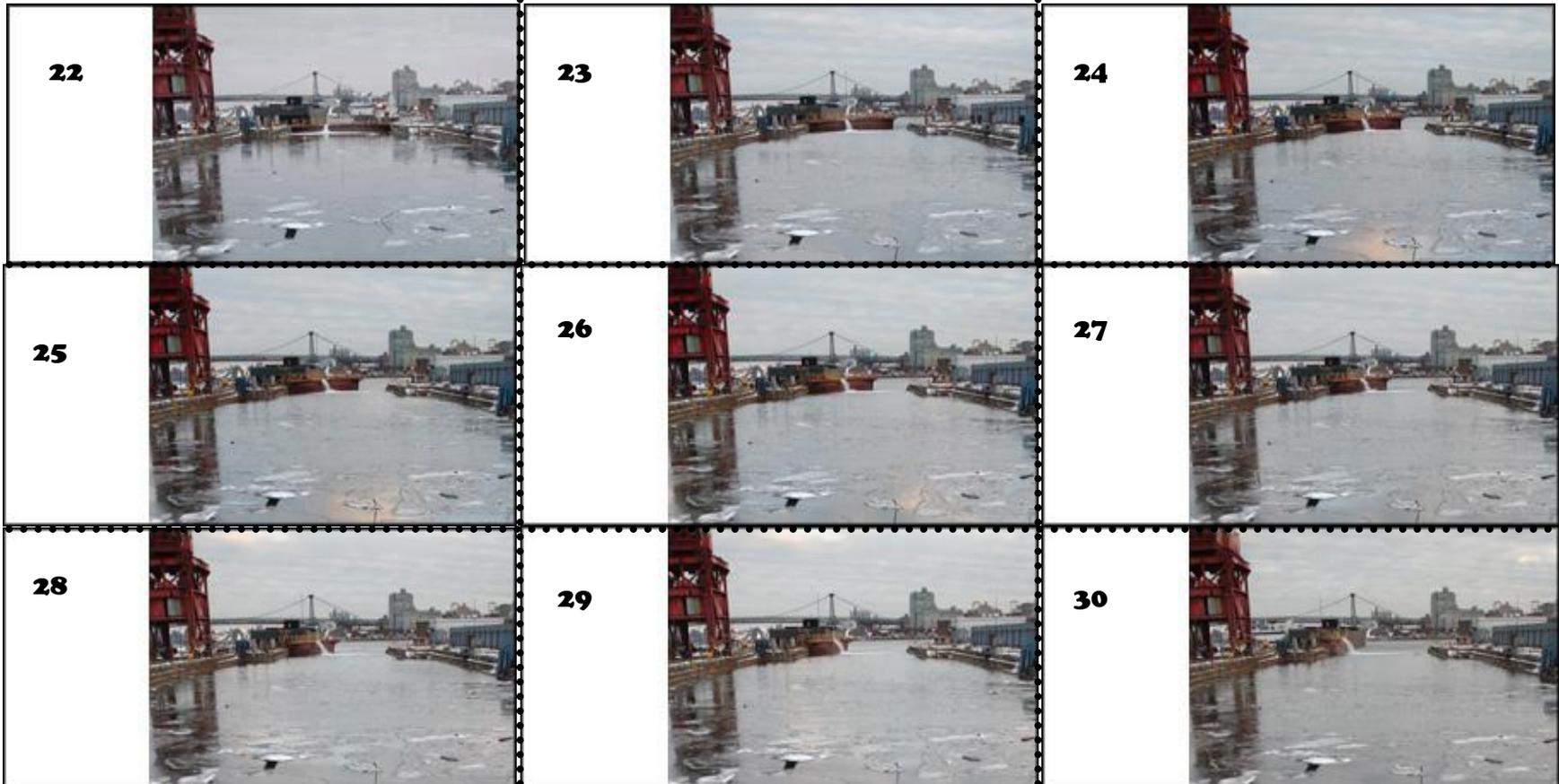


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Step # _____: Opening the Door

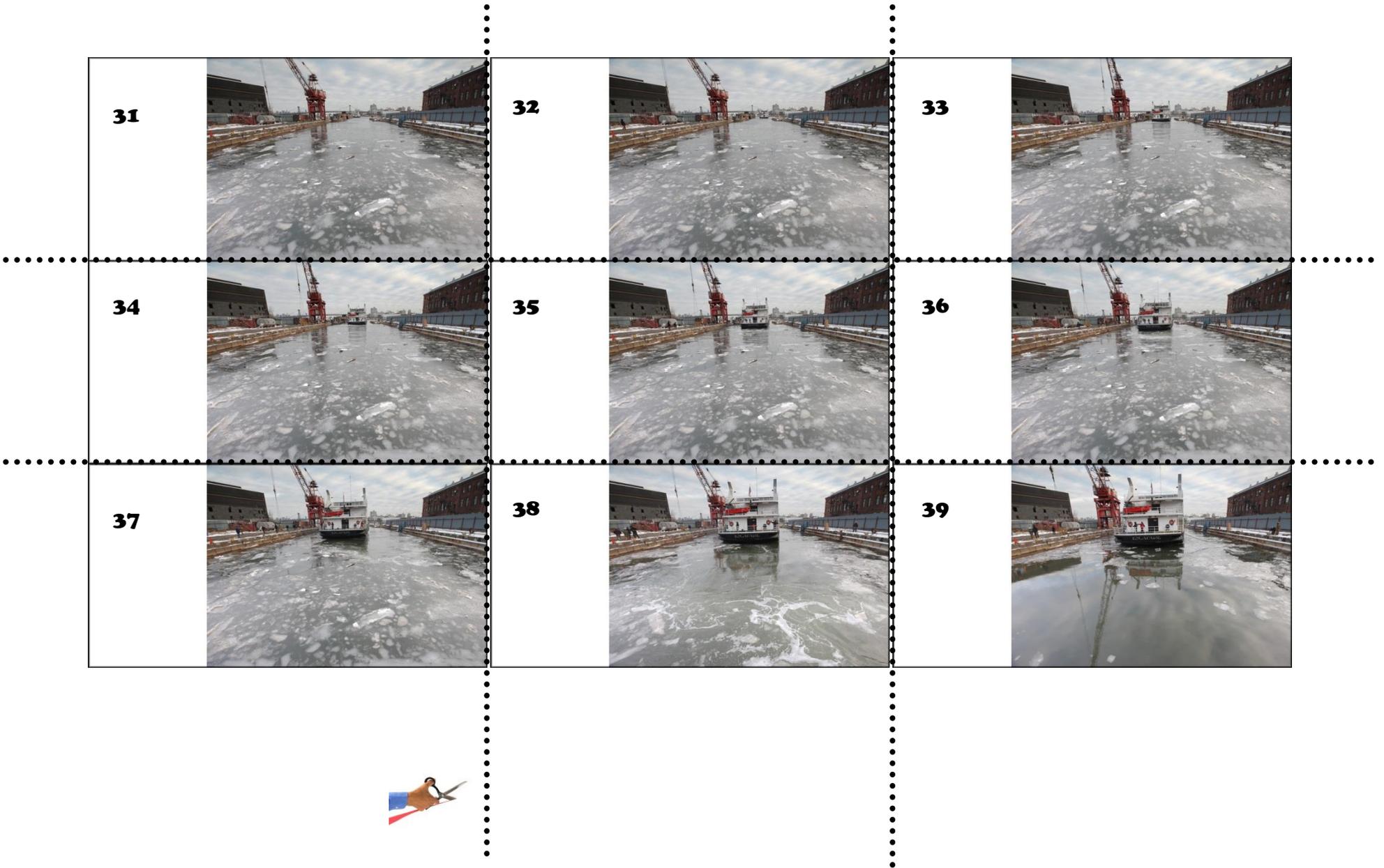


Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



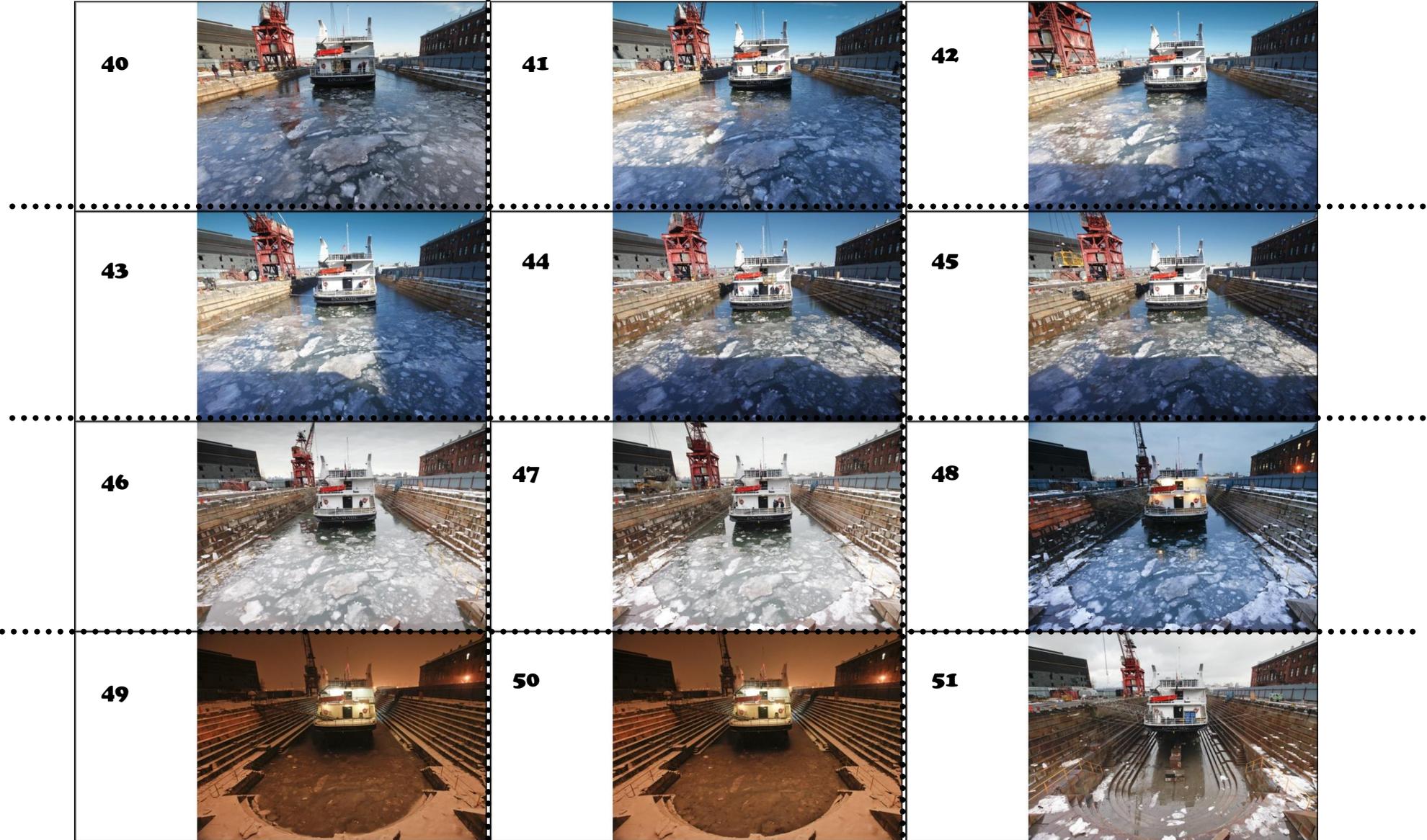
Our Dry Dock Flipbook
Step #_____: The Boat Enters

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



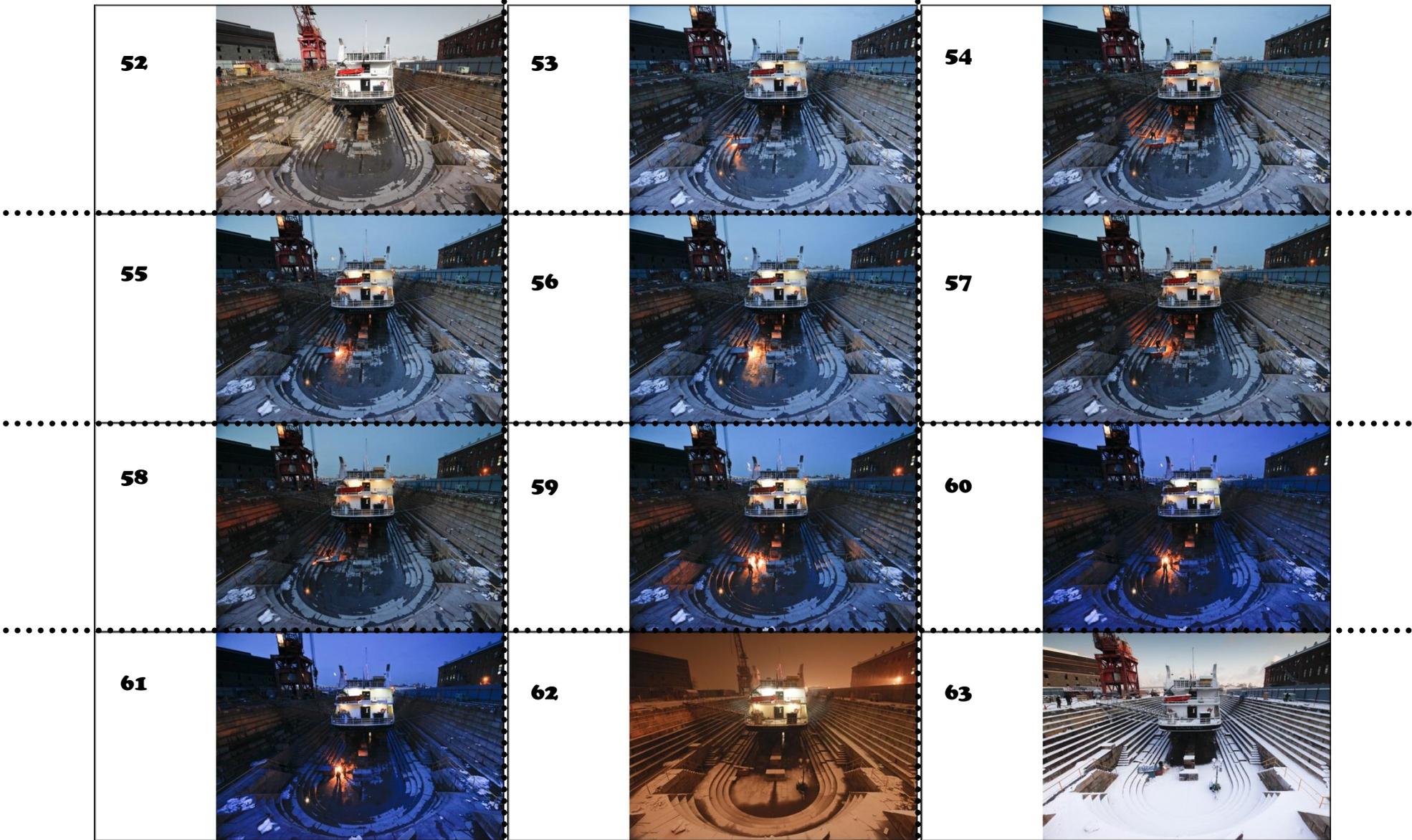
Our Dry Dock Flipbook
Step# _____: The Water Drains

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



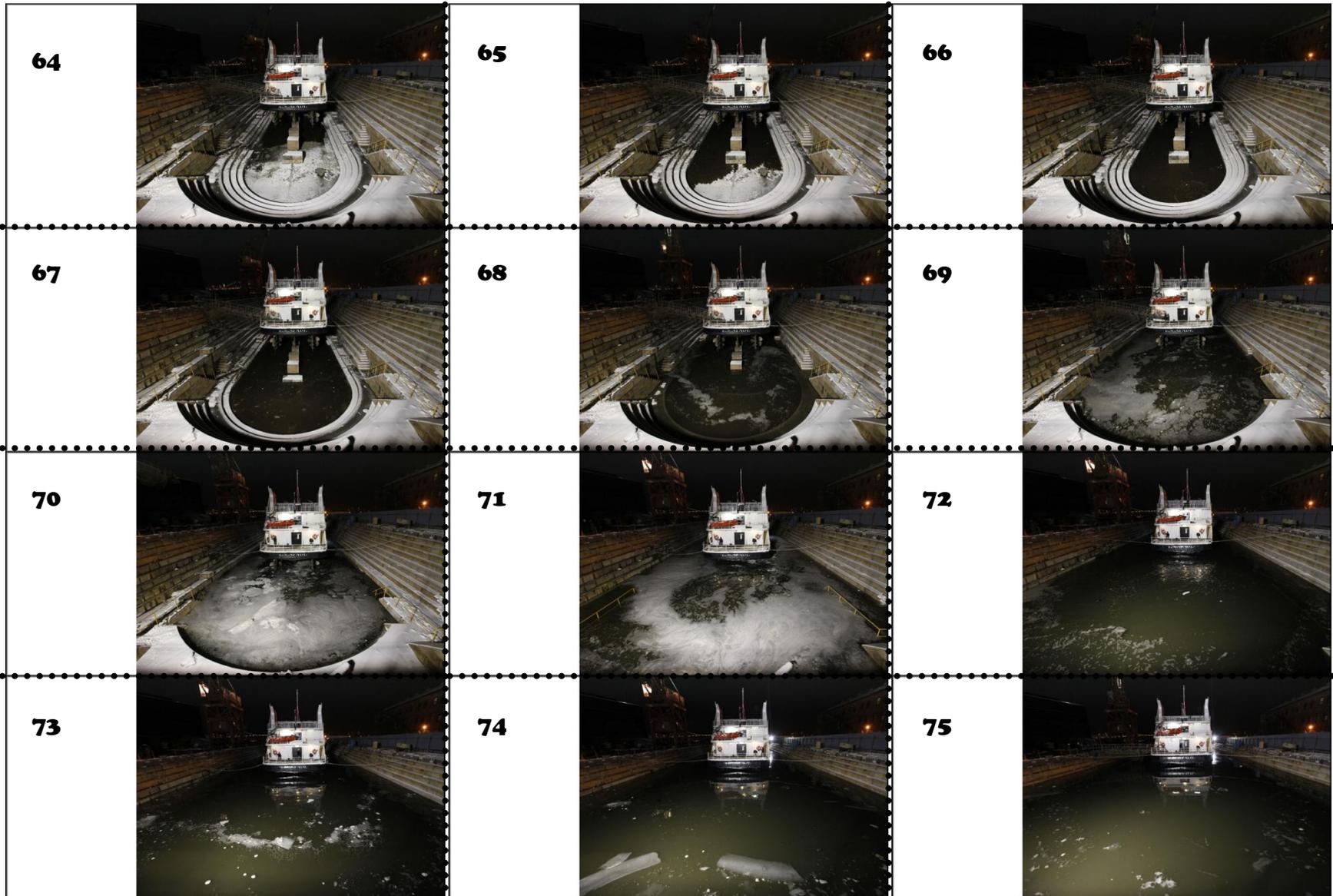
Our Dry Dock Flipbook
Step # _____: Making Repairs

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



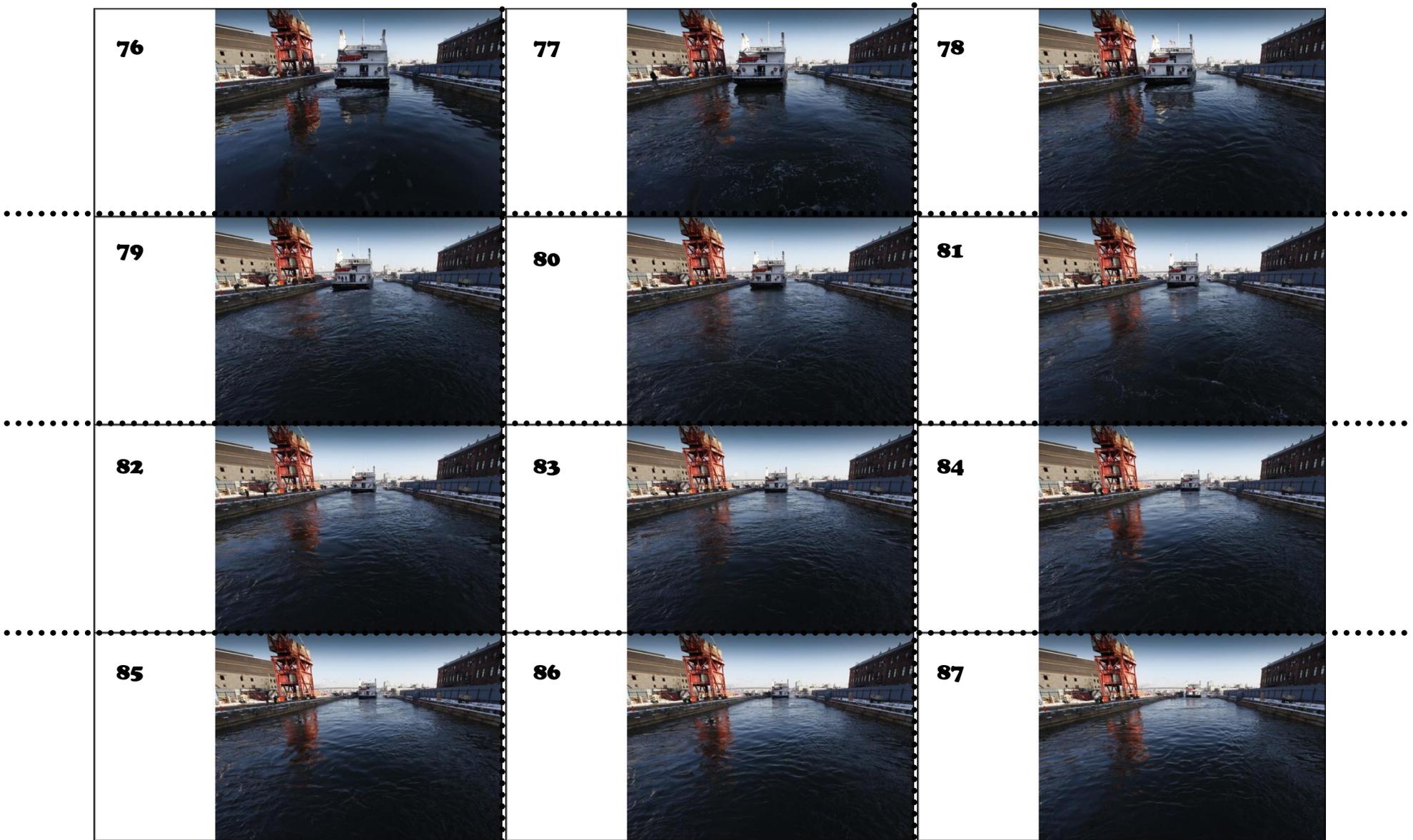
Our Dry Dock Flipbook
Step # ____: The Water Fills

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



Our Dry Dock Flipbook
Step # ____: The Boat Leaves

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.



OUR DRY DOCK FLIPBOOK

Step # ____: The Door Closes

Cut out each picture along the dotted lines. Stack your photos together in number order with #1 on top.

