How The Game Works

There are two play modes in NumBots that serve different purposes.

## 1. Story Mode for Understanding

In Story Mode, the emphasis is on mathematical concepts and is underpinned by a mastery approach to teaching. Story Mode features visual representations, procedural variation, exposure to different calculation strategies and interleaved material all in very carefully sequenced order.

Unlocking Levels

Story Mode is set out as a series of Stages (Rust, Tin, Iron, etc) containing levels, a bit like Angry Birds. Rust is the first Stage and level 1 is unlocked, so this is the place for *everyone* to start.

To unlock the next level, players need to earn two stars by showing sufficient proficiency.

The levels in Story Mode follow a natural mathematical progression and move the pupil through the game automatically, which means you don't have to set anything! (You're welcome 😊)
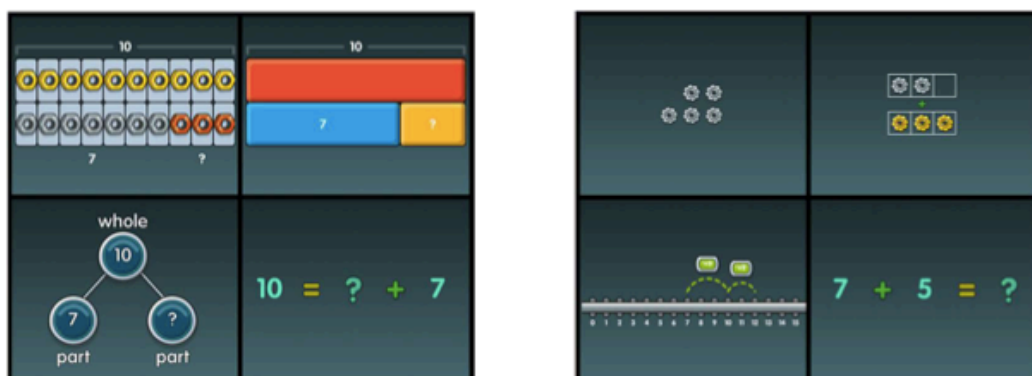
Get In The Habit

Aim for pupils to play in Story Mode for three minutes four to five times a week, to get the best out of NumBots. Little and often is key (spaced practice is more effective than blocked practice).
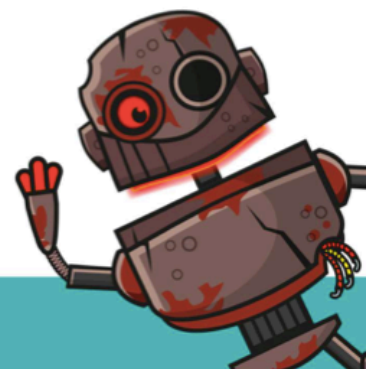
2. Challenge Mode for Recall

In Challenge Mode, the emphasis is on rapid responses to essential facts and simple sums, against the clock.

Unlocking Challenges

Challenge Mode is locked for new users and is unlocked once players reach a certain level on Story Mode. It's currently set to unlock part way through Tin stage.

There are 20 Challenge levels and only the first is unlocked to begin with. To unlock the next Challenge, players must correctly answer 12 questions in a minute.

Key Skills

Each Challenge focuses on a key skill, as follows:

No,	Key Skill	Example
1	Adding and subtracting 1 or 2 within 10	$1 + 3$, $8 - 2$
2	Number bonds to 5	$3 + ? = 5$
3	Doubles within 10 (i.e. up to 5+5)	$4 + 4$
4	Adding and subtracting 1 and 2 within 20	$17 + 2$, $11 - 1$
5	Number bonds to 10	$3 + ? = 10$
6	Adding and subtracting 10 within 20	$3 + 10$, $16 - 10$
7	Doubles within 20 (i.e. up to 10+10)	$8 + 8$
8	Adding two 1-digit numbers	$5 + 7$
9	Number Bonds to 20	$8 + ? = 20$
10	Subtracting 1-digit numbers within 20	$14 - 6$
11	Adding and subtracting 1, 2 and 10 within 100	$1 + 74$, $51 - 2$, $38 + 10$
12	Adding and subtracting 2-digit numbers to/from multiples of 10	$20 + 64$, $83 - 20$
13	Addition by bridging a multiple of 10	$25 + 6$, $47 + 5$
14	Subtraction by bridging a multiple of 10	$25 - 6$, $42 - 5$
15	Number bonds to 100	$52 + ? = 100$
16	Using compensation to add and subtract within 100	$35 + 19$, $35 - 19$
17	Adding by partitioning two 2-digit numbers	$64 + 25$, $10 + 64$
18	Subtracting by partitioning two 2-digit numbers	$64 - 23$, $47 - 31$
19	Adding any two 2-digit numbers	$63 + 56$, $63 + 58$
20	Subtracting any two 2-digit numbers	$76 - 43$, $76 - 47$