

THE CASE OF DOUBLE DUCK



YOUR MISSION:

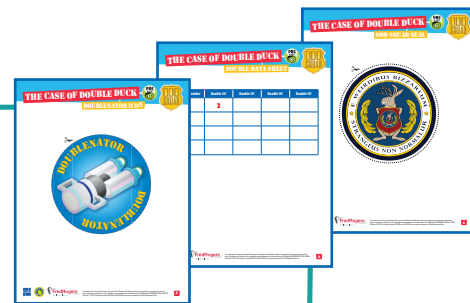
It's a double-trouble case for the Odd Squad: Double Duck is in town and he's stolen the Squad's prized Doublenator. Agents will need to double number after number to find his secret hiding place, recover the gadget and put things right again before it's too late.

LEARNING GOALS:

- Recognize and extend a doubling pattern.
- Solve addition problems.

MATERIALS:

- 36 paper plates to use as lily pads
- Printable [Doublenator Icon](#)
- Small objects (beads, beans) to use as counters
- Handout: [Doubles Data Sheet](#)
- A plain manila folder to use as the **case file**. You can attach the [Odd Squad Seal](#) (included in this packet) to the front and put the activity pages inside.



PREPARATION:

- Find the Odd Squad episode **Double Trouble** (approx. 11 minutes) online at pbskids.org/learn/oddsquad/afterschool.
- Divide the paper plates (lily pads) into 3 groups of 12, and write the following numbers on each plate:
 - **Set 1:** 2, 3, 4, 6, 7, 8, 10, 12, 14, 16, 26, 32
 - **Set 2:** 3, 6, 8, 10, 12, 16, 20, 24, 32, 40, 48, 50
 - **Set 3:** 5, 10, 15, 20, 30, 40, 50, 55, 60, 80, 100, 150
- Scatter **Set 1** of the lily pads on the floor. Hide the Doublenator icon under lily pad #16.
- Prepare your case file.

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IMPLEMENTING THE ACTIVITY:

- Help the children settle down by completing a fun, focusing task that explores doubling. You might challenge them to clap twice, then double those claps (“do it again”) so they clap 4 times, then double those to 8 and so on.
- Once the children are focused, view the episode **Double Trouble** with the group. Before you begin, ask them to pay attention to how Odd Squad agents double numbers. After you watch, ask: *How did Oscar and Olive use their knowledge of doubling to crack the case?*
- Tell the children that you’ve received a letter from the head of Odd Squad, Ms. O. Explain: *The Odd Squad needs our help. Are you ready to help crack a math case?* Read the letter from Ms. O aloud (below).
- Engage the children in **Training** and **Casework**, then celebrate with a **Case Closed** learning recap (following pages).

Letter from Ms. O

Agents! There you are! Something very odd has happened. There’s a case that we really need your help to quack. I mean, crack! The mysterious Double Duck has stolen the Odd Squad Doublenator and without it, we will lose the power to double on demand! He took off across the lake and hid the gadget under a lily pad as he made his escape. We need to recover it before he returns, but we have no idea where he hid it. All we know is that he started out on lily pad #2. To find the Doublenator, you’ll need to double and double and double some more – but you only have four chances to figure out where it’s hidden before that sneaky villain comes back and then disappears forever with our favorite doubling gadget. So, are you on the case? Then hurry, because Odd Squad needs you!



TRAINING:

1. Have the children pair up. Tell them that in order to crack **The Case of Double Duck**, they will need to become doubling experts.
2. Say: *Just as we saw in the video, if you want to double a number, you take that number and add it to itself. So, let’s take the number 4.* Have one child in each pair hold up 4 fingers and have the other child hold up 4. Together, have each pair of children count the number of fingers they are holding up to show that 4, doubled, is 8. Write the equation on the board: $4 + 4 = 8$.
3. Practice this exercise a few more times with other numbers.

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CASEWORK:

1. Tell the children that it's time to crack the **Case of Double Duck**. Give each pair of children a [Doubles Data Sheet](#) and a cup of counters. Explain: *We heard from Ms. O that to find the Doublenator, we have to guess which lily pad it's hiding under, and we only get four chances to figure it out. We know Double Duck started his escape on lily pad #2. So let's figure out what happens when we double 2 and keep doubling it.*
2. Have the children work with their partners and use their fingers, or the counters, to figure out the double of 2. Check in with the pairs and make sure they all ended up with 4 as their answer. Say: *Nice work! What is the next double? What is 4 doubled?* Do the same thing again. Repeat until all children get to 32, filling in the first row on the [Doubles Data Sheet](#).
3. Now that the children know the doubles of 2, they can begin to guess which lily pad the Doublenator might be hidden under. Say: *Remember, we only get four guesses before Double Duck returns and the Doublenator is gone forever!*
4. Have the children come up one at a time and flip a lily pad in the "doubles of 2" sequence. They can refer to their data sheet for help. If the first person doesn't uncover the Doublenator under #16, ask for another volunteer to come up and try. Not all lily pads are part of the "Doubles of 2" sequence, and the gadget is hidden under only one of several possible correct answers. Continue playing until Double Duck is found.
5. You can play the game two more times with the remaining sets of lily pads.
 - Tell the children Double Duck started on pad #3, and have them work in pairs to fill out the next row on their chart. Place the second set of lily pads down and hide the Doublenator under pad #48.
 - Tell the children Double Duck started on pad #5, and have them work in pairs to fill out the next row on their chart. Place the third set of lily pads down and hide the Doublenator under pad #40.
6. Once the Doublenator has been discovered in the final round, announce the victory of the agents over Double Duck. Say: *That's it! Double Duck isn't getting away with our gadget this time!*

CASE CLOSED:

Gather your agents back into a group.

Say: *Great work, agents! Looks like we found the Doublenator and quacked – I mean cracked – the case. As part of our training, we like to review what we learned and enter it in the case file so that future agents-in-training can learn from it.*

Ask: *How does doubling a number get you to a big number so quickly? What if we start with a number like 10? How many times does it double before it becomes 80?*

Write down the learnings/findings that the children share, close your case file and write **CASE CLOSED** across the front. Congratulate your agents on a case well solved.

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DOUBLENATOR ICON



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DOUBLES DATA SHEET

Starting Number	Double It!	Double It!	Double It!	Double It!
2	4			
3				
5				



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ODD SQUAD SEAL



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