

**Purpose of the exercise:**

- Develop addition strategies to add numbers – which ones add more "easily", e.g. 10-friends
- Learn to "split" 10s and 100s when subtracting a small number

**What should the children discover themselves:**

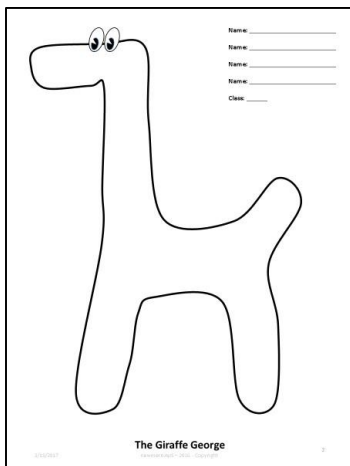
- There are several ways to add a set of numbers, e.g.  $5+2+3+10+8+20$ . One could add 10s first, or one could add 1s first
- 10 friends are good to use both when adding or when subtracting (e.g. a 10 can be split into a 3 and a 7, after which one can more easily remove a 7, as in  $11-8$  which is equivalent to  $10-7$  or  $12-7$  which is equivalent to  $3+2$ )

**How should the teach be helpful without giving the answers directly:**

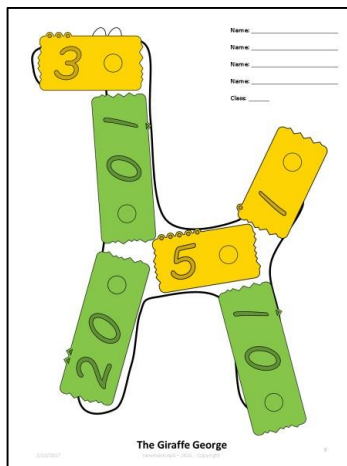
- The teacher could e.g. limit the set of available bricks, to increase the likelihood that 10 friends are chosen
- The teacher could remove the bricks 5, 6, 7, 8, 9 to limit the likelihood that there will be a carry when adding small numbers

**Which material should be used for the lecture:**

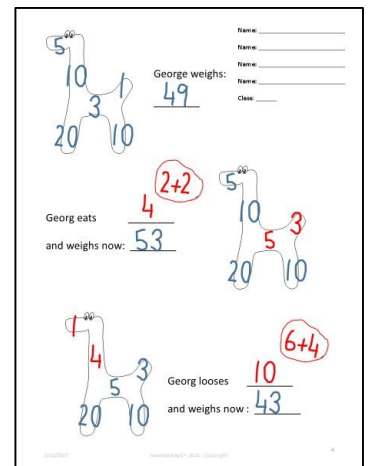
- Some yellow bricks (1s) and/or some green bricks (10s)
- Some printouts for distribution – The "Pupils material" pages
- A smartboard/large screen could be used to show the following pages and how the children should complete the "Pupils material" pages



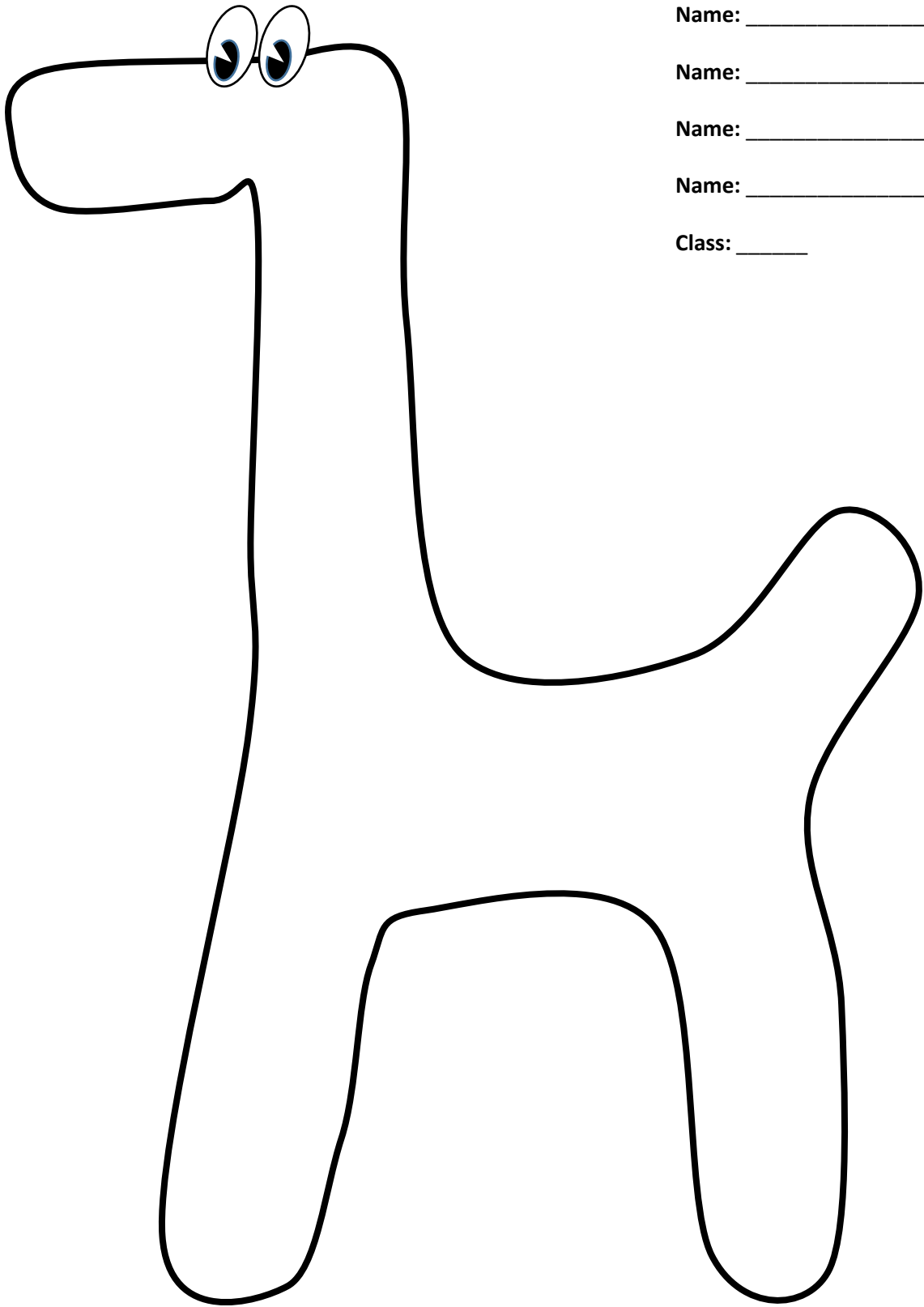
The drawing ...



.. should be covered with bricks



.. and a small story changes the use of bricks



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

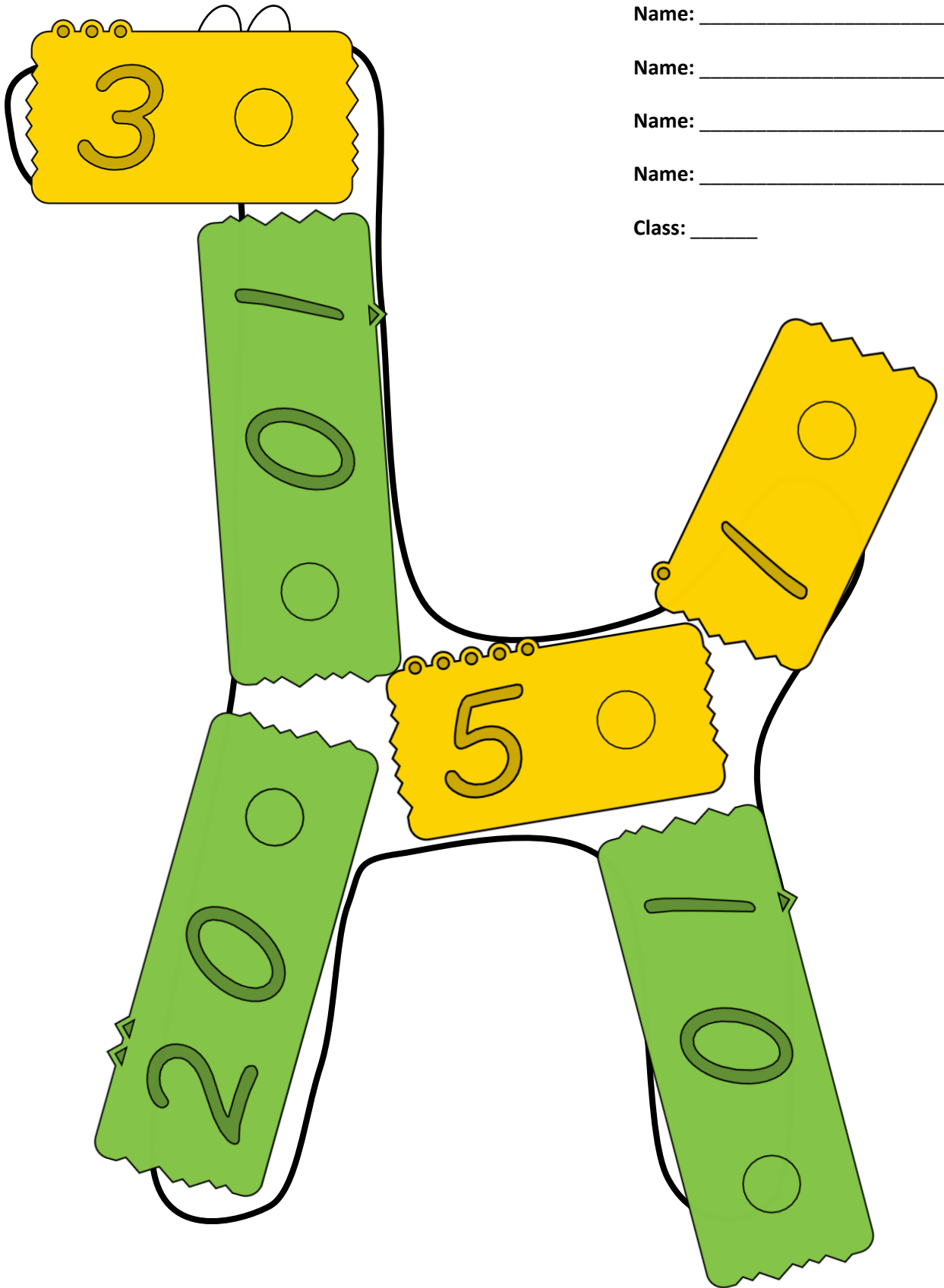
Name: \_\_\_\_\_

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

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

Class: \_\_\_\_\_

# The Giraffe George



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

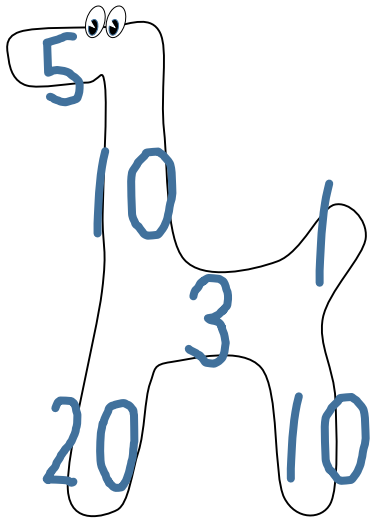
Name: \_\_\_\_\_

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

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

Class: \_\_\_\_\_

# The Giraffe George



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

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

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

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

Class: \_\_\_\_\_

George weighs:

$$\underline{49}$$

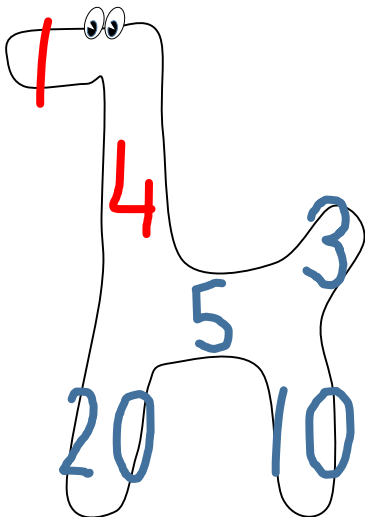
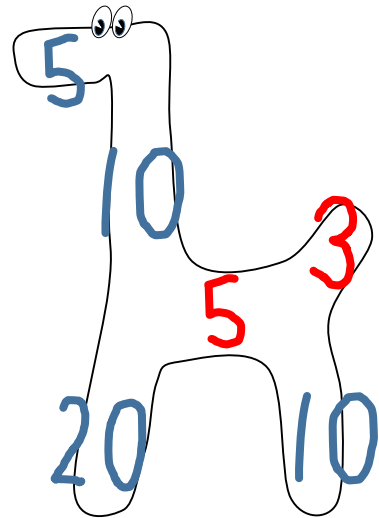
Georg eats

$$\begin{array}{r} 4 \\ \hline \end{array}$$

$$2+2$$

and weighs now:

$$\underline{53}$$



Georg loses

$$\underline{10}$$

$$6+4$$

and weighs now :

$$\underline{43}$$