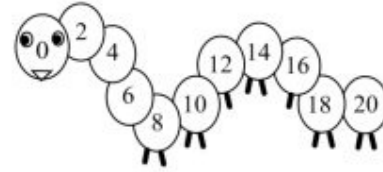




# The Counting Caterpillar

What's this one all about?

There are lots of activities out there for practising the multiplication tables. This activity, combined with its partner activity, Tap Say Turn, helps you actually LEARN them.



The beauty of both games is that you can teach the rules to everyone in the class and then do five minutes a day with them all working at the same time, in silence, on whatever table they individually need to learn. Perfect differentiation!

There is also a guide for parents for each game so that they can practise at home.

The Counting Caterpillar is the first of the two games and covers learning the stations of each table.

The teacher bits...

**Learning Intention:**

I can count in twos, fives, tens, fours, eights, threes, sixes, nines, sevens etc.

**Ages:** 6-10

**What you need:** Counters, counting caterpillars (see below).

The activity

**Teaching the Rules of the Game**

Choose a multiplication table that is appropriate for the weaker members of the class and make copies of the relevant caterpillar for all of your pupils. Issue them with 11 counters each.

Ask for a volunteer who is not confident about being able to count in whatever number you have chosen, but who would be happy for you to be **REALLY STRICT** with them in front of the whole class! Gather the pupils round the table where this child is sitting.

Talk them through an explanation, as follows. Keep the demonstration going until you are confident that they have fully understood the process.

### **Explanation**

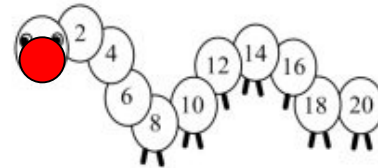
(Rules referred to below are listed on the next page.)

Place the caterpillar on the table with the counters in a pile beside you. Count along the caterpillar at a **slow steady pace**. eg for two-times table: 0, 2, 4, 6, 8, 10, 12 and so on till you get to 20. [Get everyone to join in with the child demonstrating.]

(Rule 1) Now cover up the easiest number. (for example 0). Count along the numbers again at the same steady pace, counting all the numbers (including the one covered up)

0, 2, 4, 6, 8, 10, 12 and so on till you get to 20.

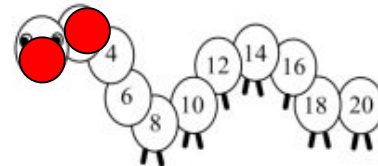
[Everyone counting again.]



If you found that easy, cover up the next easiest number, and count again.

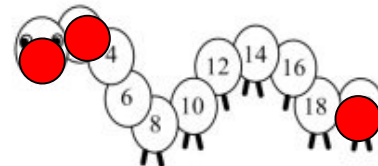
0, 2, 4, 6, 8, 10, 12 and so on till you get to 20.

[Everyone counting again.]



If you are OK with that, then cover up another number and count again.

Each time you find it easy, cover up one new number and count again.



(Rule 2) **If at any point you hesitate on any of the numbers or have forgotten what one of them is, you MUST take that counter off again.** You must not guess or try to work it out. You just have to 'know it' or the counter comes off.

Let the volunteer read the numbers alone. When 20 is reached, ask the class whether the volunteer hesitated. If so, take off the appropriate counter. If not, add another one.

Each time the child reads the numbers easily, put a new counter on. Each time there is hesitation or an error, **take the counter off!**

Explain to the pupils that it is important to be really strict with yourself. If you are, the learning will work. If you are not strict, it will not!

(Rule 3) If you start getting worse, it's time to stop. Your brain is getting tired. Leave the game and come back to it after a break.

### **Practice**

Send the children back to their seats. Ensure they all have no counters covered.

Get them to move their pointer fingers along the numbers at a steady pace in time with you, chanting the numbers aloud.

Tell them to cover one number up and repeat.

If they haven't hesitated, they can cover up another counter. If they hesitated, take one off. Then repeat, counting together.

Once you have repeated several times, get them to move their fingers along in time with you clicking your fingers, saying the numbers *inside their heads*.

Once they have this, set them counting at their own pace, with you starting them off each time.

Once they have this then they can work at their own speed. You now have a totally silent classroom, with everyone working at their own level!

### **Development**

Once pupils have mastered the rules you can let them go at their own pace. Circulate and encourage those who are finding it heavy going, praise aloud those you see taking counters off again, and 'hear' those who claim to have finished. Those who finish quickly should try playing the game from the beginning again, but this time counting backwards!

Stop the class after a set amount of time.

## **Differentiation**

The beauty of this game is that, once the rules are learned, you can play it for 5 minutes daily, with each pupil working on a multiplication table that you have assigned to them. Once you are confident that the pupils fully understand the rules you can give further practice for homework.

## **Classroom Organisation**

For this activity to work well, you need an organisational system that is simple to operate, so pupils can collect an appropriate caterpillar from a central resource area. It is a good idea to have each multiplication table copied onto a different colour of card so that the cards are easy to distinguish.

As regards the counters, you can either simply put a heap onto each desk each time you do the activity, and get the children to help themselves to each counter when they need it, or you can buy a bundle of little plastic money bags, and let each pupil keep their own in their own desk with their eleven counters in it.

## ***Summary of the Rules:***

### **Rule 0: Start with something that you can do easily.**

Always start with *all the numbers visible*. Count along the caterpillar at a **slow steady pace**. eg for two-times table: 0, 2, 4, 6, 8, 10, 12 and so on till you get to 20.

### **Rule 1: If it is too easy make it a little harder.**

Cover up the easiest number. (for example 0). Count along the numbers again at the same steady pace, counting all the numbers (including the one covered up). Whenever you feel confident, make the game *slightly* harder – cover up *one* more number and count again.

### **Rule 2: If it is too hard make it a little easier.**

If you hesitate on a number you *must* take the counter off again so that you can see the number. *Be very strict with yourself!*

### **Rule 3: If you start getting worse, it is time to stop!**

This game is hard on the brain. Just play it for 5 minutes at a time and then come back to it later. Play it for 5 minutes, three times day.

### **The Tables Record Card**

The tables record card lets everyone keep track of what they can do. A5 is a good size for these, so print one and then photoreduce it so that you get two on an A4 sheet side by side.

The tables are listed down the side of the card. Across the top are the three steps in learning each table: counting forwards, counting backwards, knowing the facts. The first two of these use the counting Caterpillar. For the third you need to learn another game called Tap, Say, Turn.

Each of the skills has three circles:

- The first circle means 'I know I can do this.' (being really strict with myself!)
- The second circle means 'A friend agrees I can do this.' (being really strict with me!)
- The third circle means 'My teacher agrees I can do this.' (being really strict with me!)

You can only colour in one circle for a particular table in one day.

To get your second circle your friend has to test you another day.

To get your third circle your teacher has to test you another day.

You can be working on more than one table at the same time.

The best order to learn the tables is:

2x, 10x, 5x,

3x, 4x, 9x

6x, 8x, 7x

Things to notice:

5s are half the 10s.

9s have a special pattern.

6s are double the 3s.

8s are double the 4s.

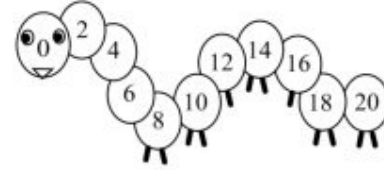


# The Counting Caterpillar

## Information for Parents

### What's this all about?

There are lots of activities out there for *practising* the multiplication tables. This activity is the first in a pair that helps you actually *learn* them.



The Counting Caterpillar covers learning the 'stations' of each table. The second activity, Tap Say Turn is for memorising the full tables facts.

The stations of the table are the numbers you say when you go along the number line and count in twos, fives or tens etc. When you recite the stations you always start at zero.

*The Stations of the 2x table:* 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20 and so on.

**Note:** Many schools teach the 2, 10 and 5x tables first, followed by the others in a particular order. Depending on the teaching programme the school uses, the order may differ slightly. Please refer to your child's teacher for guidance.

### What you need:

Counting caterpillar sheet, counters.

(5p coins are ideal and could be added to pocket money when you finish!)

### How it works:

The Counting Caterpillar is a game that your child can play quietly alone, checking with you every so often to let you see progress. Your child will have been taught the rules in school but may need reminded. Here they are for reference.

**Rule 0: Start with something that you can do easily.**

Always start with *all the numbers visible*.

Count *at a slow steady pace*. eg for two-times table: 0, 2, 4, 6, 8, 10, 12 and so on till you get to 20.

**Rule 1: If it is too easy make it a little harder.**

Each time you feel confident, make the game *slightly* harder – cover up *one* more number and count again.

**Rule 2: If it is too hard make it a little easier.**

If at any point you hesitate on any of the numbers or have forgotten what one of them is, you **MUST** take that counter off again. You must not guess or try to work it out. You just have to 'know it' or the counter comes off. *Be very strict with yourself!* If you are OK, then cover another number up and try again. If you still hesitate then take off another one.

**Rule 3: If you start getting worse, it is time to stop!**

This game is hard on the brain. Just play it for 5 minutes at a time and then come back to it later. Play it for 5 minutes, three times day.

Once your child has mastered one of the tables (eg 2x table) you can move onto the next table (eg 5 x table) or increase the challenge by suggesting counting backwards!

**The Tables Record Card**

Your child's teacher may send home a tables record card. This lets your child keep track of what (s)he can do. The tables are listed down the side of the card. Across the top are the three steps in learning each table: counting forwards, counting backwards, knowing the facts. The first two of these use the counting Caterpillar. For the third you need to learn another game called Tap, Say, Turn.

Each of the skills has three circles:

- The first circle means 'I know I can do this.' (being really strict with myself!)
- The second circle means 'A friend agrees I can do this.' (being really strict with me!)
- The third circle means 'My teacher agrees I can do this.' (being really strict with me!)

You can only colour in one circle for a particular table in one day.

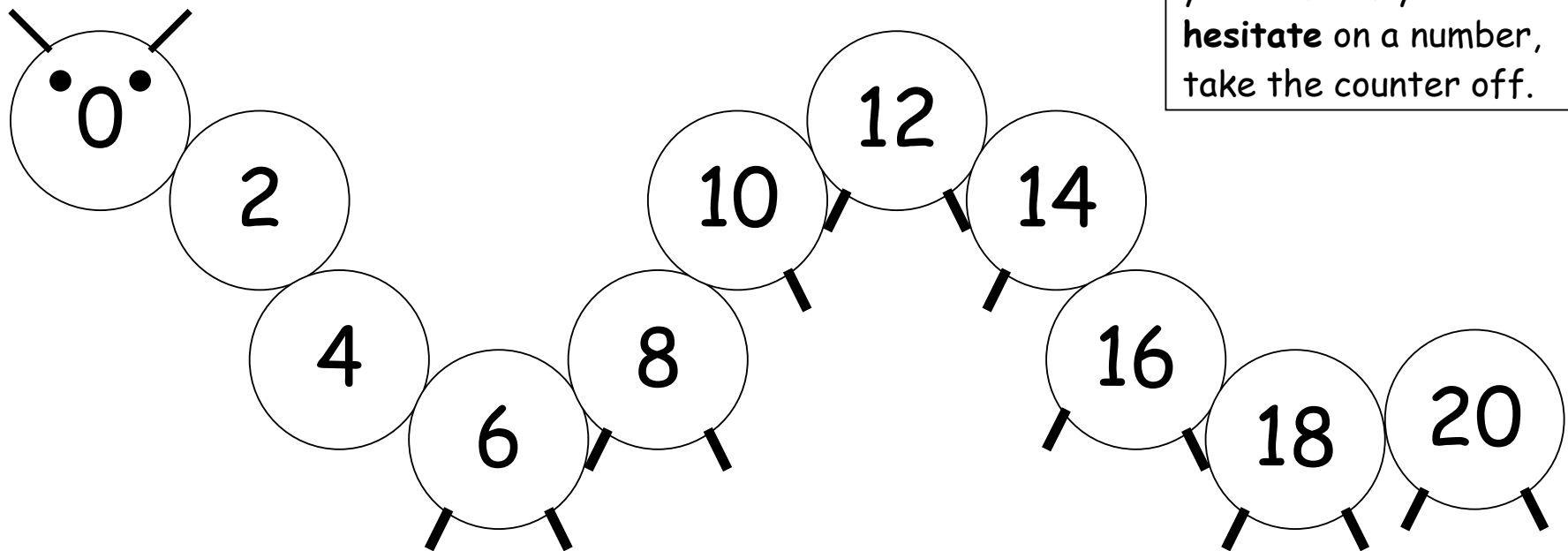
You can be working on more than one table at the same time.

A good order to learn the tables is: 2x, 10x, 5x; 3x, 4x, 9x; 6x, 8x, 7x.

# Counting Caterpillar

I can count in twos!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

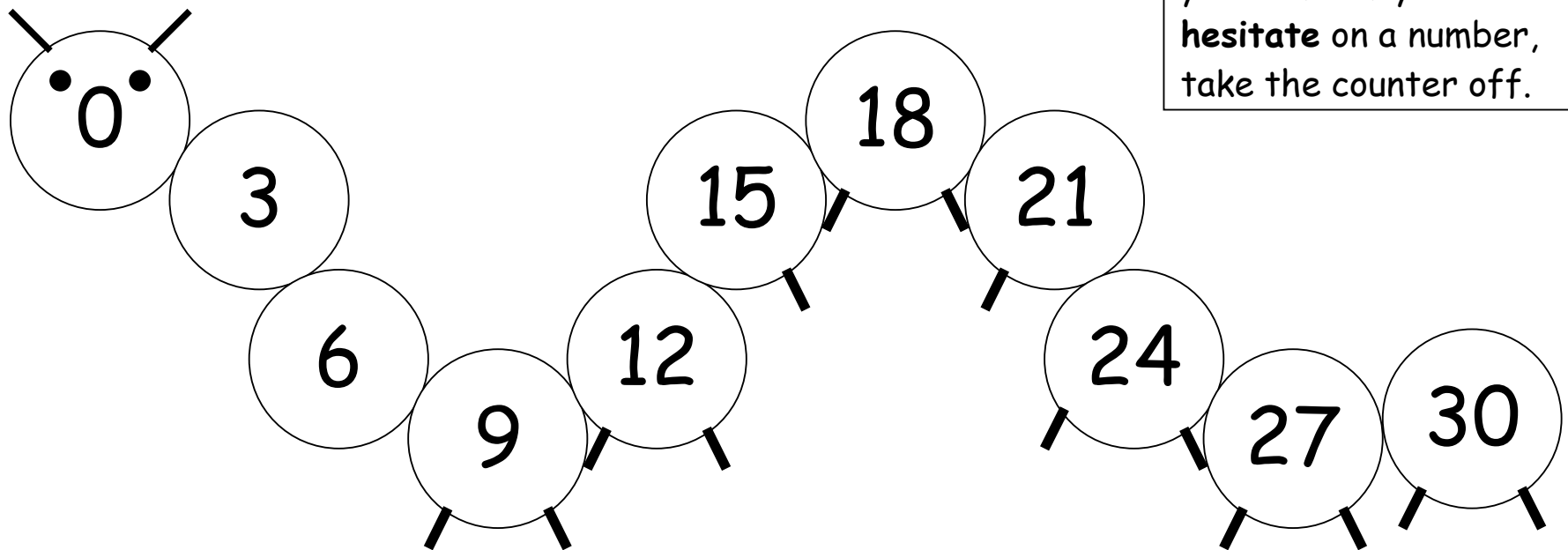
**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**



# Counting Caterpillar

I can count in threes!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

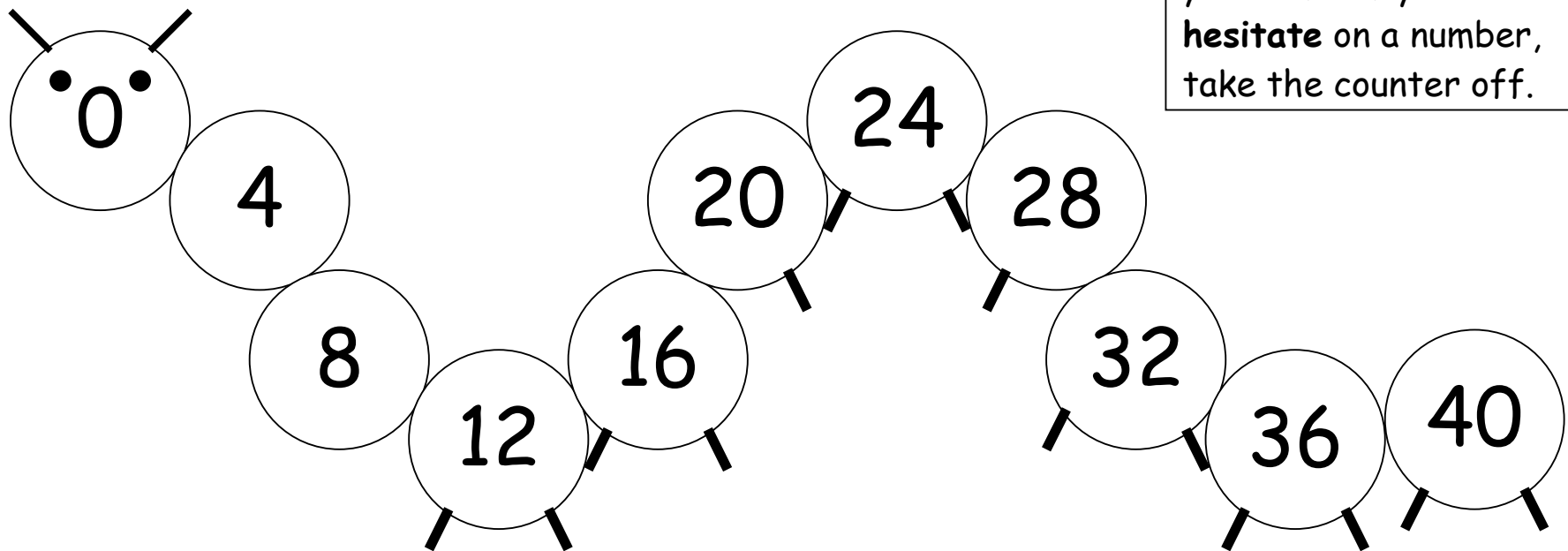
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in fours!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

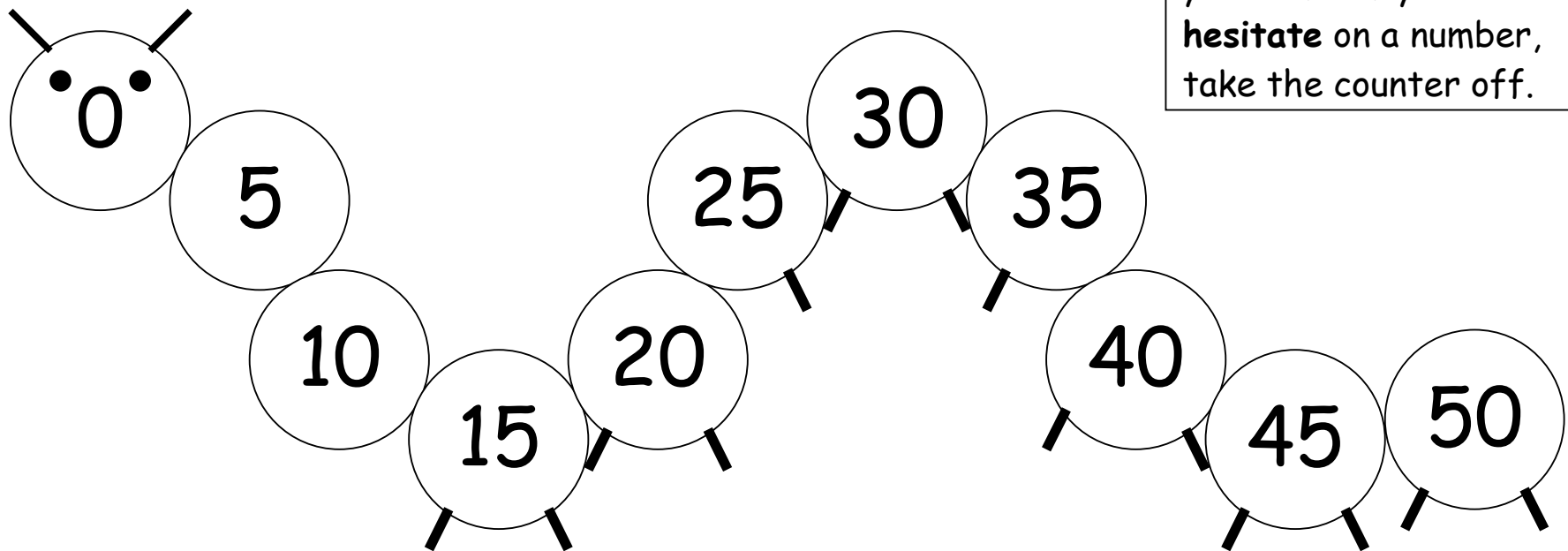
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in fives!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

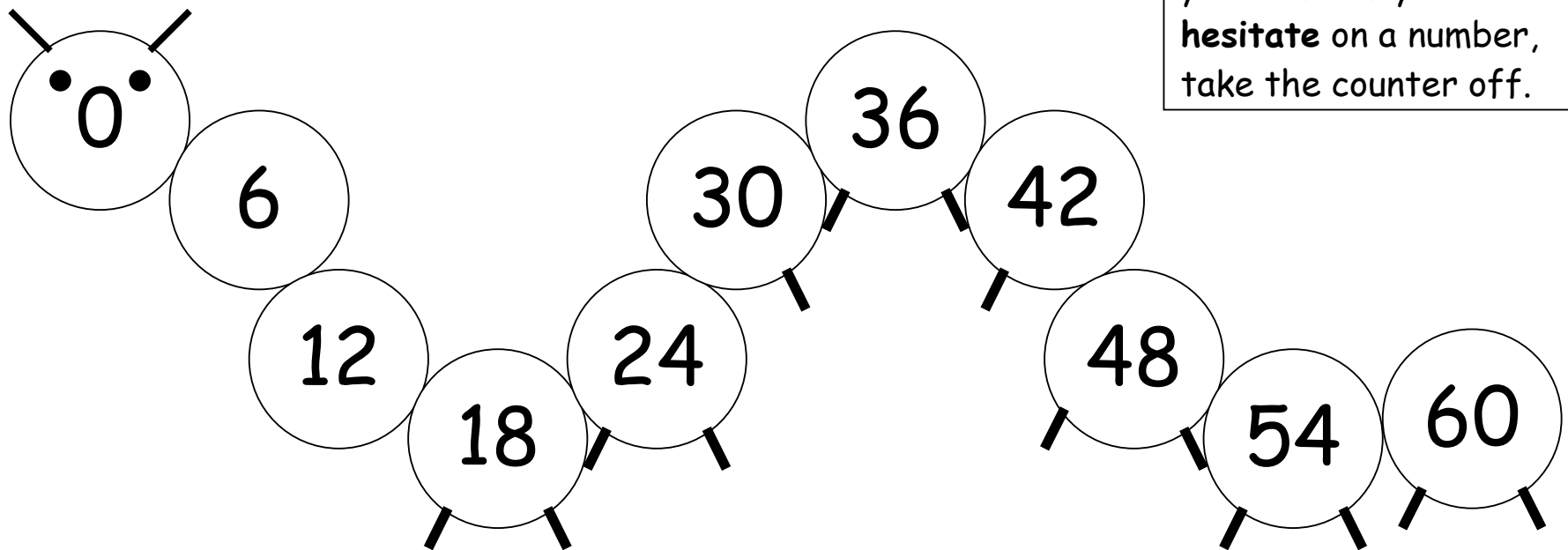
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in sixes!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

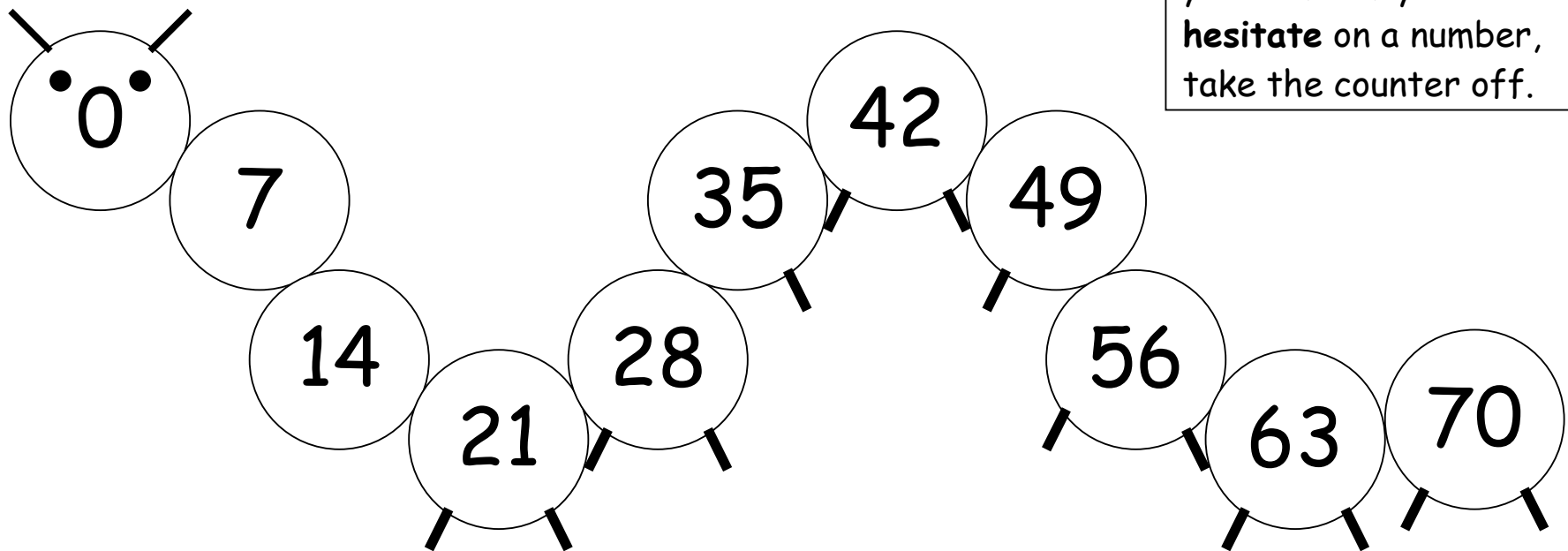
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in sevens!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

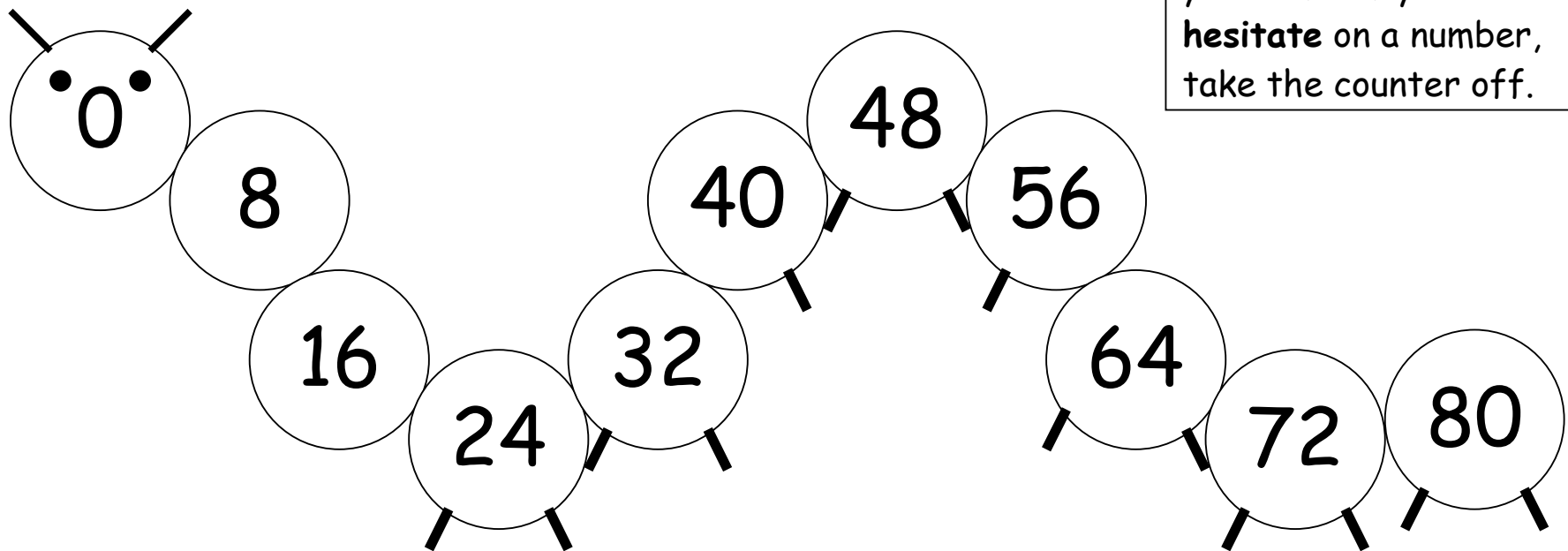
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in eights!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

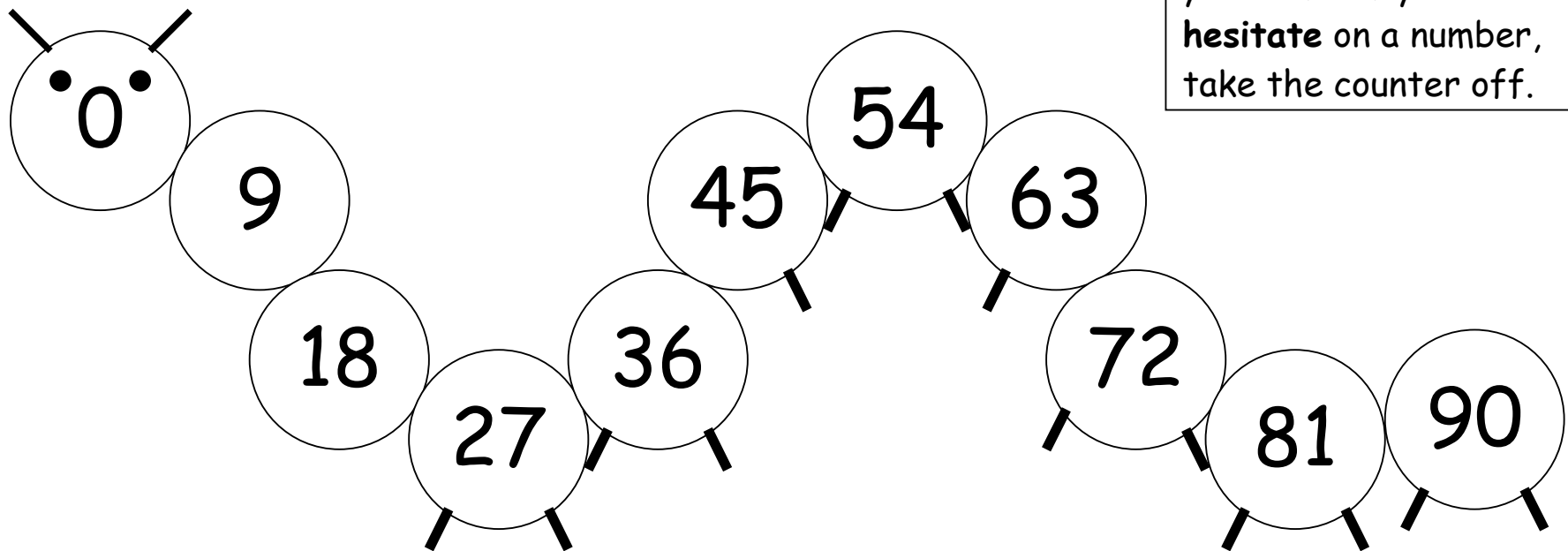
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in nines!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

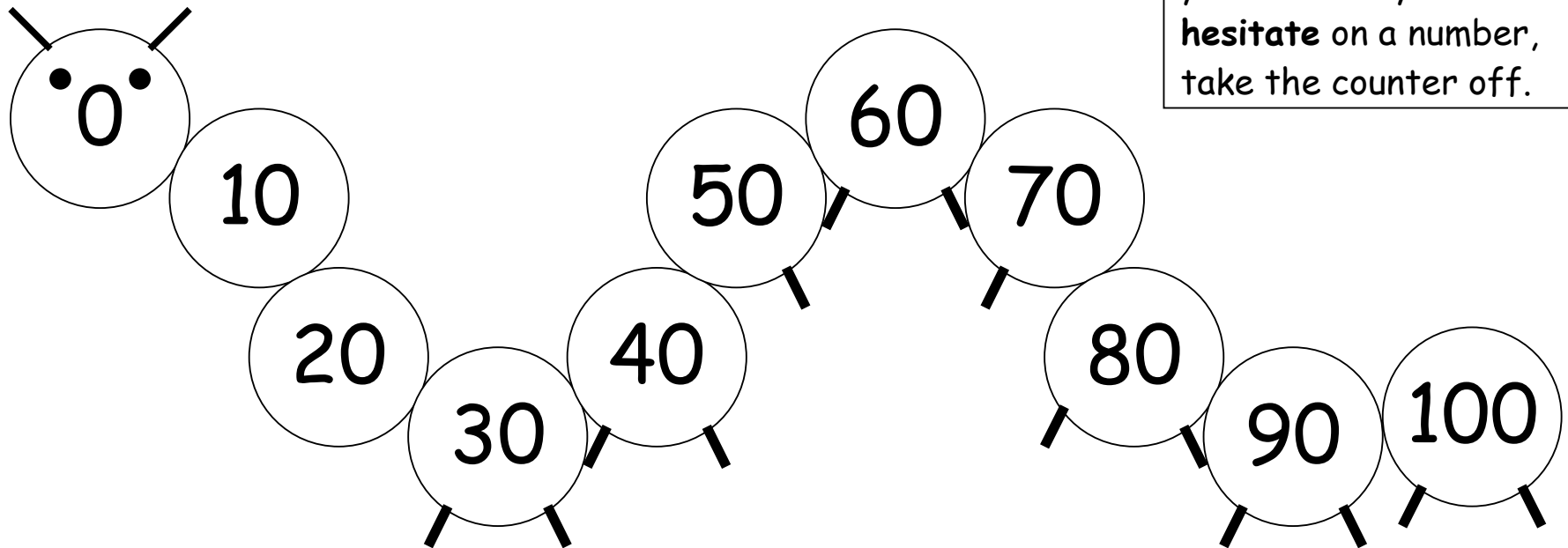
**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**

# Counting Caterpillar

I can count in tens!

**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.



**Rule 1:** If it is too **easy**, make it a **little bit** harder. Add **one** more counter.

**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop!**



# My Tables Record Card

Name: \_\_\_\_\_

Table	Counting Caterpillar Forwards	Counting Caterpillar Backwards	Tap, Say, Turn I know all my facts
2	○ ○ ○	○ ○ ○	○ ○ ○
3	○ ○ ○	○ ○ ○	○ ○ ○
4	○ ○ ○	○ ○ ○	○ ○ ○
5	○ ○ ○	○ ○ ○	○ ○ ○
6	○ ○ ○	○ ○ ○	○ ○ ○
7	○ ○ ○	○ ○ ○	○ ○ ○
8	○ ○ ○	○ ○ ○	○ ○ ○
9	○ ○ ○	○ ○ ○	○ ○ ○
10	○ ○ ○	○ ○ ○	○ ○ ○

# The Tables Tower

Begin at the bottom and work your way to the top!

6	8	7
3	4	9
2	10	5

