1. What is our research question?

What bounces more often within a minute a tennis ball or a football?

## 2. How does this research fit the theme of the project?

It is about weight and acceleration (bouncing) and this fits with the Higgs boson.
3. What do we think will be the answer to the research question? And why do we think this will be the answer?
[Researchers call this a 'hypothesis']
$\square$
[Rent
4. Which persons or what materials are we researching?

We investigate two types of balls: a tennis ball and a (well-inflated) football. We then see which ball bounces more often.

## 5. What is it that we will measure exactly?

[Measuring can mean: measuring lenght, distance or weight.
Measuring can also mean: asking people in your research the same question and comparing the answers.]
We'll count how many times a tennis ball and a (well-inflated) football bounce within one minute.
6. In what way will we do the measuring?
[For example with a test, with a question or with interviews]
We let the tennis ball and the football fall down from 2 meters and then we count how many times the tennis ball and the football are bouncing. We do this for one minute. Or until the ball stops bouncing, if it does so before the minute is up.
7. How many times or with how many people do we need to repeat our measuring to really know the answer to the question?

We conduct the test 5 times. We let the tennis ball and the football both bounce five times for one minute.
8. How will we record the results while we conduct our research?
[For example: make a table, keep a tally or write down the answers.]
We write down the answers in a table.

How many times does the tennisball and the football bounce in one minute:

|  | $\mathbf{1}^{e}$ keer | $\mathbf{2}^{e}$ keer | $\mathbf{3}^{e}$ keer | $\mathbf{4}^{e}$ keer | $\mathbf{5}^{e}$ keer |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Tennisbal |  |  |  |  |  |
| Voetbal |  |  |  |  |  |

Afterwards we'll calculate the average times.
9. What should stay the same in our research and what should change?

The same: the height at which we drop the balls ( 2 meters), de surface (for example the sports hall), we let the balls fall (we don't throw them).

Different: the bal (tennis ball or football)
10. Make a plan: when will you do the different research activities.

| Activiteit: | Plaats/locatie: |  | Dag: |
| :--- | :--- | :--- | :--- |
|  |  |  | Tijd: |
|  |  |  |  |
|  |  |  |  |

11. What help and which materials do we need?

- Tennis ball
- Football
- Stopwatch
- Paper to write down the results
- Sports hall

12. From whom do we need permission, apart from the teacher?
$\qquad$
13. Who will do what in preparation and conducting our research?

| Naam: | Taken: | Wanneer af: |
| :--- | :--- | :--- |
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