

Sample Lesson Plan using Template 1

<u>Date:</u>	<u>Year level:</u> Year 3/4	<u>Lesson duration (minutes):</u> 60 minutes
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Broad title indicating the content.

<u>Title of lesson:</u> Using Body Benchmarks for Estimating Length

Describe outcomes in your own words. Be specific.

<u>Learning Outcome/s and Specific Purpose:</u> <i>At the end of this lesson students will:</i> <ul style="list-style-type: none"> • Know certain useful lengths, based on parts of their body; • Be able to use these benchmarks to estimate lengths; • Understand that these benchmarks may change as they get older.
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Link learning outcomes to VELs (or other curriculum documents where appropriate).

<u>Links to VELs:</u>
<u>Strand: Physical, Personal and Social Learning</u>
<u>Domain:</u> <i>Interpersonal Development</i>
<u>Dimension:</u> <i>Working in Teams</i>
<ul style="list-style-type: none"> • Students cooperate with others in teams for agreed purposes, taking roles and following guidelines established within the task.
<u>Strand: Disciplinary Learning</u>
<u>Domain:</u> <i>Mathematics</i>
<u>Dimension:</u> <i>Measurement, Chance & Data</i>
<ul style="list-style-type: none"> • Students estimate and measure length using appropriate instruments and use different units of measurement including formal and informal.
<u>Strand: Interdisciplinary Learning</u>
<u>Domain:</u> <i>Thinking Processes</i>
<u>Dimension:</u> <i>Reasoning, Processing and Inquiry</i>
<ul style="list-style-type: none"> • Use of organised information for problem solving and decision making in an investigation.

Categorise links by strand and specify domains and dimensions.

What prior knowledge or skills are required?

How does this lesson link to the previous one?

<u>Prerequisite knowledge/concepts/skills/vocabulary are required?</u> <u>How does this link to previous lessons?</u>
<ul style="list-style-type: none"> • Measuring with rulers/tape measures; • Measurement Vocabulary – <i>centimetre, metre, estimate, approximate, length, width, depth, span, body benchmarks;</i> • Knowledge of units of length (cm, m); • Knowledge that $100\text{cm}=1\text{m}$, $50\text{cm}=1/2\text{m}$; • Repeated addition/multiples, especially of 5s, 10s, 20s, 25s, 50s; • Simple addition and subtraction.

How will you group your students? Whole class, small groups, individual? What classroom spaces or learning centres will students occupy? How will classroom furniture be arranged or utilised?

Grouping/s and Physical Space:

Whole/part/whole

- *Whole Class (Introduction and explanation)*
- *Working collaboratively in pairs. (Ensure any students who are less able will be assisted by student partner).*
- *Whole Class (presenting and discussing findings)*

Detailed list of all equipment and resources needed throughout entire lesson.

Equipment/Resources required:

- *1m rulers.*
- *30cm rulers.*
- *Tape measures.*
- *Worksheet for recording.*
- *Two pieces of string (≈12cm long, ≈1.4m long).*
- *Prizes.*

Indicate here if you have included attachments (e.g., work-sheets, tests, assessment checklists, etc.).

Attachments: *(Items not attached but samples included below).*

Worksheets (Parts 1 & 2)

Extension Worksheet: Blooms Taxonomy Questions

Group Skills Checklist : (Teacher Assessment Record)

What will you do to introduce the lesson?

Lesson Introduction:

Learning activity/ies, key questions and teacher explanations:

- *Class on mat. Hold up pieces of string.*
- *Discussion (5 minutes).*

T: How could we find out how long they are?

S: Measure ... with ruler.

T: What if no ruler?

S: Guess. Compare with something known.

T: How long do you THINK they are? [only by looking]

S: [Various responses, with teacher asking for why they think so. Do NOT indicate if they are close.]

T: Would it help if you could have the string?

S: [Various responses. Seek reasons. Some may say they can compare it to something they know.]

T: What could you compare it to? [Still no ruler.]

S: [Various responses. Seek reasons.]

T: Will you always have that [whatever] with you?

S: No [?]

T: What if we knew some useful measurements using our body? For example, I know my hand span is 20cm. If I wanted to find out how wide the desk is [DO NOT MEASURE THE STRING] then what could I do?

S: [Count hand spans and go: 20, 40, 60, 80, etc.]

T: Would it be useful to know some measurements using our body?

We'll call these "body benchmarks".

[Give more of your own examples (pace, arm span, foot length), reiterating the term].

How will you introduce the main objectives of the lesson?

Describe what you will do as a teacher and what you want students to do.

Provide brief details of the learning activities and think carefully about the purpose when designing these activities.

If students are grouped, describe each group's activity separately.

Provide examples and questions that you will use.

Give an estimate of the duration of each activity.

Indicate how you will monitor each student's understanding.

Ensure that the content is evident from your description.

Main Component of Lesson:

Learning activity/ies, key questions and teacher explanations:

- *Instruction about worksheet and how to work (5 minutes).*
 - *Working in pairs. [Get children to sit next to partner (less able students need an able partner), and hand out worksheet.]*
 - *The worksheet has two parts.*
 - *First part asks you find some body benchmarks, by using a ruler to measure your hand span, etc., and then it also asks you to see if you can find a body benchmark that is 10cm and 1m.*
 - *Second part asks you to use what you now know about your body measurements to measure some things around the classroom.*
 - *If you complete the activity come to get a second worksheet (Blooms Taxonomy Questions) from me that asks you to analyse and evaluate the activity and your results.*
 - *Does everyone understand?*
 - *So, how many people in each group? [Two]*
 - *What does the first part of the worksheet ask us to do? [Response]*
 - *What does the second part of the worksheet ask us to do? [Response]*
 - *If you complete both parts of the worksheet what do you do? [Response].*

- *You will also be asked to estimate the lengths of the pieces of string, and there is a competition for the closest estimates.*

- *Students working on worksheet (see end of document for sample of worksheet items). (30-40 minutes)*

- *As students work, monitor progress.*
 - *Make sure students are making their benchmark measurements accurately.*
 - *Make sure students are finding "usable" benchmarks for the 10cm and 1m [may need to suggest hand width, pace].*
 - *Make sure measuring with the benchmarks is done appropriately (e.g., no gaps, overlaps).*
 - *Watch for difficulties in adding lengths (especially using those benchmarks with trickier values; may want to allow calculator).*

What activities have you included for gifted students or those who experience learning difficulties?

What activities do you have for fast finishers?

Extension or Enrichment Activities:

- *Extension: Worksheet - Blooms Taxonomy Questions*
- *Learning Difficulties: Students paired with able partner.*
- *Early Finishers: Worksheet (Part 3)*

How will you draw together the ideas of the lesson?

The process may include whole class sharing, teacher-directed or student-led discussion, reflective journal writing/sharing, a summary, a scene setter for the next lesson, etc.

Lesson Conclusion:

Learning activity/ies, key questions and teacher explanations:

- *Each pair to write each of their string length estimates on separate post-it notes.*
 - *Name of pair on back of notes*.*
 - *Stick all post-its for short string in order; similarly for long string.*
 - *Discuss how close/far apart the answers are.*
 - *Why might some be very different?*
 - *[Bad measurement of benchmark, addition error, not careful enough in measuring.]*
 - *Get student to measure the short string with ruler; ditto with long string and tape measure.*
 - *Get two students to check [resolve discrepancies if necessary].*
 - *Write up results.*
 - *Identify the winners (find number, name on back).*
 - *Ask the winners why they got so close [hopefully they will say mathematically helpful things!].*
 - *Ask students which of their body benchmarks is the most useful.*
 - *Bring out Easy to use for measuring. Nice easy length for adding (e.g., 10cm, 20cm).*
 - *Encourage them to remember these ones.*
 - *So do we need rulers for measuring length any more?!*
 - *No (can use our body benchmarks); Yes (need to measure our body benchmarks).*
 - *So, are body benchmarks useful?*
- [By having only numbers on the front we can focus on numbers, not who came up with them. Note too that finding the winner is being delayed until we have discussed key issues].*
- *There's just one little thing we have to worry about.*
 - *How long is your hand span?*
 - *[Less than 20cm.]*
 - *But mine is 20cm. Why is that?*
 - *[You're bigger; we haven't grown yet.]*
 - *So, our body benchmarks will change. What will we have to do?*
 - *[Check them every so often.]*

What are you assessing and why? Categorise the purpose of your assessment, eg. 'For / Of / As' Learning: How will you assess student achievement?

Identify the data used and the criteria.

Identify the assessment tools you will use to collect data and how you will record it. (Attach copies of any documentation).

Assessment of Student Learning:

Assessment for Learning:

- *Refer to assessments made from prior lessons involving measurement.*

Assessment as Learning:

- *Students to complete Reflective Journal article;*
- *Students present and compare findings and discuss their understandings.*

Assessment of Learning: Recall monitoring from main part of lesson:

- *Making benchmark measurements accurately;*
- *Finding "usable" benchmarks for the 10cm and 1m;*
- *Measuring with the benchmarks is correct;*
- *Addition and subtraction of values accurate;*

- *Assess collaborative team work - Note observations on Group Skills Checklist(Attach Copy)*

In follow up lesson: *ask students for the length of some object without using a ruler.*

- *Do they think to use body benchmarks;*
- *Do they recall their own values;*
- *Do they use relevant vocabulary appropriately;*
- *Do they make appropriate use of the techniques?*

Evaluate the interrelationships between the objectives, content, pedagogy and results of this lesson.

What went well?

What could be improved?

How could you improve this?

Personal Evaluation of Lesson

Things to think of:

- *Did students know the prerequisites well enough?*
- *Should I have just concentrated on getting them to find “useful” benchmarks (e.g., 10cm, 20cm) rather than worrying about ones that might have been “ugly” numbers (e.g., hand span)?*
- *Did I convey the usefulness of the idea?*
- *Was the order of tasks on the worksheet appropriate?*
- *Were my explanations and questions clear?*
- *Did the pairs “work”?*

What do you need to remember for next lesson? (e.g., “Don’t forget to find answer to Louise’s question about cubes”) (*Fill in after class*)

Notes for next lesson:

- *Revise use of relevant vocabulary – particularly use of term ‘body benchmarks’.*
- *Remember to check Guinness Book of Records to answer Justin’s question about body measure records.*

Reflect deeply upon the impact this lesson has had upon your professional learning.

Reflective Notes:

Things to reflect upon:

- *How might the experience gained in this lesson inform your future planning and teaching?*
- *How might this lesson inform your future assessment practices?*
- *What aspects of your students’ behaviours or actions gave you the greatest insight?*
- *Are there any other important implications for you as a teacher?*

