Run sheet, Sink or Float

Goal. Every girl says what she thinks a thing will do in water, tries it, and says what surprised her.

Before you start

- One shallow bowl of water on the floor or a low table, filled halfway. Never a deep bucket. Stay within arm's reach of it the whole time.
- Gather found things, two of each kind: palm-sized stones, leaves, sticks, large caps, spoons, paper scraps. **Test every one in your own bowl the night before.**
- Over twelve girls: a second bowl, or pairs sharing one thing and one guess.
- At each place: Sheet A, Sheet B, a pencil or one between two. Sleeves up before you start.

The clock, 30 minutes

- 0 to 4 min: sleeves up, hands out, the signal
- 4 to 11 min: guess first, then drop it in
- 11 to 18 min: one thing each
- 18 to 25 min: another one like it
- 25 to 30 min: say what surprised you

Run 30 with a new group. In 45: 0 to 6, 6 to 17, 17 to 26, 26 to 38, 38 to 45. In 60: 0 to 8, 8 to 22, 22 to 34, 34 to 50, 50 to 60. With mostly four-year-olds, shorten the middle, never the close.

What you do

1. Set the bowl down. Two rules: "Hands stay out until it is your turn. Nobody drinks this water."
2. Teach the signal: hand high for stays on top, hand low for goes to the bottom. Practise both twice.
3. Hold up a stone. Say: "Do not say it. On three, show me your hand." Count the hands, then drop it in.
4. Ask: "Who had it going down? Who had it staying up?" Take no reasons, give none.
5. Give each girl one thing. Hand out Sheet A: "Draw it. Mark your guess before it goes in the water."
6. Go round one at a time. She shows her mark, puts her thing in, then marks what happened.
7. Ask her: "Same as your guess?" She marks SAME or NOT THE SAME. Say: "A guess that comes out different is still a good guess."
8. Give each girl a second thing of the same kind. Hand out Sheet B. Guess and mark first, every time.
9. Ask three girls: "Why do you think so?" Take every answer, give none.
10. Empty the water out. In the circle, each girl says one thing that surprised her. Repeating is allowed.

Watch for

1. A girl puts her hand up or down before anything touches the water, without looking at her neighbour first.
2. A girl leaves her guess mark alone when the result is different, and marks NOT THE SAME.
3. A girl says out loud what she thought and what happened: "I said down. It stayed up."

What goes wrong most. The room copies the first hand that goes up. Say "eyes on your own hand", count down from three, take every signal at once.

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Learner sheets, Sink or Float

Sheet A, my guess and what happened

One copy per girl

Name: _____ Date: _____

Draw your thing here.

my thing

MY GUESS. Your leader will read these words to you. Mark one now, before your thing goes in the water.

☐ **TOP** ☐ **BOTTOM**

WHAT HAPPENED. Now put it in and watch. Mark one.

☐ **TOP** ☐ **BOTTOM**

Look at your two marks. Are they the same? Mark one.

☐ **SAME** ☐ **NOT THE SAME**

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Sheet B, another one like it

One copy per girl

Name: _____ Date: _____

Your leader will give you another thing like your first one. Draw it here.

my second thing

MY GUESS. Your leader will read these words to you. Mark one first. Keep your thing out of the water.

☐ **TOP** ☐ **BOTTOM**

WHAT HAPPENED. Now put it in. Mark one.

☐ **TOP** ☐ **BOTTOM**

Are your two marks the same? Mark one.

☐ **SAME** ☐ **NOT THE SAME**

Draw the thing that surprised you most today.

my surprise

More time? Turn this sheet over. Draw one more thing and mark your guess before you test it.

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What to print

- **Once, for yourself:** page 1, the run sheet.
- **One copy per girl:** page 2 (Sheet A) and page 3 (Sheet B). That is 2 pages per girl.
- **You do not need:** pages 4 to 13, the guide and the key. The session runs without it.

Guide, Sink or Float

Group 4 to 16 · Materials: paper, pencil, one shallow bowl of water, shared by the group, found objects in pairs, such as palm-sized stones, leaves, sticks, large caps, spoons, scraps of paper · SDG 4, 5 · EN edition · Released · Nameet Potnis, author and English editor

Before you enter the room

- **The guess goes on the sheet before the thing touches the water. A wrong guess is never a mistake.**
- Test every thing in your own bowl the night before. Keep two or three either-way things, a large cap or a paper scrap, for the second round.
- One shallow bowl, half full, on the floor or a low table. You stay within arm's reach the whole time and empty it yourself at the end.
- Above twelve girls, put out a second bowl or pair the girls, or the queue loses the room.
- Never give a rule for why things float. You cannot tell by looking, which is why we test.

Read this once at home. In the room you only need the run sheet. Where this says "you", it means whoever is running the session: a teacher, a volunteer, an older sister.

Who it is for

- **For ages 4 to 7.** Girls who can hold a small thing and put it into water. No reading, no writing and no counting are needed anywhere in this session.
- **Looking and figuring out.** This pack sits one rung above looking at a thing closely. Here she says what she thinks will happen before it happens, which is a harder and much more useful job.
- **Group size.** 4 to 16 girls around one bowl. Above twelve, either put out a second bowl or pair the girls so two share one thing and one guess each, or the waiting gets long enough to lose the room.
- **Different levels in one room.** A four-year-old and a seven-year-old use the same water, the same things and the same two sheets, and the stretch sits inside the activity. A girl who is just starting gives one hand signal, puts one thing in, and marks what happened. A girl who is ahead guesses a

second thing of the same kind before she tests it, says why she thinks so, and on the back of Sheet B guesses a third thing without touching it. Nobody gets a different sheet.

What you need

- One shallow bowl, basin or wide pan of water, shared by the whole group, filled about halfway. A washing basin is ideal. If all you have is a bucket, pour from it into something shallow and keep the bucket out of the room
- Found things, two of each kind: stones that fill a palm, leaves, sticks, large bottle caps, a metal spoon, a wooden spoon, scraps of paper, large seed pods, a bit of cloth. Two of each kind is what makes the second round work
- One learner sheet A and one learner sheet B per girl
- One pencil per girl, or one shared between two
- A cloth or a rag for spills, and somewhere to pour the water out afterwards
- **Free and optional:** nothing
- **Nothing here costs money.** Water is the one thing that is not free everywhere. Two litres does a group of sixteen, and the same bowl serves every girl, so nothing is poured away between turns. At the end, empty it onto a plant, a path or a field rather than down a drain.

Why the session is shaped this way

Read the water rules under Keeping it safe, near the end of this guide, before you fill the bowl.

The guess is the whole pack. A girl who guesses and turns out to be wrong has learned more than a girl who only watched, because she found out that the world can be different from what she expected. That is the lesson here, and it only works if the guess is on record before the thing touches the water. So the hand goes up first, the mark goes on the sheet first, and nothing goes in the water until both are done. If you are ever short of time, cut the number of things tested, never the guessing.

Hands and marks before mouths. Most of this room cannot write, and some cannot yet write their own name, so the record is a hand signal and a pencil mark. Hand high up means it stays on top. Hand low down means it goes to the bottom. Teach it in the first four minutes and use it all session. Write her name on her sheet for her as you hand it out, before she has to ask.

Take the signals all at once. Ask one at a time and the room copies the first hand. Count down from three and take every hand in the same second, then look round and count them aloud: "Four hands up, seven hands down." Nobody is wrong at that point, because nothing has been tested yet.

A wrong guess is never a mistake here. Say it in your own words, several times: "A guess that comes out different is still a good guess." Never ask a girl to change a guess mark once the result is in. The two marks sitting side by side and not matching is the finished work of this pack, not a fault on the page.

Do not tell her why things float. You will want to, and a seven-year-old will ask. The honest answer for this age is that you cannot tell by looking, which is exactly why we test. Any short rule you might reach for is false in front of the class: a big stick floats and a small nail goes straight down, a dry leaf floats and a wet one sinks, a spoon sinks and a boat made of the same metal does not. Hand the question back and offer another thing to test. The key gives you the exact words.

The second thing of the same kind is the stretch. Once she has tested a stone, hand her another stone. Now she has something to go on, and the guess becomes a real prediction rather than a shot in the dark. Some of the time it will hold, and sometimes it will not, and both are good outcomes. This is where a seven-year-old gets her challenge without leaving the activity the four-year-olds are doing.

Including everyone

A girl who cannot yet read. This session asks her to read nothing. The words on the sheets, TOP, BOTTOM, SAME and NOT THE SAME, are read aloud by you, once, pointing at each one as you say it, and she puts her mark on the one she means. Her guess can be a hand signal alone. If she wants a word written for her thing, she tells you, you write it faintly in the trace line, and she goes over it. She finishes holding the same two sheets as everybody else.

A girl who joins late. Put one thing in her hand at the door and say one sentence: "Guess what this will do in the water. Hand up for the top, hand down for the bottom." Then she marks Sheet A and takes the next turn at the bowl. That is the whole task and it needs none of the earlier steps. If she comes in during the second round, she does one thing rather than two and finishes at the same time as the room. Never ask her in front of the group where she was.

Boys in the room. Boys do the same activity with the same things, the same water and the same sheets. Two things keep the session centred on the girls, and neither sends anybody out: the girls take their turns at the bowl first and speak first in the closing circle, and you watch that the quickest voice does not call out the result while the girl beside him is still deciding. Watch the bowl too. If one child has moved to the front of it and stayed there, give him the job of holding the cloth.

A girl who does not want to touch the water. Some girls will not want to put a hand near the bowl, and in some homes that is a sensible instinct rather than a fear. She guesses, then hands her thing to you or to a partner to drop in, and she watches and marks. She has done every part of the work that matters.

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If it goes wrong

Hands in the water, and the bowl on the move. Two or three girls reach in at once, the bowl slides, and a lot of water goes on the floor. This happens and it is not misbehaviour, it is small children next to water. Put one hand on the rim of the bowl and keep it there, say "hands in your lap, we go one at a time", and mop with the cloth while you carry on talking. If the room stays keyed up, move the bowl to your own lap level on a low table so it is only reachable from where you are sitting, and bring each girl to you rather than leaving the bowl open to everyone. Do not stop the session to talk about it, and do not name the girls who reached.

She rubs out her guess after she has seen. She marked TOP, the thing went down, and she wants the sheet to be right, so she changes the mark or hides the sheet. This is the commonest way this pack quietly fails, because the whole point is the difference between the two marks. Say one sentence: "Leave that one, it is the best mark on your page." Then mark NOT THE SAME with her and say why it matters: "You found out something you did not know. That is what we came to do." If she has already rubbed it out, do not make a thing of it. Ask her what she guessed, write it yourself if she wants it written, and start her on the second thing. Never rub out a mark to tidy a sheet, and never hold up a sheet where the guess matched as the good one.

Adapting it

- Use whatever is on the ground where you teach. Palm-sized stones, sticks, leaves, large caps, spoons, large seed pods, folded paper, a scrap of cloth, a piece of fruit peel. The only thing the pack needs is pairs, so that the second round has something of the same kind.
- Use the words your girls use at home for the top and the bottom of the water, and for sinking and staying up. You read the words on the sheets aloud anyway.
- Outdoors with a wide pan is better than indoors with a bowl, if the weather and the ground allow it. Spills stop mattering.
- Two shallow bowls halve the waiting for a group of sixteen. Three is better still, and you stay within reach of all of them by putting them in a short row in front of you.
- If water is scarce, run the session with one bowl and fewer things: four objects tested by the whole group together, with every girl guessing every time, teaches the same thing as sixteen objects.
- If your group meets again, keep the objects in a bag. Start the next session by holding one up and asking for guesses before anybody sees water.

Running it shorter or longer

30 minutes. 0 to 4 sleeves up, hands out and the signal, 4 to 11 guess first then drop it in, 11 to 18 one thing each, 18 to 25 another one like it, 25 to 30 say what surprised you. This is the real version of the

pack for a new group and nothing in it is cut down. What it gives up is time in the closing circle, so a quiet girl may not get her turn to say what surprised her. If you have a quiet girl, start the circle with her.

45 minutes. 0 to 6 sleeves up, hands out and the signal, 6 to 17 guess first then drop it in, 17 to 26 one thing each, 26 to 38 another one like it, 38 to 45 say what surprised you. The extra minutes go on guessing, not on new work. Every girl is asked "why do you think so?" at least once, and the second round gets a third thing of the same kind on the back of Sheet B.

60 minutes. 0 to 8 sleeves up, hands out and the signal, 8 to 22 guess first then drop it in, 22 to 34 one thing each, 34 to 50 another one like it, 50 to 60 say what surprised you. Use this length only with a settled group that already sits for half an hour, and check the water rules again halfway through, because attention to a bowl of water fades before interest in it does. The extra time adds a round where the whole group guesses one thing together before anybody tests it, and two or three minutes at the end on what to try next time. It adds no new sheet, because a longer session at this age means more guessing, not more content.

Closing, in every version. The water goes out first, then the circle. Each girl says one thing that surprised her, in her own words, and "nothing surprised me" is a real answer that gets no comment. Then hold up one last thing yourself, take the whole room's hands at once, and put it in. Ending on a guess that the group made together sends everybody out having done the thing the pack is for.

Keeping it safe

The water rules, and why they are short. Water at this age needs handling, not worrying about. Five rules, said plainly at the start and then held to:

- The bowl sits on the floor or on a low table, shallow and filled about halfway. Never a deep bucket, a drum or a tub that a small child can tip over or fall into.
- You stay within arm's reach of the bowl for the whole session. Not across the room, not at the board. Within reach of it, the whole time.
- Sleeves up before anything begins, for you as well as for the girls.
- Nobody drinks this water, and nobody puts a face near it. Say it once, calmly, in the first minute: "This water is for our things, not for our mouths."
- Empty the water out yourself, straight after the last turn, while the girls are still in the circle. Water left standing in a room with small children is the thing that goes wrong later, after the lesson is over and nobody is watching it.

Wipe spills as they happen so nobody slips. Do not let a child carry the bowl, and never send one to fill or empty it. The things you test go in a child's hand and near her face, so check them the way every pack on this shelf does: if it fits inside a ring made by your thumb and first finger it is too small for this room.

Count them back in at the end. If a girl puts both hands in and splashes, that is ordinary, not dangerous. Dry her hands and carry on.

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Key and facilitation cues

Answers and what to say, Sink or Float

Answers

There is no single correct answer in this pack. Accept every guess, because a guess is not an answer and is never marked. What you are watching for is that the guess went down before the thing went in, and what you are listening for at the end is one honest sentence about a surprise.

The result itself is not the achievement either. A girl whose guess came out different has done exactly what this session is for.

Test your own things the night before, in your own bowl. You are not checking answers, you are avoiding surprises you cannot handle. Some things do the same thing every time in the same water: a stone goes down, a metal spoon goes down, a stick stays on top. Some things do either, and those are the good ones: a large bottle cap stays up if it lands hollow side up and goes down once it fills, a scrap of paper stays on top and then goes down slowly as it soaks, a leaf behaves differently dry and wet. Keep two or three of the either-way things for the second round, because they are where the surprise lives.

A sheet is finished when:

Sheet	Finished when
A	Something drawn in the box, one guess mark, one result mark, and one of SAME or NOT THE SAME marked. The two marks do not have to match
B	A second drawing, a guess mark made before the test, a result mark, one of SAME or NOT THE SAME marked, and a drawing in the surprise box

Say the swap out loud. Palm-sized stones, sticks, leaves, large caps, spoons, large seed pods, paper and cloth all do the same job. Use what is on the ground where you teach, and use the words your girls use at home for the top and the bottom of the water.

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What you might see

What is on the page	What to offer next
A guess mark and a result mark that do not match, and NOT THE SAME marked	This is the finished work of the pack. Say so: "You found out something you did not know." Then hand her a second thing of the same kind and ask for a guess before she touches it
A guess mark and a result mark that match on both sheets	Give her one of the either-way things, a large cap or a paper scrap, and take her guess before it goes in. Ask "why do you think so?" and write her words under the box if she wants them written
A drawing and a result mark, but no guess mark	Sit beside her for the next one and take the guess as a hand signal first, then let her put the mark down while her hand is still up. The mark can come after the hand, never after the water
Both boxes drawn, nothing marked at all, and she answered with her hands all session	She has done the pack. Read the words aloud once more, pointing, and let her mark whichever she means. If she would rather not, leave the sheet as it is
A guess mark rubbed out and redrawn to match the result	Say "leave the next one, whatever happens". Then do the second thing with her and put your finger beside her guess mark so it stays put. Nothing needs redoing on the first sheet

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Sticky points

What happens	What to say or do
She asks why it stayed on top	"What do you think?" Take her answer, whatever it is. Then: "Nobody can tell just by looking. That is why we put it in the water." Then offer another thing to test
A seven-year-old presses you for the real reason	"There is a long answer and you will get it at school. Today we are finding out by testing." Then let her test three more things and guess each one first
You are tempted to give the short rule	Do not. Heavy and light does not work in front of a class: a big stick stays on top and a small nail goes straight down. A rule that breaks in the bowl costs you more than no rule at all
The room copies the first hand that goes up	"Eyes on your own hand." Count down from three and take every hand in the same second. Then count them aloud so both answers sound normal
She changes her guess mark once she has seen	"Leave that one, it is the best mark on your page." Mark NOT THE SAME with her. Never rub out a mark to tidy a sheet
Two girls argue about who guessed right	"We are not counting who was right today. We are counting what surprised us." Then ask each of them what surprised her. Never keep a score of correct guesses, on the board or in your head out loud
Her thing stays up and then goes down a minute later	"Both of those really happened." Let her mark the one she saw first and draw the thing in the surprise box. A thing that does both is the best thing in the bowl
Hands go in the water all at once	One hand on the rim of the bowl, "hands in your lap, one at a time", and mop while you keep talking. Do not stop the session or name anybody
She will not put her hand near the water	She guesses, then hands her thing to you or a partner to drop in, and she watches and marks. Same work either way
She says nothing surprised her	"Then that is your answer." It is a real one and it gets no comment. Ask her which thing she would test next
She says her drawing is wrong or ugly	"It is your thing, and nobody else has that one." Then ask her what it did in the water, and let that be the part that counts

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What happens	What to say or do
She cannot write her name	You write it as you hand the sheet out, before she has to ask

Say "what do you think?", never "no, that is not why". Say "guess first", never "you should know this". Never hold up one girl's sheet as the good one: if the group needs to see something, hold up an object and take everybody's hands at once.

If something serious comes up. A session this small rarely goes anywhere heavy, but if a girl says something that worries you, bring the group back to the bowl at once and keep the session running normally. Ask her nothing in front of the others. Speak to her alone afterwards, briefly, with no pressure to say more, and follow whatever safeguarding route your school or organisation already has, the same day. If there is none, tell somebody senior the same day. Write nothing about it on her sheet.

After the session

Before you leave the room, check the bowl is empty and the floor is dry. That is the last water rule and it is the one most easily forgotten, because by then the lesson feels over.

Keep the objects in a bag or a tin, and keep the either-way ones separate, because they are what makes the next session work. Sheet A tells you at a glance who to sit beside next time: look for the sheets with a result mark and no guess mark, and take that girl's guess out loud, as a hand signal, before she touches anything.

Nothing in this pack is graded, counted or reported. The next rung is testing the same thing twice to see whether it does the same thing both times.

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