



# Thermodynamics teaching set

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VIEW IN BROWSER

updated 29. 1. 2024 | published 29. 1. 2024

## Summary

Thermodynamics teaching set (LEGO-Based) - Total and partial differentials  
These tiles can be used to teach the...

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Thermodynamics teaching set (LEGO-Based) - Total and partial differentials

These tiles can be used to teach the concept of integration over  $dQ$ ,  $dW$  and  $dU$  differentials in thermodynamics.

The tile sizes are of standard Duplo brick, they can be mounted on top of Duplo or Lego bricks. The slope of the top surface is calculated to fit the Lego dimension and connect to neighbouring brick (if chosen correctly).

These bricks have been designed to fit nicely when printed with 0.4 mm nozzle and 0.2 mm layer height. If these do not apply for your printer or if the tiles do not fit, you can fully customize the dimensions by modifying the OpenSCAD source available at <https://github.com/jan-koupil/3D-lego-thermodynamics>.

## Print Settings

**Printer Brand:**

Creality

**Printer:**

Ender 3 Pro

**Rafts:**

No

**Supports:**

No

**Resolution:**

0.2

**Infill:**

15%

**Filament:** Any PET-G

Category: Physics & Astronomy

## Model files



**du\_1\_1.stl**



**du\_3\_1.stl**



**dw\_2\_0.stl**



**dw\_2\_1.stl**



**dw\_0\_5.stl**

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**dw\_4\_0.stl**

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**du\_5\_4.stl**

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**dq\_1\_4.stl**

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**du\_1\_0.stl**

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**du\_1\_2.stl**

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**dq\_0\_5.stl**

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**du\_6\_0.stl**

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**dw\_2\_2.stl**

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**dw\_0\_1.stl**

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**dw\_3\_6.stl**

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**dw\_2\_5.stl**

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**dq\_1\_3.stl**

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**du\_3\_3.stl**

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**dw\_6\_3.stl**

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**dw\_6\_2.stl**

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**du\_4\_5.stl**

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**du\_1\_6.stl**

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**dw\_1\_1.stl**

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**dq\_2\_0.stl**

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**one\_and\_half\_plate.stl**

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**dq\_0\_3.stl**

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**du\_2\_1.stl**

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**dw\_0\_0.stl**

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**du\_1\_3.stl**

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**dw\_6\_4.stl**

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**dw\_0\_4.stl**

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**dq\_6\_2.stl**

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**du\_5\_1.stl**

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**dw\_4\_2.stl**

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**du\_4\_1.stl**

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**dq\_1\_2.stl**

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**du\_4\_2.stl**

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**du\_5\_0.stl**

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**du\_5\_3.stl**

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**du\_4\_3.stl**

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**du\_2\_6.stl**

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**dq\_6\_6.stl**

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**dw\_5\_6.stl**

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**dw\_4\_6.stl**

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**dq\_3\_6.stl**

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**dw\_2\_3.stl**

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**du\_0\_2.stl**

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**du\_5\_6.stl**

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**dw\_6\_1.stl**

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**du\_1\_5.stl**

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**dq\_2\_2.stl**

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**du\_3\_4.stl**

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**du\_2\_0.stl**

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**dq\_5\_3.stl**

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**dw\_2\_6.stl**

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**dq\_6\_3.stl**

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**du\_0\_0.stl**

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**dw\_4\_1.stl**

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**du\_6\_4.stl**

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**dw\_5\_3.stl**

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**du\_2\_3.stl**

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**dq\_6\_5.stl**

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**dw\_0\_6.stl**

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**du\_6\_2.stl**

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**dw\_4\_3.stl**



**du\_3\_5.stl**



**dq\_4\_6.stl**



**dq\_0\_1.stl**



**dw\_3\_2.stl**



**dq\_1\_5.stl**



**du\_2\_4.stl**



**dw\_5\_4.stl**



**dq\_5\_0.stl**



**du\_0\_3.stl**



**dq\_4\_3.stl**

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**du\_6\_1.stl**

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**dw\_5\_1.stl**

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**dq\_6\_0.stl**

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**dq\_0\_6.stl**

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**dq\_0\_2.stl**

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**dw\_0\_2.stl**

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**du\_1\_4.stl**

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**du\_0\_6.stl**

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**dw\_1\_3.stl**

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**du\_5\_5.stl**

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**dw\_5\_5.stl**

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**dq\_6\_1.stl**

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**dq\_4\_4.stl**

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**du\_0\_5.stl**

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**dw\_5\_0.stl**

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**dq\_3\_2.stl**

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**dw\_1\_6.stl**

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**dq\_3\_1.stl**

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**dq\_2\_4.stl**

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**dq\_6\_4.stl**

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**du\_2\_2.stl**

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**dw\_1\_5.stl**

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**dq\_4\_2.stl**

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**du\_3\_0.stl**

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**dq\_0\_4.stl**

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**dw\_1\_0.stl**

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**dw\_6\_0.stl**

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**dq\_2\_1.stl**

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**dw\_6\_5.stl**

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**dq\_2\_6.stl**

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**dw\_3\_1.stl**

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**dq\_1\_0.stl**

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**dq\_2\_3.stl**

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**dq\_3\_0.stl**

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**dq\_4\_0.stl**

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**du\_6\_3.stl**

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**du\_3\_2.stl**

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**dq\_4\_1.stl**

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**dq\_2\_5.stl**



**du\_3\_6.stl**



**du\_0\_4.stl**



**dq\_5\_4.stl**



**du\_5\_2.stl**



**dq\_1\_6.stl**



**dq\_3\_4.stl**



**dw\_3\_3.stl**



**dq\_3\_5.stl**



**dw\_3\_4.stl**



**dw\_6\_6.stl**



**dw\_3\_0.stl**



**dq\_5\_2.stl**



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**du\_4\_6.stl**



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**dw\_4\_5.stl**



**dq\_3\_3.stl**



**du\_6\_5.stl**



**du\_0\_1.stl**



**du\_4\_4.stl**



**dw\_1\_4.stl**



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**dw\_5\_2.stl**



**du\_4\_0.stl**



**du\_2\_5.stl**



**du\_6\_6.stl**



**dq\_4\_5.stl**



**dw\_1\_2.stl**



**dw\_3\_5.stl**





**dw\_2\_4.stl**

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**dw\_0\_3.stl**

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**dq\_5\_6.stl**

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**dw\_4\_4.stl**

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com)

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